# **Clinic Management System**

# **Design Document**



# INSTITUTE of TECHNOLOGY CARLOW

18th April 2018 BSc (Hons) Software Development

> Name: Ryan Donoghue Year: 4th year Student ID: C00194829 Supervisor: Paul Barry

# Table of Contents

| Clinic Management System        | 0  |
|---------------------------------|----|
| Table of Contents               | 1  |
| Backend                         | 3  |
| Frontend                        | 3  |
| Database Structure (Simplified) | 5  |
| Database Structure (Detailed)   | 6  |
| Detailed Use Cases              | 7  |
| Login                           | 7  |
| Logout                          | 8  |
| CRU patient                     | 9  |
| Create Patient                  | 9  |
| Read Patient                    | 10 |
| Update Patient                  | 11 |
| CRU pharmacy                    | 12 |
| Create Pharmacy                 | 12 |
| Read pharmacy                   | 13 |
| Update pharmacy                 | 14 |
| CRU doctor                      | 15 |
| Create doctor                   | 15 |
| Read doctor                     | 16 |
| Update doctor                   | 17 |
| CRU gp                          | 18 |
| Create gp                       | 18 |
| Read gp                         | 19 |
| Update gp                       | 20 |
| CRU Clinic                      | 21 |
| Create clinic                   | 21 |
| Read clinic                     | 22 |
| Update clinic                   | 23 |
| CRU vaccination record          | 24 |
| Create vaccination record       | 24 |
| Read vaccination record         | 25 |

| CRU phlebotomy record2Create phlebotomy record2Read phlebotomy record2Update phlebotomy record2Add an inactivity reason3Add a patient relationship3Add a vaccination brand3Add a gender3Generate report3Guil Screenshots3Login3Add Patient3Add Patient3Login3Login3Add Patient3List pp3Add gp3List pharmacy44New pharmacy44New pharmacy44Add vaccination records44Add vacer menu layout 144Standard user menu layout 244Admin44Post login / show users44Add new user44Add new user44Ad   | Update vaccination record   | 26 |
|--|-----------------------------|----|
| Create phlebotomy record22Read phlebotomy record22Update phlebotomy record22Add an inactivity reason33Add a patient relationship33Add a vaccination brand33Add a gender33Generate report33Generate report33Gul Screenshots33Login33Add gp33Add a patient33Add Patient33List patients33Show patient33Add gp33List pharmacy44New pharmacy44New pharmacy44List phlebotomy records44Add vaccination record44View Reports44Standard user menu layout 144Standard user menu layout 244Admin44Post login / show users44Add new user44List rel clicine oc44Add new user44Add new user <t< td=""><td>CRU phlebotomy record</td><td>27</td></t<>   | CRU phlebotomy record       | 27 |
| Read phlebotomy record22Update phlebotomy record23Add an inactivity reason33Add a patient relationship3Add a vaccination brand33Add a gender33Create new user33Generate report33GU Screenshots33Login33Add Patient33Add ap33Login / List patients33Show patient33Add gp33List gp33Add gp33List pharmacy44New pharmacy44List clinic doctor44Add vaccination records44Add vaccination records44Add vaccination records44Standard user menu layout 144Standard user menu layout 244Admin44Post login / show users44Add new user44Add new user44 <td>Create phlebotomy record</td> <td>27</td>   | Create phlebotomy record    | 27 |
| Update phlebotomy record24Add an inactivity reason33Add a patient relationship33Add a vaccination brand33Add a gender33Create new user33Generate report33Gull Screenshots33Login35Post login / List patients35Show patient33Add gp33Add gp33List gp33Add gp33List pharmacy44New pharmacy44List chinic doctor44Add chinic doctor44Add vaccination record44Add vaccination record44View Reports44Standard user menu layout 144Standard user menu layout 244Admin44Post login / show users44Add relicine cond44Add nin44Post login / show users44Add relicine cond44Add relicine cond44Add nin44Post login / show users44Add relicine cond44Add relicine cond44Add relicine cond44Add nin44Add relicine cond44Add relicine cond44Add nin44Add nin44Add relicine cond44Add relicine cond44Add relicine cond44  | Read phlebotomy record      | 28 |
| Add an inactivity reason33Add a patient relationship33Add a vaccination brand33Add a gender33Create new user33Generate report33GUI Screenshots33Login33Post login / List patients33Show patient33Add gp33Add gp33List gp33Add gp33List pharmacy44New pharmacy44List phlebotomy records44Add phlebotomy records44Add vaccination records44Standard user menu layout 144Standard user menu layout 244Admin44Post login / show users44Admin44List child inice44Admin44List child inice44Add new user44Add new user  | Update phlebotomy record    | 29 |
| Add a patient relationship3Add a vaccination brand33Add a gender33Create new user33Generate report33GUI Screenshots33Login33Post login / List patients33Show patient34Add gp33List gp33Add gp33List gp33Add gp33List pharmacy44New pharmacy44List phlebotomy records44Add phlebotomy records44Add vaccination records44Standard user menu layout 144Standard user menu layout 244Admin44Post login / show users44Add new user44List clinic necords44Admin44Post login / show users44Add new user44Add new user<  | Add an inactivity reason    | 30 |
| Add a vaccination brand33Add a gender33Create new user33Generate report33Gull Screenshots33Login33Post login / List patients33Show patient33Add Patient33List gp33Add gp33List pharmacy44New pharmacy44List clinic doctor4List phlebotomy records44Add vaccination records44Add vaccination record44View Reports44Standard user menu layout 144Standard user menu layout 244Admin44Post login / show users44Add new user44List clinicine44Add new user44Add new user<  | Add a patient relationship  | 31 |
| Add a gender33Create new user33Generate report33GUI Screenshots33Login33Post login / List patients33Show patient33Add Patient33List gp33Add gp33List pharmacy44New pharmacy44List clinic doctor4List phlebotomy records44List vaccination records44Add vaccination record44Standard user menu layout 144Standard user menu layout 244Admin44Post login / show users44Add new user44List clinicine44  | Add a vaccination brand     | 32 |
| Create new user33Generate report33GUI Screenshots34Login35Post login / List patients35Show patient36Add Patient36List gp37Add gp37List pharmacy44New pharmacy44List clinic doctor44List phlebotomy records44List vaccination record44View Reports44Standard user menu layout 144Standard user menu layout 244Addmin44Post login / show users44Add new user44Add new user44   | Add a gender                | 33 |
| Generate report33GUI Screenshots33Login33Post login / List patients33Show patient34Add Patient34List gp34Add gp35List pharmacy44New pharmacy44List clinic doctor44List phebotomy records44List vaccination record44Add vaccination record44View Reports44Standard user menu layout 144Admin44Post login / show users44Add new user44List all divince44Add new user44Add new user44Add new user44List all divince44Add new user44Add new user44   | Create new user             | 34 |
| GUI Screenshots3Login3Post login / List patients3Show patient3Add Patient3List gp3Add gp3List pharmacy44New pharmacy44List clinic doctor44List phebotomy records44List vaccination record44Add vaccination record44Standard user menu layout 144Standard user menu layout 344Add new user44Add new user44  | Generate report             | 35 |
| Login33Post login / List patients33Show patient33Add Patient33List gp33Add gp33List pharmacy44New pharmacy44List clinic doctor44Add clinic doctor44List phlebotomy records44List vaccination records44View Reports44Standard user menu layout 144Standard user menu layout 244Admin44Post login / show users44Add new user44List al clinica44Add new user44Add new user44 <tr< td=""><td>GUI Screenshots</td><td>36</td></tr<>   | GUI Screenshots             | 36 |
| Post login / List patients33Show patient33Add Patient33List gp33Add gp33List pharmacy44New pharmacy44List clinic doctor44Add clinic doctor44List phlebotomy records44List vaccination records44Add vaccination record44View Reports44Standard user menu layout 144Standard user menu layout 244Admin44Post login / show users44Add new user44List ellelinico44Add new user44Add new user44   | Login                       | 37 |
| Show patient33Add Patient33List gp33Add gp34List pharmacy44New pharmacy44New pharmacy44List clinic doctor44Add clinic doctor44Add phlebotomy records44Add phlebotomy records44Add vaccination records44View Reports44Standard user menu layout 144Standard user menu layout 244Admin44Post login / show users44Add new user44List clinic align and align | Post login / List patients  | 37 |
| Add Patient33List gp33Add gp34List pharmacy44New pharmacy44List clinic doctor44Add clinic doctor44Add clinic doctor44List phlebotomy records44Add phlebotomy record44List vaccination records44View Reports44Standard user menu layout 144Standard user menu layout 244Add new user44List oligin / show users44Add new user44List all clinica44Add new user44Add new user <td< td=""><td>Show patient</td><td>38</td></td<>  | Show patient                | 38 |
| List gp33Add gp34List pharmacy44New pharmacy44List clinic doctor44Add clinic doctor44Add clinic doctor44List phlebotomy records44Add phlebotomy records44List vaccination records44View Reports44Standard user menu layout 144Standard user menu layout 244Standard user menu layout 344Add new user44List olgin / show users44Add new user44List all clinico44List all clinico44  | Add Patient                 | 38 |
| Add gp33List pharmacy44New pharmacy44List clinic doctor44Add clinic doctor44List phlebotomy records44List phlebotomy records44Add phlebotomy records44List vaccination records44Add vaccination record44Standard user menu layout 144Standard user menu layout 244Standard user menu layout 344Add new user44List login / show users44Add new user44List all clinica44List all clinica44List all clinica44   | List gp                     | 39 |
| List pharmacy44New pharmacy40List clinic doctor44Add clinic doctor44List phlebotomy records44List phlebotomy record44List vaccination records44Add vaccination records44View Reports44Standard user menu layout 144Standard user menu layout 244Standard user menu layout 344Add new user44Add new user44Add new user44  | Add gp                      | 39 |
| New pharmacy44List clinic doctor4Add clinic doctor4List phlebotomy records44List phlebotomy records44Add phlebotomy records44List vaccination records44Add vaccination record44View Reports44Standard user menu layout 144Standard user menu layout 244Standard user menu layout 344Addmin44Post login / show users44List ell elinice44  | List pharmacy               | 40 |
| List clinic doctor4Add clinic doctor4List phlebotomy records4Add phlebotomy record4List vaccination records4Add vaccination record4View Reports4Standard user menu layout 14Standard user menu layout 24Standard user menu layout 34Admin4Post login / show users44Add new user44List all aliging44Add new user44Add new   | New pharmacy                | 40 |
| Add clinic doctor4List phlebotomy records42Add phlebotomy record42List vaccination records42Add vaccination record43View Reports44Standard user menu layout 144Standard user menu layout 244Standard user menu layout 344Admin44Post login / show users44Add new user44List all alining44  | List clinic doctor          | 41 |
| List phlebotomy records42Add phlebotomy record42List vaccination records42Add vaccination record42View Reports44Standard user menu layout 144Standard user menu layout 244Standard user menu layout 344Admin44Post login / show users44Add new user44  | Add clinic doctor           | 41 |
| Add phlebotomy record42List vaccination records43Add vaccination record43View Reports44Standard user menu layout 144Standard user menu layout 244Standard user menu layout 344Admin44Post login / show users44Add new user44List all clinica44   | List phlebotomy records     | 42 |
| List vaccination records43Add vaccination record43View Reports44Standard user menu layout 144Standard user menu layout 243Standard user menu layout 344Admin44Post login / show users44Add new user44List all alinica44  | Add phlebotomy record       | 42 |
| Add vaccination record43View Reports44Standard user menu layout 144Standard user menu layout 243Standard user menu layout 344Admin44Post login / show users44Add new user44List all alinica44  | List vaccination records    | 43 |
| View Reports44Standard user menu layout 144Standard user menu layout 244Standard user menu layout 344Admin44Post login / show users44Add new user44List all alinica44  | Add vaccination record      | 43 |
| Standard user menu layout 144Standard user menu layout 244Standard user menu layout 344Admin44Post login / show users44Add new user44List all alinica44  | View Reports                | 44 |
| Standard user menu layout 244Standard user menu layout 344Admin44Post login / show users44Add new user44List all alinica44   | Standard user menu layout 1 | 44 |
| Standard user menu layout 344Admin40Post login / show users40Add new user40List all aliging41  | Standard user menu layout 2 | 45 |
| Admin40Post login / show users40Add new user40List all aliging41   | Standard user menu layout 3 | 45 |
| Post login / show users46Add new user40List all aligned41  | Admin                       | 46 |
| Add new user 4   | Post login / show users     | 46 |
| List all aligner   | Add new user                | 46 |
| List all clinics 4   | List all clinics            | 47 |
| Add new clinic 4 <sup>-</sup>  | Add new clinic              | 47 |

# Backend

The server hosting the Clinic Management System (CMS) is a Linux server running Ubuntu Server (compliments of my project tutor), although any Linux server would suffice. Additional software installed includes NGINX, Postgres v9.5 and Elixir v1.6. NGINX is the software required to serve the system over the web. When NGINX receives a request over port 80 for ardu.itcarlow.ie, it gets routed to port 4000 where the application is running, handled by Phoenix. The response is then passed back to NGINX, which passes the request back through port 80 to display the webpage. A linux module named screen was installed, which allows processes to be "detached" from the server, allowing multiple CLI's to run concurrently, a necessity for accessing the server without stopping the system from being live. Some additional software was required to be installed, including Phoenix v1.2, Git, Node.js and Node.js's package manager, NPM.

### Frontend

For the frontend of the system the following technologies/modules are used:

- Phoenix for serving webpages, form submission and changeset creation.
- UI elements are created using a mixture of Bootstrap, CSS, HTML and JavaScript Dynamic content is created via:
  - Drab for dynamically updating form components and other client-side elements
  - Sortable for creating sortable tables and reports

NOTE: Please refer to technical manual for more information on modules and technologies used.

# Database Structure (Simplified)



### Database Structure (Detailed)



Ryan Donoghue | Clinic Management System | Design Document | 5

## **Detailed Use Cases**

### Login

Name: Login

Actors: User

Precondition: User is not logged in

**Description:** This use case beings when the system user wants to log in to their account on the system. The user enters their username and password to log in to the system. The use case ends when the user successfully logs into the system.

#### Main Success Scenario:

- 1. The user successfully navigates to the Clinic Management System web address
- 2. The system displays the login screen.
- 3. The user enters a username in the username textbox.
- 4. The user enters a password in the password textbox.
- 5. The user clicks the login button to submit their information.
- 6. The system validates the details entered by the user
- 7. The system adds the user to the currently active session.
- 8. The system redirects to the Patient display screen.

- 6a. The system fails to validate the users details
  - 1. The system returns the login form, with appropriate errors.
  - 2. The user enters their information again.
  - 3. The user clicks the login button
- 8a. The user logging in is an admin
  - 1. The system redirects to the User display screen

### Logout

Name: Logout

Actors: User

Precondition: A valid standard user session exists.

**Description:** This use case begins when the user wishes to logout of the system. The user clicks the logout button. This use case ends when the user has successfully logged out and the login screen is displayed.

- 1. The user is currently logged in.
- 2. The user clicks the logout button.
- 3. The system removes the user from the active session.
- 4. The system destroys the current session.
- 5. The system redirects the page to the login screen.

### **CRU** patient

**Create Patient** 

Name: Create Patient

### Actors: User

**Preconditions:** A valid standard user session exists, a valid general practitioner exists, a valid clinic doctor exists, a valid pharmacy exists

**Description:** The use case begins when the user successfully navigates to the add patient screen. The user fills out the form of patient details and submits the information. The use case ends when the patient is successfully added to the system.

### Main Success Scenario:

- 1. The user successfully navigates to the add patient screen.
- 2. The system displays the add patient screen.
- 3. The user fills out the add patient form.
- 4. The user clicks add patient.
- 5. The system validates the required fields have been filled.
- 6. The system inserts the inputted patient information into the database.
- 7. The system redirects to the patient display screen.
- 8. The system displays a confirmation message on the screen.

- 5a. The required fields have not been entered correctly
  - 1. The system displays the add patient form, with appropriate error message(s).
  - 2. The user re-enters the patient information.
  - 3. The user clicks the add patient button.
- 6a. The data contains errors and cannot be submitted
  - 1. The system displays the add patient form, with appropriate error message(s).
  - 2. The user re-enters the patient information.
  - 3. The user clicks the add patient button.

**Read Patient** 

Name: Read Patient

Actors: User

**Precondition:** A valid standard user session exists, a valid general practitioner exists, a valid clinic doctor exists, a valid pharmacy exists, a valid patient exists.

**Description:** The use case begins when the user successfully navigates to the show patient screen. The use case ends when the system displays the patient information to the user.

- 1. The user successfully navigates to the show patient screen.
- 2. The system fetches the data for the selected user.
- 3. The system displays the show patient information screen.

**Update Patient** 

Name: Update Patient

Actors: User

**Precondition:** A valid standard user session exists, a valid general practitioner exists, a valid clinic doctor exists, a valid pharmacy exists, a valid patient exists.

**Description:** The use case begins when the user successfully navigates to the edit patient screen. The user fills out the appropriate patient information that requires updating on the form, and submits the form. The use case end when the patient information has successfully been updated.

#### Main Success Scenario:

- 1. The user successfully navigates to the edit patient details screen.
- 2. The system fetches the information for the selected patient.
- 3. The system displays the edit patient details screen, with existing information prefilled on the patient details form.
- 4. The user enters any information that requires updating.
- 5. The user clicks the update patient button.
- 6. The system validates the required fields have been filled.
- 7. The system updates the inputted patient information in the database.
- 8. The system redirects to the patient display screen.
- 9. The system displays a confirmation message on the screen.

- 6a. The required fields have not been entered correctly
  - 1. The system displays the add patient form, with appropriate error message(s).
  - 2. The user re-enters the patient information.
  - 3. The user clicks the add patient button.
- 7a. The data contains errors and cannot be submitted
  - 1. The system displays the add patient form, with appropriate error message(s).
  - 2. The user re-enters the patient information.
  - 3. The user clicks the add patient button.

### **CRU** pharmacy

**Create Pharmacy** 

Name: Create Pharmacy

Actors: User

Preconditions: A valid standard user session exists

**Description:** The use case begins when the user successfully navigates to the add pharmacy screen. The user fills out the form of pharmacy details and submits the information. The use case ends when the pharmacy is successfully added to the system.

### Main Success Scenario:

- 1. The user successfully navigates to the add pharmacy screen.
- 2. The system displays the add pharmacy screen.
- 3. The user fills out the add pharmacy form.
- 4. The user clicks add pharmacy.
- 5. The system validates the required fields have been filled.
- 6. The system inserts the inputted pharmacy information into the database.
- 7. The system redirects to the pharmacy display screen.
- 8. The system displays a confirmation message on the screen.

- 5a. The required fields have not been entered correctly
  - 1. The system displays the add pharmacy form, with appropriate error message(s).
  - 2. The user re-enters the pharmacy information.
  - 3. The user clicks the add pharmacy button.
- 6a. The data contains errors and cannot be submitted
  - 1. The system displays the add pharmacy form, with appropriate error message(s).
  - 2. The user re-enters the pharmacy information.
  - 3. The user clicks the add pharmacy button.

Read pharmacy

Name: Read pharmacy

Actors: User

Precondition: A valid standard user session exists, a valid pharmacy exists

**Description:** The use case begins when the user successfully navigates to the show pharmacy screen. The use case ends when the system displays the pharmacy information to the user.

- 1. The user successfully navigates to the show pharmacy screen.
- 2. The system fetches the data for the selected user.
- 3. The system displays the show pharmacy information screen.

Update pharmacy

Name: Update pharmacy

Actors: User

Precondition: A valid standard user session exists, a valid pharmacy exists

**Description:** The use case begins when the user successfully navigates to the edit pharmacy screen. The user fills out the appropriate pharmacy information that requires updating on the form, and submits the form. The use case end when the pharmacy information has successfully been updated.

### Main Success Scenario:

- 1. The user successfully navigates to the edit pharmacy details screen.
- 2. The system fetches the information for the selected pharmacy.
- 3. The system displays the edit pharmacy details screen, with existing information prefilled on the pharmacy details form.
- 4. The user enters any information that requires updating.
- 5. The user clicks the update pharmacy button.
- 6. The system validates the required fields have been filled.
- 7. The system updates the inputted pharmacy information in the database.
- 8. The system redirects to the pharmacy display screen.
- 9. The system displays a confirmation message on the screen.

### Alternatives:

6a. The required fields have not been entered correctly

- 1. The system displays the add pharmacy form, with appropriate error message(s).
- 2. The user re-enters the pharmacy information.
- 3. The user clicks the add pharmacy button.

7a. The data contains errors and cannot be submitted

- 1. The system displays the add pharmacy form, with appropriate error message(s).
- 2. The user re-enters the pharmacy information.
- 3. The user clicks the add pharmacy button.

### CRU doctor

Create doctor

Name: Create doctor

Actors: User

Preconditions: A valid standard user session exists

**Description:** The use case begins when the user successfully navigates to the add doctor screen. The user fills out the form of doctor details and submits the information. The use case ends when the doctor is successfully added to the system.

### Main Success Scenario:

- 1. The user successfully navigates to the add doctor screen.
- 2. The system displays the add doctor screen.
- 3. The user fills out the add doctor form.
- 4. The user clicks add doctor.
- 5. The system validates the required fields have been filled.
- 6. The system inserts the inputted doctor information into the database.
- 7. The system redirects to the doctor display screen.
- 8. The system displays a confirmation message on the screen.

- 5a. The required fields have not been entered correctly
  - 1. The system displays the add doctor form, with appropriate error message(s).
  - 2. The user re-enters the doctor information.
  - 3. The user clicks the add doctor button.
- 6a. The data contains errors and cannot be submitted
  - 1. The system displays the add doctor form, with appropriate error message(s).
  - 2. The user re-enters the doctor information.
  - 3. The user clicks the add doctor button.

Read doctor

Name: Read doctor

Actors: User

Precondition: A valid standard user session exists, a valid clinic doctor exists

**Description:** The use case begins when the user successfully navigates to the show doctor screen. The use case ends when the system displays the doctor information to the user.

- 1. The user successfully navigates to the show doctor screen.
- 2. The system fetches the data for the selected user.
- 3. The system displays the show doctor information screen.

Update doctor

Name: Update doctor

Actors: User

**Precondition:** A valid standard user session exists, a valid doctor exists.

**Description:** The use case begins when the user successfully navigates to the edit doctor screen. The user fills out the appropriate doctor information that requires updating on the form, and submits the form. The use case end when the doctor information has successfully been updated.

#### Main Success Scenario:

- 1. The user successfully navigates to the edit doctor details screen.
- 2. The system fetches the information for the selected doctor.
- 3. The system displays the edit doctor details screen, with existing information prefilled on the doctor details form.
- 4. The user enters any information that requires updating.
- 5. The user clicks the update doctor button.
- 6. The system validates the required fields have been filled.
- 7. The system updates the inputted doctor information in the database.
- 8. The system redirects to the doctor display screen.
- 9. The system displays a confirmation message on the screen.

### Alternatives:

6a. The required fields have not been entered correctly

- 1. The system displays the add doctor form, with appropriate error message(s).
- 2. The user re-enters the doctor information.
- 3. The user clicks the add doctor button.

7a. The data contains errors and cannot be submitted

- 1. The system displays the add doctor form, with appropriate error message(s).
- 2. The user re-enters the doctor information.
- 3. The user clicks the add doctor button.

### CRU gp

Create gp

Name: Create gp

Actors: User

Preconditions: A valid standard user session exists

**Description:** The use case begins when the user successfully navigates to the add gp screen. The user fills out the form of gp details and submits the information. The use case ends when the gp is successfully added to the system.

### Main Success Scenario:

- 1. The user successfully navigates to the add gp screen.
- 2. The system displays the add gp screen.
- 3. The user fills out the add gp form.
- 4. The user clicks add gp.
- 5. The system validates the required fields have been filled.
- 6. The system inserts the inputted gp information into the database.
- 7. The system redirects to the gp display screen.
- 8. The system displays a confirmation message on the screen.

- 5a. The required fields have not been entered correctly
  - 1. The system displays the add gp form, with appropriate error message(s).
  - 2. The user re-enters the gp information.
  - 3. The user clicks the add gp button.
- 6a. The data contains errors and cannot be submitted
  - 1. The system displays the add gp form, with appropriate error message(s).
  - 2. The user re-enters the gp information.
  - 3. The user clicks the add gp button.

Read gp

Name: Read gp

Actors: User

Precondition: A valid standard user session exists, a valid gp exists.

**Description:** The use case begins when the user successfully navigates to the show gp screen. The use case ends when the system displays the gp information to the user.

- 1. The user successfully navigates to the show gp screen.
- 2. The system fetches the data for the selected user.
- 3. The system displays the show gp information screen.

Update gp

Name: Update gp

Actors: User

**Precondition:** A valid standard user session exists, a valid gp exists.

**Description:** The use case begins when the user successfully navigates to the edit gp screen. The user fills out the appropriate gp information that requires updating on the form, and submits the form. The use case end when the gp information has successfully been updated.

#### Main Success Scenario:

- 1. The user successfully navigates to the edit gp details screen.
- 2. The system fetches the information for the selected gp.
- 3. The system displays the edit gp details screen, with existing information prefilled on the gp details form.
- 4. The user enters any information that requires updating.
- 5. The user clicks the update gp button.
- 6. The system validates the required fields have been filled.
- 7. The system updates the inputted gp information in the database.
- 8. The system redirects to the gp display screen.
- 9. The system displays a confirmation message on the screen.

#### Alternatives:

6a. The required fields have not been entered correctly

- 1. The system displays the add gp form, with appropriate error message(s).
- 2. The user re-enters the gp information.
- 3. The user clicks the add gp button.
- 7a. The data contains errors and cannot be submitted
  - 1. The system displays the add gp form, with appropriate error message(s).
  - 2. The user re-enters the gp information.
  - 3. The user clicks the add gp button.

### **CRU** Clinic

Create clinic

Name: Create clinic

Actors: User

Preconditions: A valid admin user session exists

**Description:** The use case begins when the user successfully navigates to the add clinic screen. The user fills out the form of clinic details and submits the information. The use case ends when the clinic is successfully added to the system.

#### Main Success Scenario:

- 1. The user successfully navigates to the add clinic screen.
- 2. The system displays the add clinic screen.
- 3. The user fills out the add clinic form.
- 4. The user clicks add clinic.
- 5. The system validates the required fields have been filled.
- 6. The system inserts the inputted clinic information into the database.
- 7. The system redirects to the clinic display screen.
- 8. The system displays a confirmation message on the screen.

- 5a. The required fields have not been entered correctly
  - 1. The system displays the add clinic form, with appropriate error message(s).
  - 2. The user re-enters the clinic information.
  - 3. The user clicks the add clinic button.
- 6a. The data contains errors and cannot be submitted
  - 1. The system displays the add clinic form, with appropriate error message(s).
  - 2. The user re-enters the clinic information.
  - 3. The user clicks the add clinic button.

Read clinic

Name: Read clinic

Actors: User

Precondition: A valid admin user session exists, a valid clinic exists.

**Description:** The use case begins when the user successfully navigates to the show clinic screen. The use case ends when the system displays the clinic information to the user.

- 1. The user successfully navigates to the show clinic screen.
- 2. The system fetches the data for the selected user.
- 3. The system displays the show clinic information screen.

Update clinic

Name: Update clinic

Actors: User

Precondition: A valid admin session exists, a valid clinic exists.

**Description:** The use case begins when the user successfully navigates to the edit clinic screen. The user fills out the appropriate clinic information that requires updating on the form, and submits the form. The use case end when the clinic information has successfully been updated.

#### Main Success Scenario:

- 1. The user successfully navigates to the edit clinic details screen.
- 2. The system fetches the information for the selected clinic.
- 3. The system displays the edit clinic details screen, with existing information prefilled on the clinic details form.
- 4. The user enters any information that requires updating.
- 5. The user clicks the update clinic button.
- 6. The system validates the required fields have been filled.
- 7. The system updates the inputted clinic information in the database.
- 8. The system redirects to the clinic display screen.
- 9. The system displays a confirmation message on the screen.

### Alternatives:

6a. The required fields have not been entered correctly

- 1. The system displays the add clinic form, with appropriate error message(s).
- 2. The user re-enters the clinic information.
- 3. The user clicks the add clinic button.

7a. The data contains errors and cannot be submitted

- 1. The system displays the add clinic form, with appropriate error message(s).
- 2. The user re-enters the clinic information.
- 3. The user clicks the add clinic button.

### CRU vaccination record

Create vaccination record

Name: Create vaccination record

Actors: User

Preconditions: A valid standard user session exists

**Description:** The use case begins when the user successfully navigates to the add vaccination record screen. The user fills out the form of vaccination record details and submits the information. The use case ends when the vaccination record is successfully added to the system.

#### Main Success Scenario:

- 1. The user successfully navigates to the add vaccination record screen.
- 2. The system displays the add vaccination record screen.
- 3. The user fills out the add vaccination record form.
- 4. The user clicks add vaccination record.
- 5. The system validates the required fields have been filled.
- 6. The system inserts the inputted vaccination record information into the database.
- 7. The system redirects to the vaccination record display screen.
- 8. The system displays a confirmation message on the screen.

- 5a. The required fields have not been entered correctly
  - 1. The system displays the add vaccination record form, with appropriate error message(s).
  - 2. The user re-enters the vaccination record information.
  - 3. The user clicks the add vaccination record button.
- 6a. The data contains errors and cannot be submitted
  - 1. The system displays the add vaccination record form, with appropriate error message(s).
  - 2. The user re-enters the vaccination record information.
  - 3. The user clicks the add vaccination record button.

Read vaccination record

Name: Read vaccination record

Actors: User

Precondition: A valid standard user session exists, a valid clinic vaccination record exists

**Description:** The use case begins when the user successfully navigates to the show vaccination record screen. The use case ends when the system displays the vaccination record information to the user.

- 1. The user successfully navigates to the show vaccination record screen.
- 2. The system fetches the data for the selected user.
- 3. The system displays the show vaccination record information screen.

Update vaccination record

Name: Update vaccination record

Actors: User

**Precondition:** A valid standard user session exists, a valid vaccination record exists.

**Description:** The use case begins when the user successfully navigates to the edit vaccination record screen. The user fills out the appropriate vaccination record information that requires updating on the form, and submits the form. The use case end when the vaccination record information has successfully been updated.

#### Main Success Scenario:

- 1. The user successfully navigates to the edit vaccination record details screen.
- 2. The system fetches the information for the selected vaccination record.
- 3. The system displays the edit vaccination record details screen, with existing information prefilled on the vaccination record details form.
- 4. The user enters any information that requires updating.
- 5. The user clicks the update vaccination record button.
- 6. The system validates the required fields have been filled.
- 7. The system updates the inputted vaccination record information in the database.
- 8. The system redirects to the vaccination record display screen.
- 9. The system displays a confirmation message on the screen.

### Alternatives:

6a. The required fields have not been entered correctly

- 1. The system displays the add vaccination record form, with appropriate error message(s).
- 2. The user re-enters the vaccination record information.
- 3. The user clicks the add vaccination record button.

7a. The data contains errors and cannot be submitted

- 1. The system displays the add vaccination record form, with appropriate error message(s).
- 2. The user re-enters the vaccination record information.
- 3. The user clicks the add vaccination record button.

### CRU phlebotomy record

Create phlebotomy record

Name: Create phlebotomy record

Actors: User

Preconditions: A valid standard user session exists

**Description:** The use case begins when the user successfully navigates to the add phlebotomy record screen. The user fills out the form of phlebotomy record details and submits the information. The use case ends when the phlebotomy record is successfully added to the system.

#### Main Success Scenario:

- 1. The user successfully navigates to the add phlebotomy record screen.
- 2. The system displays the add phlebotomy record screen.
- 3. The user fills out the add phlebotomy record form.
- 4. The user clicks add phlebotomy record.
- 5. The system validates the required fields have been filled.
- 6. The system inserts the inputted phlebotomy record information into the database.
- 7. The system redirects to the phlebotomy record display screen.
- 8. The system displays a confirmation message on the screen.

- 5a. The required fields have not been entered correctly
  - 1. The system displays the add phlebotomy record form, with appropriate error message(s).
  - 2. The user re-enters the phlebotomy record information.
  - 3. The user clicks the add phlebotomy record button.
- 6a. The data contains errors and cannot be submitted
  - 1. The system displays the add phlebotomy record form, with appropriate error message(s).
  - 2. The user re-enters the phlebotomy record information.
  - 3. The user clicks the add phlebotomy record button.

Read phlebotomy record

Name: Read phlebotomy record

#### Actors: User

Precondition: A valid standard user session exists, a valid clinic phlebotomy record exists

**Description:** The use case begins when the user successfully navigates to the show phlebotomy record screen. The use case ends when the system displays the phlebotomy record information to the user.

- 1. The user successfully navigates to the show phlebotomy record screen.
- 2. The system fetches the data for the selected user.
- 3. The system displays the show phlebotomy record information screen.

Update phlebotomy record

Name: Update phlebotomy record

Actors: User

**Precondition:** A valid standard user session exists, a valid phlebotomy record exists.

**Description:** The use case begins when the user successfully navigates to the edit phlebotomy record screen. The user fills out the appropriate phlebotomy record information that requires updating on the form, and submits the form. The use case end when the phlebotomy record information has successfully been updated.

#### Main Success Scenario:

- 1. The user successfully navigates to the edit phlebotomy record details screen.
- 2. The system fetches the information for the selected phlebotomy record.
- 3. The system displays the edit phlebotomy record details screen, with existing information prefilled on the phlebotomy record details form.
- 4. The user enters any information that requires updating.
- 5. The user clicks the update phlebotomy record button.
- 6. The system validates the required fields have been filled.
- 7. The system updates the inputted phlebotomy record information in the database.
- 8. The system redirects to the phlebotomy record display screen.
- 9. The system displays a confirmation message on the screen.

### Alternatives:

6a. The required fields have not been entered correctly

- 1. The system displays the add phlebotomy record form, with appropriate error message(s).
- 2. The user re-enters the phlebotomy record information.
- 3. The user clicks the add phlebotomy record button.

7a. The data contains errors and cannot be submitted

- 1. The system displays the add phlebotomy record form, with appropriate error message(s).
- 2. The user re-enters the phlebotomy record information.
- 3. The user clicks the add phlebotomy record button.

### Add an inactivity reason

Name: Add an Inactivity Reason

Actors: User

Precondition: A valid standard user session exists

**Description:** This use case begins when the user successfully navigates to the add inactivity reason screen. The user fills out the inactivity reason form and submits. The use case ends when the inactivity reason has successfully been added.

- 1. The user successfully navigates to the add inactivity reason screen
- 2. The system displays the add inactivity reason form
- 3. The user enters the inactivity reason.
- 4. The user clicks the submit button.
- 5. The system inserts the inputted inactivity reason data into the database.
- 6. The system redirects to the show inactivity reason screen.

### Add a patient relationship

Name: Add a patient relationship

Actors: User

Precondition: A valid standard user session exists

**Description:** This use case begins when the user successfully navigates to the add patient relationship screen. The user fills out the patient relationship form and submits. The use case ends when the patient relationship has successfully been added.

- 1. The user successfully navigates to the add patient relationship screen
- 2. The system displays the add patient relationship form
- 3. The user enters the patient relationship.
- 4. The user clicks the submit button.
- 5. The system inserts the inputted patient relationship data into the database.
- 6. The system redirects to the show patient relationship screen.

### Add a vaccination brand

Name: Add a vaccination brand

Actors: User

Precondition: A valid standard user session exists

**Description:** This use case begins when the user successfully navigates to the add vaccination brand screen. The user fills out the vaccination brand form and submits. The use case ends when the vaccination brand has successfully been added.

- 1. The user successfully navigates to the add vaccination brand screen
- 2. The system displays the add vaccination brand form
- 3. The user enters the vaccination brand.
- 4. The user clicks the submit button.
- 5. The system inserts the inputted vaccination brand data into the database.
- 6. The system redirects to the show vaccination brand screen.

### Add a gender

Name: Add a gender

Actors: User

Precondition: A valid standard user session exists

**Description:** This use case begins when the user successfully navigates to the add gender screen. The user fills out the gender form and submits. The use case ends when the gender has successfully been added.

- 1. The user successfully navigates to the add gender screen
- 2. The system displays the add gender form
- 3. The user enters the gender.
- 4. The user clicks the submit button.
- 5. The system inserts the inputted gender data into the database.
- 6. The system redirects to the show gender screen.

### Create new user

Name: Create a user

#### Actors: User

Precondition: A valid admin user session exists, a valid clinic exists

Description: The use case begins when the user successfully navigates to the add new user screen. The user enters the information for the user into the displayed form, then submits. The use case end when the user is successfully added to the database.

#### Main Success Scenario:

- 1. The user successfully navigates to the add user screen.
- 2. The system displays the add user screen.
- 3. The user enters the information into the form
- 4. The user clicks the add user button.
- 5. The system validates the required fields have been filled.
- 6. The system add the inputted user information in the database.
- 7. The system redirects to the user display screen.
- 8. The system displays a confirmation message on the screen.

- 5a. The required fields have not been entered correctly
  - 1. The system displays the add phlebotomy record form, with appropriate error message(s).
  - 2. The user re-enters the phlebotomy record information.
  - 3. The user clicks the add phlebotomy record button.
- 6a. The data contains errors and cannot be submitted
  - 1. The system displays the add phlebotomy record form, with appropriate error message(s).
  - 2. The user re-enters the phlebotomy record information.
  - 3. The user clicks the add phlebotomy record button.

### Generate report

Name: Generate

Actors: User

Precondition: A valid standard user session exists

**Description:** The use case begins when the user successfully navigates to the report page. The use case ends when the report screen is shown.

- 1. The user successfully navigates to the report page.
- 2. The system fetches information from the database.
- 3. The system displays the report page

**GUI** Screenshots

### Login

| Ardu Management System  |                               |        |
|---|-------------------------------|--------|
|   | No user currently logged in / | Log in |
|   |                               |        |
| Login   |                               |        |
| Username  |                               |        |
| Password  |                               |        |
| Log in  |                               |        |
|   |                               |        |
|   |                               |        |
| 그는 것 같은 것 같은 것 같은 것 같은 것 같은 것 같은 것 같이 많이 많이 없는 것 같이 않는 것 않는 것 같이 않는 것 않는 것 같이 않는 것 않는 것 같이 않는 것 않는 것 않는 것 않는 것 않는 않는 것 않는 않는 것 않는 않는 것 않는 |                               |        |
| 승규는 것 같은 것 같은 것이 것이 없는 것 같은 것이 같은 것이 같은 것을 가지 않는 것 같이 없다.   |                               |        |
|   |                               |        |
|   |                               |        |
|   |                               |        |
|   |                               |        |

Standard User

### Post login / List patients

| Ardu Management System Patient Repo                    | ort Clinic Entities Clinical Me         |                                 |  |         |
|--|---|---------------------------------|--|---------|
|  |   |                                 | Logged in as: deirdre / Access level: standard / L | .og out |
| Welcome back!  |   |                                 |  |         |
|  |   |                                 |  |         |
| Patient  |   |                                 |  |         |
| To sort the table, click the heading of the column you | want to sort by. Click to cycle through | ascending and descending order. |  |         |
| Name   | Ppsn                                    | Date of birth                   |  |         |
| Ryan Donoghue  | 1234xxx                                 | 1995-04-29                      | Show   | Edit    |
| Jonathan Finlay  | xxx1234                                 | 1995-11-24                      | Show   | Edit    |
| Dylan Lawlor   | xxx6778                                 | 1991-05-17                      | Show   | Edit    |
| Kathleen Gaynor  | 384xxxx                                 | 1993-12-18                      | Show   | Edit    |
| Add Patient  |   |                                 |  |         |
|  |   |                                 |  |         |

### Show patient

| Ardu Management System | Patient |  | Clinical Measu |           |    |  |                       |                    |                 |
|------------------------|---------|--|----------------|-----------|----|--|-----------------------|--------------------|-----------------|
|                        |         |  |                |           |    |  | Logged in as: deirdre | Access level: star | ndard / Log out |
|                        |         |  |                |           |    |  |                       |                    |                 |
| Show patient           |         |  |                |           |    |  |                       |                    |                 |
| First Name:            |         |  | Ry             | in        |    |  |                       |                    |                 |
| Last Name:             |         |  | Do             | noghue    |    |  |                       |                    |                 |
| General Practitioner:  |         |  | Do             | nal Drum  | þ  |  |                       |                    |                 |
| Clinic Doctor:         |         |  | Ki             | enny      |    |  |                       |                    |                 |
| Pharmacy:              |         |  | Lic            | /ds Carlo | w  |  |                       |                    |                 |
| PH Number:             |         |  | xx             | 1234      |    |  |                       |                    |                 |
| PPSN:                  |         |  | 12             | 4xxx      |    |  |                       |                    |                 |
| Date of Birth:         |         |  | 19             | 5-04-29   |    |  |                       |                    |                 |
| Age:                   |         |  | 22             |           |    |  |                       |                    |                 |
| Street:                |         |  | Co             | tstown    |    |  |                       |                    |                 |
| Town/City:             |         |  | Ca             | stledermo | it |  |                       |                    |                 |
| County:                |         |  | Ki             | are       |    |  |                       |                    |                 |
| Eircode:               |         |  | ю              | 39R14     |    |  |                       |                    |                 |
| Gender:                |         |  | Ma             | e         |    |  |                       |                    |                 |
| Medical Card Present   |         |  | Ne             |           |    |  |                       |                    |                 |

### Add Patient

| Ardu Management S   | system Patient  | Report   | Clinic Entities   | Clinical Measurements  | Config           |  | Î       |
|---|---|--|---|--|------------------|--|---------|
|   |   |  |   |  |                  | Logged in as: deirdre / Access level: standard / L | .og out |
|   |   |  | ÷.  | •  | - <u> </u>       |  |         |
| Add patient   |   |  |   |  |                  |  |         |
| A valid GP, Clinic Docto  | r and Pharmacy mus  | t be present to  | o add a new patier  | ıt.  |                  |  |         |
| If the patient's GP, Pha<br>• Open a new tab<br>• Add the new rec<br>• Return to this pa<br>Once you have started | macy or Clinic Docto<br>or window, and navig;<br>ord into the system.<br>ge, and click the refre<br>filling out this form, do | r is not found<br>ate to the desi<br>sh button belo<br>o not close the | in the system, plea<br>ired page (for exar<br>ow.<br>e page or navigate | use follow these steps:<br>nple, Pharmacy).<br>away, or the data on the fo | rm will be lost! |  |         |
| First Name:   |   |  |   |  |                  |  |         |
| Last Name:  |   |  |   |  |                  |  |         |
| Street Name/Number:   | Street and Number   | , P.O. box   |   |  |                  |  |         |
| Town/City:  |   |  |   |  |                  |  |         |
| County: Carlow  |   |  |   |  |                  |  | •       |

### List gp

| Ardu Management System               | Patient Report           |   | Clinical Measurements         |                     |                            | Î                              |
|--------------------------------------|--------------------------|---|-------------------------------|---------------------|----------------------------|--------------------------------|
|                                      |                          |   |                               |                     | Logged in as: deirdre / Ac | cess level: standard / Log out |
|                                      |                          | - Marine - M |                               |                     |                            |                                |
| General Practitio                    | ner                      |   |                               |                     |                            |                                |
| To sort the table, click the heading | g of the column you want | to sort by. Click to  | o cycle through ascending and | d descending order. |                            |                                |
| Name                                 |                          | Address   |                               | Training level      |                            |                                |
| Joe Bloggs                           |                          | Waterford   |                               | 1                   |                            | Show Edit                      |
| John Doe                             |                          | Carlow  |                               | 1                   |                            | Show Edit                      |
| Joe Dolan                            |                          | Baltinglass   |                               | 1                   |                            | Show Edit                      |
| Donal Drump                          |                          | Kilkenny  |                               | 1                   |                            | Show Edit                      |
| Add General Practitioner             |                          |   |                               |                     |                            |                                |
|                                      |                          |   |                               |                     |                            |                                |

### Add gp

| Ardu Managen    | nent System      | Patient  | Report | Clinic Entities | Clinical Measurements | Config |      |                   |                    |               | Í  |
|-----------------|------------------|----------|--------|-----------------|-----------------------|--------|------|-------------------|--------------------|---------------|----|
|                 |                  |          |        |                 |                       |        | Logg | ed in as: deirdre | Access level: stan | dard / Log ou | ut |
|                 |                  |          |        | n Kennen ander  | •                     |        |      |                   |                    |               |    |
| Add Con         | oral Dra         | ctition  | or     |                 |                       |        |      |                   |                    |               |    |
| Auu Gen         |                  | Guuon    |        |                 |                       |        |      |                   |                    |               |    |
| Name:           |                  |          |        |                 |                       |        |      |                   |                    |               |    |
| Address:        |                  |          |        |                 |                       |        |      |                   |                    |               | ĩ. |
|                 |                  |          |        |                 |                       |        |      |                   |                    |               |    |
| Mobile number:  |                  |          |        |                 |                       |        |      |                   |                    |               | J  |
| Landline number | n l              |          |        |                 |                       |        |      |                   |                    |               | 1  |
|                 |                  |          |        |                 |                       |        |      |                   |                    |               |    |
| Fax number:     |                  |          |        |                 |                       |        |      |                   |                    |               | J  |
| Email:          |                  |          |        |                 |                       |        |      |                   |                    |               |    |
| Training level: | Choose a trainir | na level |        |                 |                       |        |      |                   |                    |               | 3  |
|                 |                  |          |        |                 |                       |        |      |                   |                    |               | d: |
| Save            |                  |          |        |                 |                       |        |      |                   |                    |               |    |
| Back            |                  |          |        |                 |                       |        |      |                   |                    |               |    |
|                 |                  |          |        |                 |                       |        |      |                   |                    |               | _  |
|                 |                  |          |        |                 |                       |        |      |                   |                    |               |    |

### List pharmacy

| Ardu Management System Patient Repo                      | rt Clinic Entities Clinical Measurements Config                         |                                    |                         |
|--|---|------------------------------------|-------------------------|
|  |   | Logged in as: deirdre / Access lev | /el: standard / Log out |
|  |   |                                    |                         |
| Pharmacy   |   |                                    |                         |
| To sort the table, click the heading of the column you v | vant to sort by. Click to cycle through ascending and descending order. |                                    |                         |
| Name   | Address   | Mobile number                      |                         |
| Lloyds Carlow  | Main Street, Carlow Town, Co. Carlow                                    | 085-xxx-xxxx                       | Show Edit               |
| Morrisseys Carlow  | Tullow Street, Carlow Town, Co. Carlow                                  | 085-xxx-xxxx                       | Show Edit               |
| Lloyds Carlow  | Barrow Street, Carlow Town, Co. Carlow                                  | 085-xxx-xxxx                       | Show Edit               |
| Sam McCauleys Carlow                                     | Other Street, Carlow Town, Co. Carlow                                   | 085-xxx-xxxx                       | Show Edit               |
| Sam McCauleys Waterford                                  | Main Street, Waterford Town, Co. Waterford                              | 085-xxx-xxxx                       | Show Edit               |
| Add Pharmacy   |   |                                    |                         |
|  |   |                                    |                         |
|  |   |                                    |                         |

### New pharmacy

| Ardu Management System      | Patient |  | Clinical Measurements |   |  | Â |
|-----------------------------|---------|--|-----------------------|---|--|---|
|                             |         |  |                       |   | Logged in as: deirdre / Access level: standard / Log out |   |
|                             |         |  |                       | • |  | ٦ |
| Add pharmacy                |         |  |                       |   |  |   |
| Name:                       |         |  |                       |   |  | ( |
| Address:                    |         |  |                       |   |  | ( |
| Mobile number:              |         |  |                       |   |  |   |
| Landline number:            |         |  |                       |   |  |   |
| Fax number:                 |         |  |                       |   |  |   |
| Email:                      |         |  |                       |   |  |   |
| Alternative contact person: |         |  |                       |   |  |   |
| Alternative contact number: |         |  |                       |   |  |   |
| Save                        |         |  |                       |   |  |   |
| Back                        |         |  |                       |   |  | • |

### List clinic doctor

| Ardu Management System Patient Rep                     | ort Clinic Entities Clinical Measure  |                              |  |
|--|---|------------------------------|--|
|  |   | Logg                         | ed in as: deirdre / Access level: standard / Log out |
|  | 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - |                              |  |
| Clinic Doctor  |   |                              |  |
| To sort the table, click the heading of the column you | want to sort by. Click to cycle through asce  | ending and descending order. |  |
| Name   | Address   | Training level               |  |
| Jim Dunne  | Baltinglass   | 2                            | Show Edit  |
| Declan Byrne   | Carlow  | 2                            | Show   |
| Jimmy McNamara   | Kilkenny  | 2                            | Show   |
| Caroline Nolan   | Waterford   | 2                            | Show   |
| Add Clinic Doctor                                      |   |                              |  |
|  |   |                              |  |

### Add clinic doctor

| Ardu Management System Patient          | Report Clinic Entities | Clinical Measurements | Config |  |           |
|---|------------------------|-----------------------|--------|--|-----------|
|   |                        |                       |        | Logged in as: deirdre / Access level: standard | / Log out |
|   |                        | •                     |        |  |           |
| Add Clinic Doctor                       |                        |                       |        |  |           |
| Name:                                   |                        |                       |        |  |           |
| Address:                                |                        |                       |        |  |           |
| Mobile number:                          |                        |                       |        |  |           |
| Landline number:                        |                        |                       |        |  |           |
| Fax number:                             |                        |                       |        |  |           |
| Email:                                  |                        |                       |        |  |           |
| Training Level: Choose a training level |                        |                       |        |  | •         |
| Save                                    |                        |                       |        |  |           |
| Back                                    |                        |                       |        |  |           |
|   |                        |                       |        |  |           |

### List phlebotomy records

| Ardu Management System | ı Patient Report C | linic Entities Clinical Measureme | nts Config     |                              |                               |
|------------------------|--------------------|-----------------------------------|----------------|------------------------------|-------------------------------|
|                        |                    |                                   |                | Logged in as: deirdre / Acco | ess level: standard / Log out |
|                        |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |
| Phlebotomy rec         | ords               |                                   |                |                              |                               |
| Name                   | HIV postive        | HEP C positive                    | HEP A positive | HEP B positive               |                               |
|                        |                    |                                   | Net            |                              |                               |
| Ryan Donoghue          | res                | NO                                | NO             | res                          | Show Edit                     |
| Add Phlebotomy Record  |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |
|                        |                    |                                   |                |                              |                               |

### Add phlebotomy record

| Ardu Management System              | Patient  | Report  | Clinic Entities | Clinical Measurements | Config |   |   |                       |                     |          |         | ^ |
|-------------------------------------|----------|---------|-----------------|-----------------------|--------|---|---|-----------------------|---------------------|----------|---------|---|
|                                     |          |         |                 |                       |        |   | 1 | Logged in as: deirdre | / Access level: sta | indard / | Log out |   |
|                                     |          | <u></u> |                 |                       |        | • |   |                       |                     |          |         | 1 |
| Add phlebotomy                      | record   | ł       |                 |                       |        |   |   |                       |                     |          |         | I |
| Patient: Ryan Donoghue              |          |         |                 |                       |        |   |   |                       |                     |          | ¥       |   |
| HIV Test                            |          |         |                 |                       |        |   |   |                       |                     |          |         |   |
| Is the patient HIV positive?        |          |         |                 |                       |        |   |   |                       |                     |          |         |   |
| Test date: 2018 V / April           | ▼ / 10 ▼ |         |                 |                       |        |   |   |                       |                     |          |         | l |
| ,<br>Hepatitus B test               |          |         |                 |                       |        |   |   |                       |                     |          |         |   |
| Is the patient Hepatitus B position | /e?      | ]       |                 |                       |        |   |   |                       |                     |          |         |   |
| Date: 2018 v / April v /            | 10 🔻     |         |                 |                       |        |   |   |                       |                     |          |         |   |
| Hepatitus C test                    |          |         |                 |                       |        |   |   |                       |                     |          |         |   |
| Is the patient Hepatitus C position | /e?      |         |                 |                       |        |   |   |                       |                     |          |         | • |

### List vaccination records

| rdu Management System Patient | Report Clinic Entities Clinical | Measurements Config |                             |                                |
|-------------------------------|---------------------------------|---------------------|-----------------------------|--------------------------------|
|                               |                                 |                     | Logged in as: deirdre / Acc | cess level: standard / Log out |
|                               |                                 |                     |                             |                                |
| accination records            |                                 |                     |                             |                                |
| Name                          | Dose 1 given                    | Dose 2 given        | Dose 3 given                |                                |
| Ryan Donoghue                 | Yes                             | Yes                 | No                          | Chow Edit                      |
|                               |                                 |                     |                             | Show                           |
| Add Vaccination Record        |                                 |                     |                             |                                |
|                               |                                 |                     |                             | 다 바람이 눈이 가지                    |
|                               |                                 |                     |                             |                                |
|                               |                                 |                     |                             |                                |
|                               |                                 |                     |                             |                                |
|                               |                                 |                     |                             |                                |
|                               |                                 |                     |                             |                                |
|                               |                                 |                     |                             |                                |
|                               |                                 |                     |                             |                                |

### Add vaccination record

| Ardu Management     | System            | Patient      | Report | Clinic Entities | Clinical Measurements |  |               |               |                   |              |   |
|---------------------|-------------------|--------------|--------|-----------------|-----------------------|--|---------------|---------------|-------------------|--------------|---|
|                     |                   |              |        |                 |                       |  | Logged in as: | deirdre / Acc | ess level: standa | ard / Log ou | t |
|                     |                   |              |        | -               |                       |  |               | •             |                   |              |   |
| Add voccin          | otion r           | opord        |        |                 |                       |  |               |               |                   |              |   |
| Aud vaccin          | ation             | ecord        |        |                 |                       |  |               |               |                   |              |   |
| Patient: Ryan Dor   | noghue            |              |        |                 |                       |  |               |               |                   | •            |   |
| Vaccination Brand:  | Choose a v        | accination b | and    |                 |                       |  |               |               |                   | ٣            |   |
| Vaccination Dose 1  |                   |              |        |                 |                       |  |               |               |                   |              |   |
| Has the patient had | d their first vac | cination dos | e?     |                 |                       |  |               |               |                   |              |   |
| Vaccination date: 2 | 018 🔻 / Apri      | I ▼ /        | 10 🔻   |                 |                       |  |               |               |                   |              |   |
| Vaccination Dose 2  |                   |              |        |                 |                       |  |               |               |                   |              |   |
| Has the patient had | d their second    | vaccination  | dose?  |                 |                       |  |               |               |                   |              |   |
| Vaccination Dose 3  |                   |              |        |                 |                       |  |               |               |                   |              |   |
| Has the patient had | d their third va  | ccination do | se?    |                 |                       |  |               |               |                   |              |   |

### View Reports

| Ardu Management System               | Patient Report            |                               | al Measurements Config             |                      |                         |                 |
|--------------------------------------|---------------------------|-------------------------------|------------------------------------|----------------------|-------------------------|-----------------|
|                                      |                           |                               |                                    | Logged in as: deir   | rdre / Access level: st | andard / Log ou |
|                                      |                           |                               |                                    |                      |                         |                 |
|                                      |                           |                               |                                    |                      |                         |                 |
| Patients                             |                           |                               |                                    |                      |                         |                 |
| To sort the table, click the heading | ng of the column you want | to sort by. Click to cycle th | rough ascending and descending ord | er.                  |                         |                 |
|                                      |                           |                               |                                    |                      |                         |                 |
| Patient Name                         | D.O.B                     | GP                            | Clinic Doctor                      | Pharmacy             | County                  | Age             |
| Ryan Donoghue                        | 1995-04-29                | Donal Drump                   | Caroline Nolan                     | Lloyds Carlow        | Kildare                 | 22              |
| Jonathan Finlay                      | 1995-11-24                | Joe Bloggs                    | Declan Byrne                       | Lloyds Carlow        | Laois                   | 22              |
| Dylan Lawlor                         | 1991-05-17                | Joe Dolan                     | Jim Dunne                          | Morrisseys Carlow    | Kilkenny                | 26              |
| Kathleen Gaynor                      | 1993-12-18                | John Doe                      | Jimmy McNamara                     | Sam McCauleys Carlow | Carlow                  | 24              |
|                                      |                           |                               |                                    |                      |                         |                 |
|                                      |                           |                               |                                    |                      |                         |                 |
|                                      |                           |                               |                                    |                      |                         |                 |
|                                      |                           |                               |                                    |                      |                         |                 |
|                                      |                           |                               |                                    |                      |                         |                 |
|                                      |                           |                               |                                    |                      |                         |                 |
|                                      |                           |                               |                                    |                      |                         |                 |

### Standard user menu layout 1

| Patient o  | harmacy<br>eneral Practitoner               |                     | Logged in as: deirdre / Access level: st | andard / Log out   |
|--|---|---------------------|--|--|
| Patient c  | eneral Practitoner                          |                     |  | t and the second se |
| Patient c  | linic Doctor                                |                     |  |  |
|  |   |                     |  |  |
| To sort the table, click the heading of the column you want to s | ort by. Click to cycle through ascending an | d descending order. |  |  |
| Name   | Ppsn  | Date of birth       |  |  |
| Ryan Donoghue  | 1234xxx                                     | 1995-04-29          |  | Show Edit  |
| Jonathan Finlay  | xxx1234                                     | 1995-11-24          |  | Show Edit  |
| Dylan Lawlor   | xxx6778                                     | 1991-05-17          |  | Show Edit  |
| Kathleen Gaynor  | 384xxxx                                     | 1993-12-18          |  | Show Edit  |
| Add Patient  |   |                     |  |  |
|  |   |                     |  |  |

### Standard user menu layout 2

| Ardu Management System Patient                     |                                    |                            |                     |                         |                                  |
|--|------------------------------------|----------------------------|---------------------|-------------------------|----------------------------------|
|  |                                    | Phlebotomy                 |                     | Logged in as: deirdre / | Access level: standard / Log out |
|  |                                    | Vaccination                | · · · · ·           |                         |                                  |
| Patient  |                                    |                            |                     |                         |                                  |
| To sort the table, click the heading of the column | nn you want to sort by. Click to o | cycle through ascending an | d descending order. |                         |                                  |
| Name   | Poso                               |                            | Date of birth       |                         |                                  |
| Rvan Donoghue                                      | 1234xxx                            |                            | 1995-04-29          |                         |                                  |
|  | 1201744                            |                            | 1000 01 20          |                         | Show Edit                        |
| Jonathan Finlay                                    | xxx1234                            |                            | 1995-11-24          |                         | Show Edit                        |
| Dylan Lawlor                                       | xxx6778                            |                            | 1991-05-17          |                         | Show                             |
| Kathleen Gaynor                                    | 384xxxx                            |                            | 1993-12-18          |                         | Show Edit                        |
| Add Patient  |                                    |                            |                     |                         |                                  |
|  |                                    |                            |                     |                         |                                  |
|  |                                    |                            |                     |                         |                                  |

### Standard user menu layout 3

| Ardu Management System Patient Report                     | Clinic Entities Clinical Me           |                              |  |
|---|---------------------------------------|------------------------------|--|
|   |                                       | Patient gender<br>options    | Logged in as: deirdre / Access level: standard / Log out |
| Patient   |                                       | Patient relationship options |  |
| To sort the table, click the heading of the column you wa | nt to sort by. Click to cycle through | ascending and options        |  |
| Name  | Ppsn                                  | Vaccination brands           |  |
| Ryan Donoghue   | 1234xxx                               | 1995-04-29                   | Show Edit  |
| Jonathan Finlay   | xxx1234                               | 1995-11-24                   | Show Edit  |
| Dylan Lawlor  | xxx6778                               | 1991-05-17                   | Show Edit  |
| Kathleen Gaynor   | 384xxxx                               | 1993-12-18                   | Show   |
| Add Patient   |                                       |                              |  |
|   |                                       |                              |  |

### Admin

Post login / show users

| 1           |          | •             |              |      |
|-------------|----------|---------------|--------------|------|
| Icome back! |          |               |              |      |
| sers        |          |               |              |      |
| me          | Username | Clinic        | Access Level |      |
| nin         | admin    | defaultclinic | admin        | Show |
| rdre        | deirdre  | Carlow        | standard     | Shov |
| ld user     |          |               |              |      |
|             |          |               |              |      |
|             |          |               |              |      |
|             |          |               |              |      |
|             |          |               |              |      |

### Add new user

| Ardu Management System Users Clinic Management | ۸<br>۱  |
|--|---|
|  | Logged in as: admin / Access level: admin / Log out |
| New User                                       |   |
| Name   |   |
| Username                                       |   |
| Password                                       |   |
| Clinic: Choose a Clinic                        | •   |
| standard                                       | T   |
| Create User                                    |   |
|  | •   |

### List all clinics

| du Management System | Users Clinic Manageme |            |  |                   |                    |             |
|----------------------|-----------------------|------------|--|-------------------|--------------------|-------------|
|                      |                       |            |  | Logged in as: adm | in / Access level: | admin / Log |
|                      |                       |            |  |                   |                    |             |
| icting clinics       |                       |            |  |                   |                    |             |
| isting clinics       |                       |            |  |                   |                    |             |
| me                   | Addre                 | iS         |  |                   |                    |             |
| faultclinic          | default               | olinic     |  |                   |                    | Show Edit   |
| rlow                 | St Dv                 | nohnas     |  |                   |                    |             |
|                      | 5t. Dy                | iprin into |  |                   |                    | Show Edit   |
| ld clinic            |                       |            |  |                   |                    |             |
|                      |                       |            |  |                   |                    |             |
|                      |                       |            |  |                   |                    |             |
|                      |                       |            |  |                   |                    |             |
|                      |                       |            |  |                   |                    |             |
|                      |                       |            |  |                   |                    |             |
|                      |                       |            |  |                   |                    |             |
|                      |                       |            |  |                   |                    |             |
|                      |                       |            |  |                   |                    |             |
|                      |                       |            |  |                   |                    |             |
|                      |                       |            |  |                   |                    |             |

### Add new clinic

| Ardu Management System | Users | Clinic Management |                     |                     |              |
|------------------------|-------|-------------------|---------------------|---------------------|--------------|
|                        |       |                   | Logged in as: admin | Access level: admin | / Log out    |
|                        |       |                   |                     |                     |              |
| New clinic             |       |                   |                     |                     |              |
| Name                   |       |                   |                     |                     |              |
|                        |       |                   |                     |                     |              |
| Address                |       |                   |                     |                     |              |
|                        |       |                   |                     |                     |              |
| Submit                 |       |                   |                     |                     |              |
| Back                   |       |                   |                     |                     |              |
|                        |       |                   |                     |                     | - 10<br>- 10 |
|                        |       |                   |                     |                     |              |
|                        |       |                   |                     |                     |              |
|                        |       |                   |                     |                     |              |
|                        |       |                   |                     |                     | <b>9</b> - 1 |
|                        |       |                   |                     |                     |              |
|                        |       |                   |                     |                     |              |

Ryan Donoghue | Clinic Management System | Design Document | 46