جامعة جدة
University of Jeddah

College of Computer Science & Engineering

Department of Computer Science & Artificial Intelligence

RAFD

A VOLUNTEER APPLICATION FOR THE UNIVERSITY OF JEDDAH COVID-19 VACCINE CENTER

CCCS 214-Object oriented programming(II) project
Ahd abdulrahman alsubhi-200655-P

instructor name:
-Ms.Dalal Mohammed

TABLE OF CONTENTS

1. INTRODUCTION

The Vaccination Center at the University of Jeddah receives hundreds of visitors daily to receive vaccine doses, whether from university students and employees or from all members of society. The increase in the number of visitors led to an increase in work pressure on the employees, and due to the lack of employees compared to the number of visitors, volunteer opportunities were announced in the university clinic for all health and technical specialties.

2. PROBLEM DESCRIPTION

Since there are many people who wanted to volunteer, they were registered through the questionnaires established by the university.Instead,a health volunteering application will be created to store data in a dedicated volunteer database linked to the university clinics system, in order to:

-Registration directly through the system.
-facilitate and organize the management of their tasks.
-calculate volunteer hours.
-supervision with volunteer and organizational teams.
-making reports and statistics.

3. NAME CONCEPT

ر ف د: **الرِّفْدُ** بكسر الراء العطاء والصلة وبفتحها المصدر و **رَفَدَهُ** أعطاه **ورفده** أعانه و **الإرفَادُ** أيضا الإعطاء والإعانة
مرادفات رَفْد (اسم):
إحْسَان ,إِعانَة , إِغَاثَة , عَطَاء , عَوْن , غَوْث , مُسَاعَدَة , مُسَانَدَة , مُعاونَة , مِنْحَة , نَجْدَة , هَدِيّة.

4. APPLICATION DESCRIPTION

The main purpose is to provide all the volunteers with a pleasant experience and an easy-to-use service.

-The user will be able to Log in and Sign up

-The user will be able to view his/her profile which contains personal information, volunteer hours, number of previously participated events, and medals.

-The user will be able to view the team and admin information

-The user will be able to view a schedule of assigned tasks and deadlines.

-The user will be able to generate a report about the tasks

-The user will be able to view the university clinic news.

Application used:

- App sketch: Figma
- DataBase connection: MySql Workbeanch
- App programming: Java NetBeans
- App Interface design: Scene builder

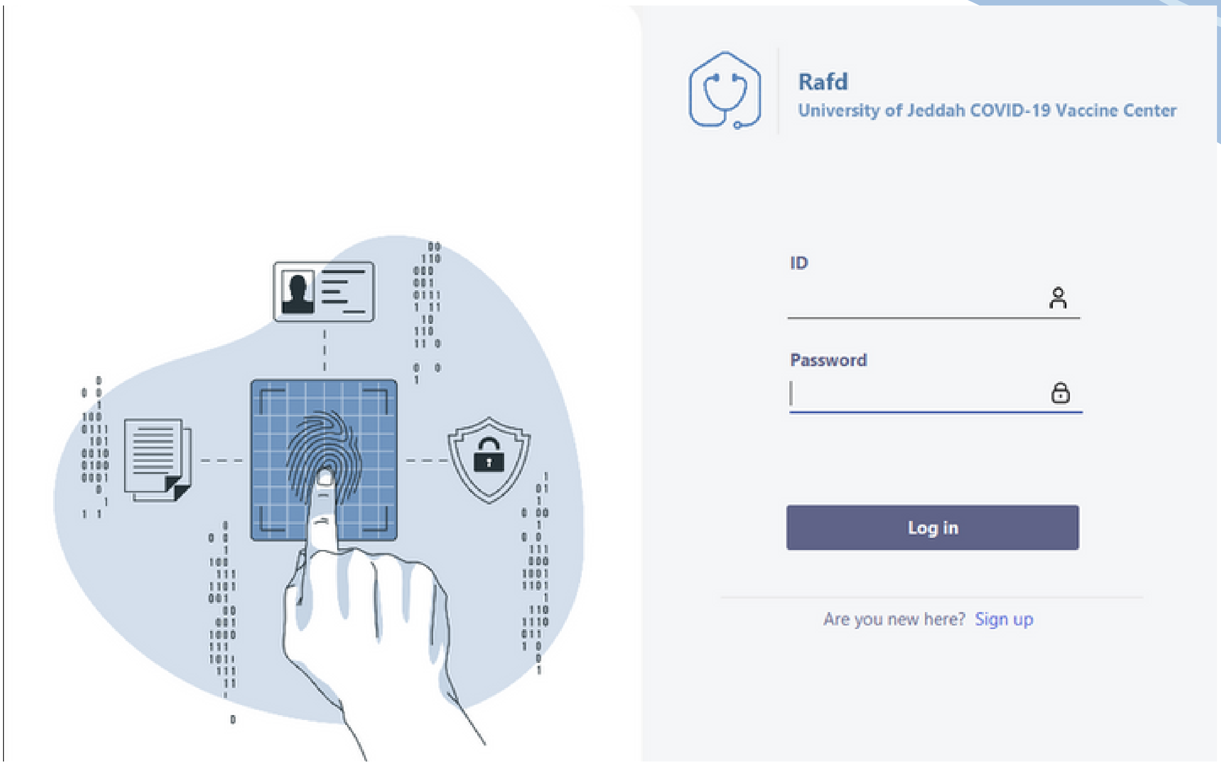
Application windows:

The Uj clinic task managment app has 5 windows .Log in ,Sign in ,Home ,Clinic news reports .The size of the frame is W 1050,H 700

libraries used:

- javax.swing
- com.jfoenix.controls
- java.net.URL
- java.util.ResourceBundle
- javafx.event.ActionEvent
- javafx.fxml.Initializable
- java.sql.Connection
- java.sql.DriverManager
- java.sql.PreparedStatement
- java.sql.ResultSet
- javafx.fxml.FXML
- javafx.scene
- javafx.stage

- **Log in Page:**



Rafd

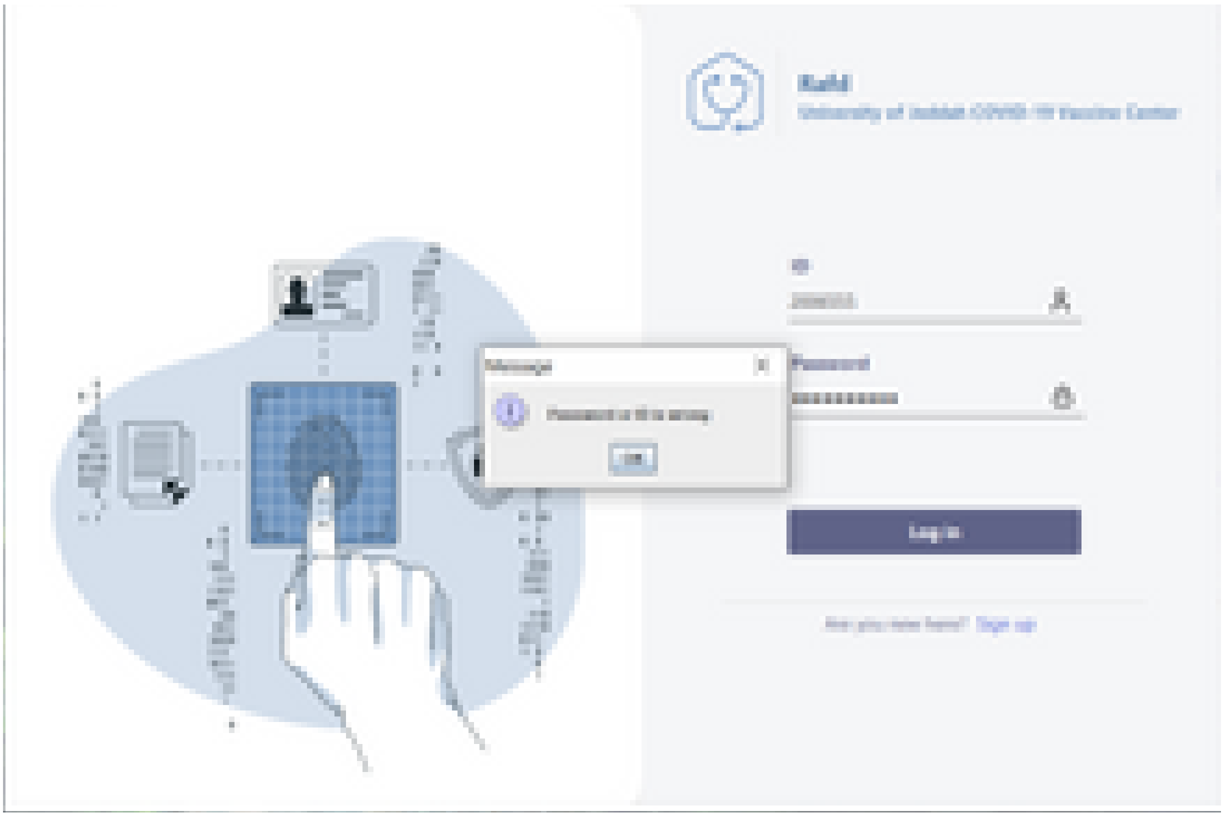
University of Jeddah COVID-19 Vaccine Center

ID

Password

Log in

Are you new here? Sign up



Rafd

University of Jeddah COVID-19 Vaccine Center

Message

Password or ID is wrong

OK

ID [illegible]

Password ●●●●●●●●●●●

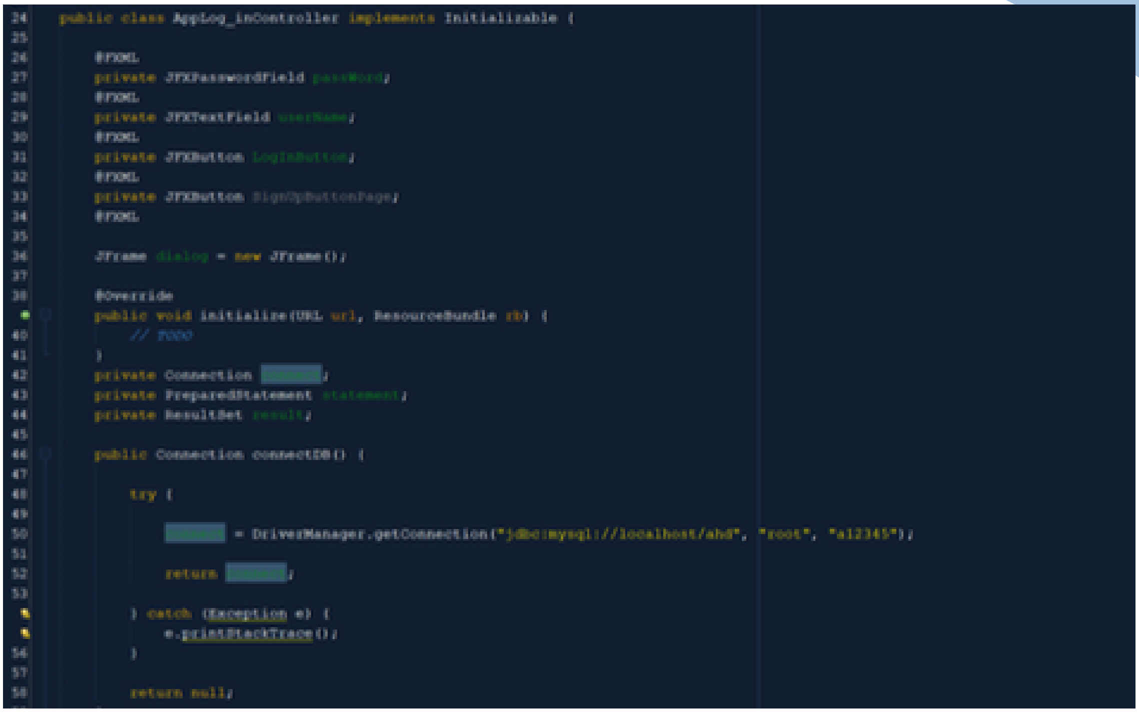
Log in

Are you new here? Sign up

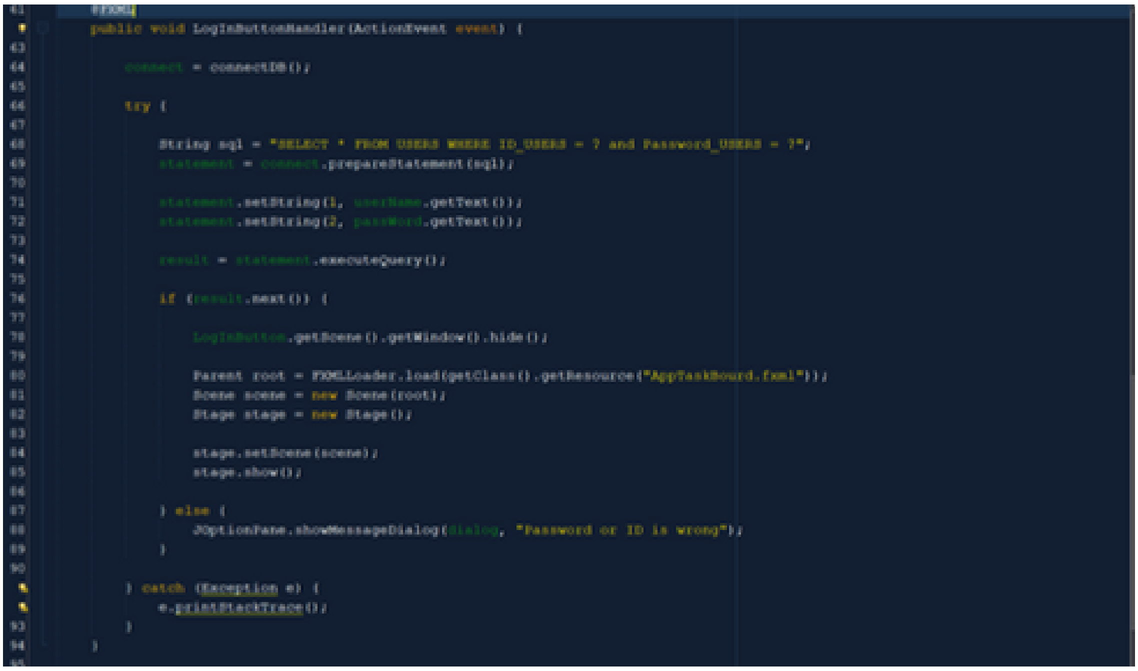
Page Interface design:

Instead of using the scene builder's default component, I used the Jfoenix library to design the page, which gives it a more contemporary look. I used JFXTeaxtField for the ID, JFXPasswordField for the password, and JFXButton for the login button. For validation of the input, I used JOptionPane.showMessageDialog if the user login information does not match the database.

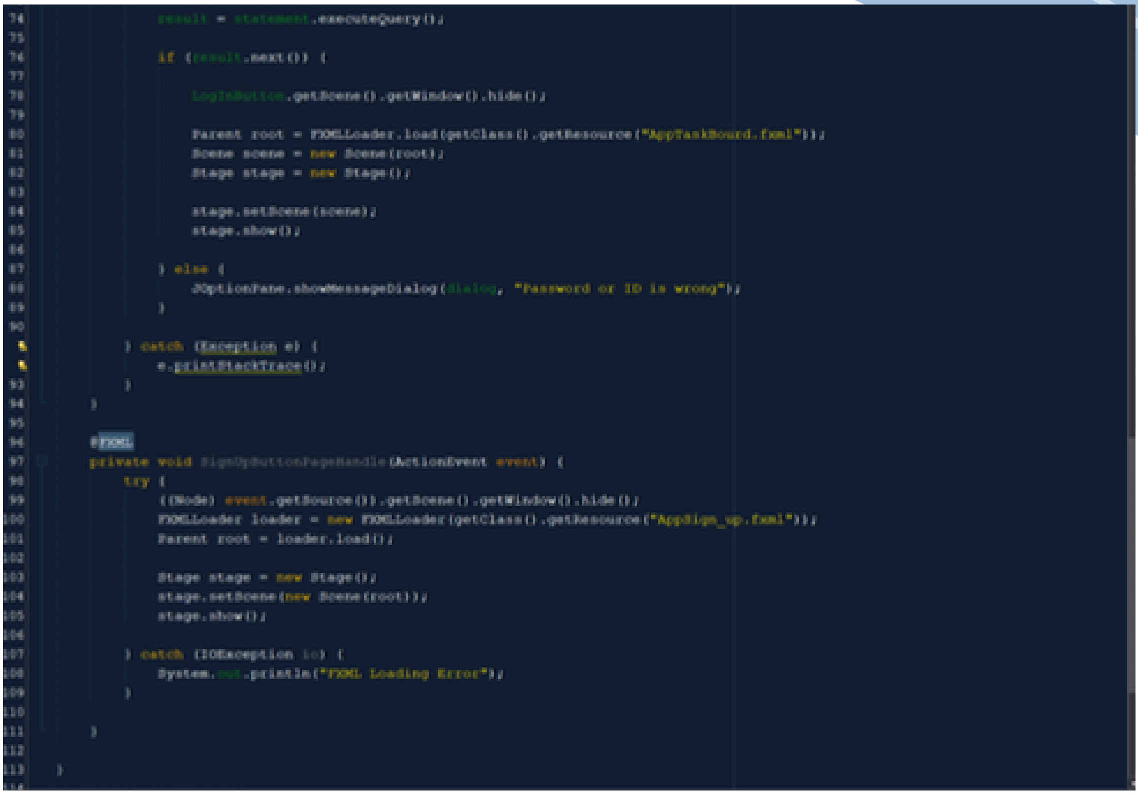
Log in code:



```java
public class AppLog_inController implements Initializable {

    @FXML
    private JFXPasswordField passWord;
    @FXML
    private JFXTextField userName;
    @FXML
    private JFXButton LogInButton;
    @FXML
    private JFXButton SignUpButtonPage;
    @FXML

    JFrame dialog = new JFrame();

    @Override
    public void initialize(URL url, ResourceBundle rb) {
        // TODO
    }
    private Connection connect;
    private PreparedStatement statement;
    private ResultSet result;

    public Connection connectDB() {

        try {

            connect = DriverManager.getConnection("jdbc:mysql://localhost/ahd", "root", "a12345");

            return connect;

        } catch (Exception e) {
            e.printStackTrace();
        }

        return null;
```

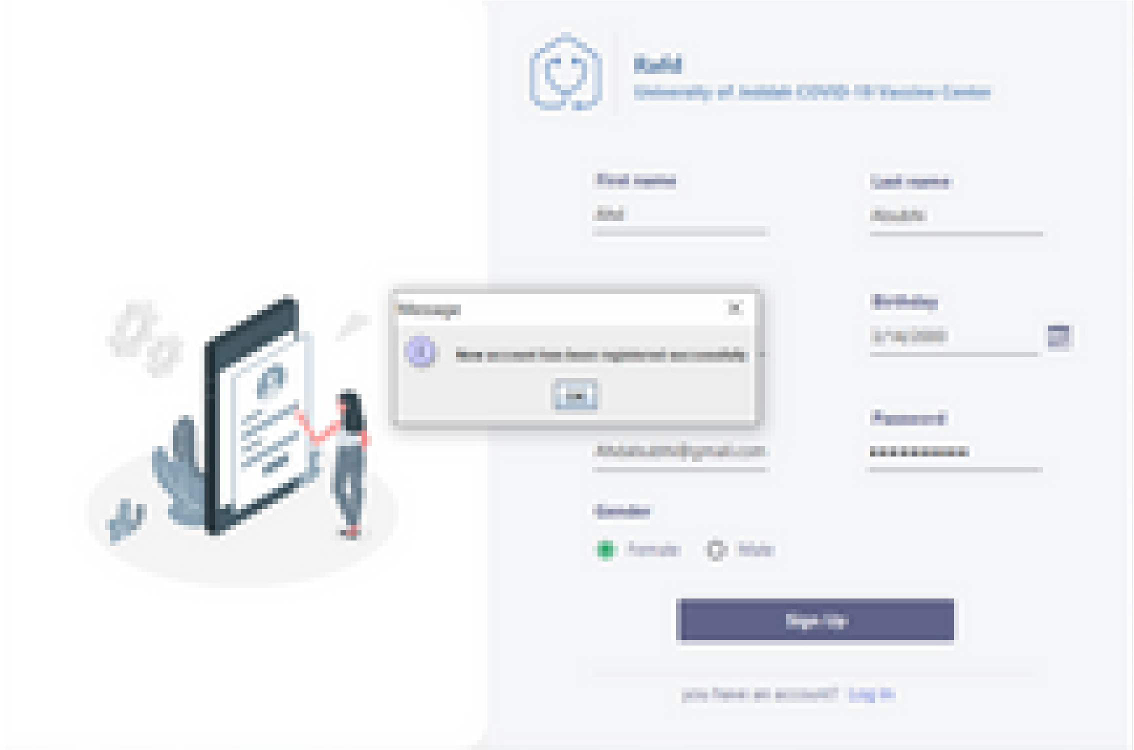


```java
    @FXML
    public void LogInButtonHandler(ActionEvent event) {

        connect = connectDB();

        try {

            String sql = "SELECT * FROM USERS WHERE ID_USERS = ? and Password_USERS = ?";
            statement = connect.prepareStatement(sql);

            statement.setString(1, userName.getText());
            statement.setString(2, passWord.getText());

            result = statement.executeQuery();

            if (result.next()) {

                LogInButton.getScene().getWindow().hide();

                Parent root = FXMLLoader.load(getClass().getResource("AppTaskBoard.fxml"));
                Scene scene = new Scene(root);
                Stage stage = new Stage();

                stage.setScene(scene);
                stage.show();

            } else {
                JOptionPane.showMessageDialog(dialog, "Password or ID is wrong");
            }

        } catch (Exception e) {
            e.printStackTrace();
        }
    }
```



```
                result = statement.executeQuery();

                if (result.next()) {

                    LogInButton.getScene().getWindow().hide();

                    Parent root = FXMLLoader.load(getClass().getResource("AppTaskBoard.fxml"));
                    Scene scene = new Scene(root);
                    Stage stage = new Stage();

                    stage.setScene(scene);
                    stage.show();

                } else {
                    JOptionPane.showMessageDialog(dialog, "Password or ID is wrong");
                }

            } catch (Exception e) {
                e.printStackTrace();
            }
        }

        @FXML
        private void SignUpButtonPageHandle(ActionEvent event) {
            try {
                ((Node) event.getSource()).getScene().getWindow().hide();
                FXMLLoader loader = new FXMLLoader(getClass().getResource("AppSign_up.fxml"));
                Parent root = loader.load();

                Stage stage = new Stage();
                stage.setScene(new Scene(root));
                stage.show();

            } catch (IOException io) {
                System.out.println("FXML Loading Error");
            }

        }

    }
```

- **Sign up Page**

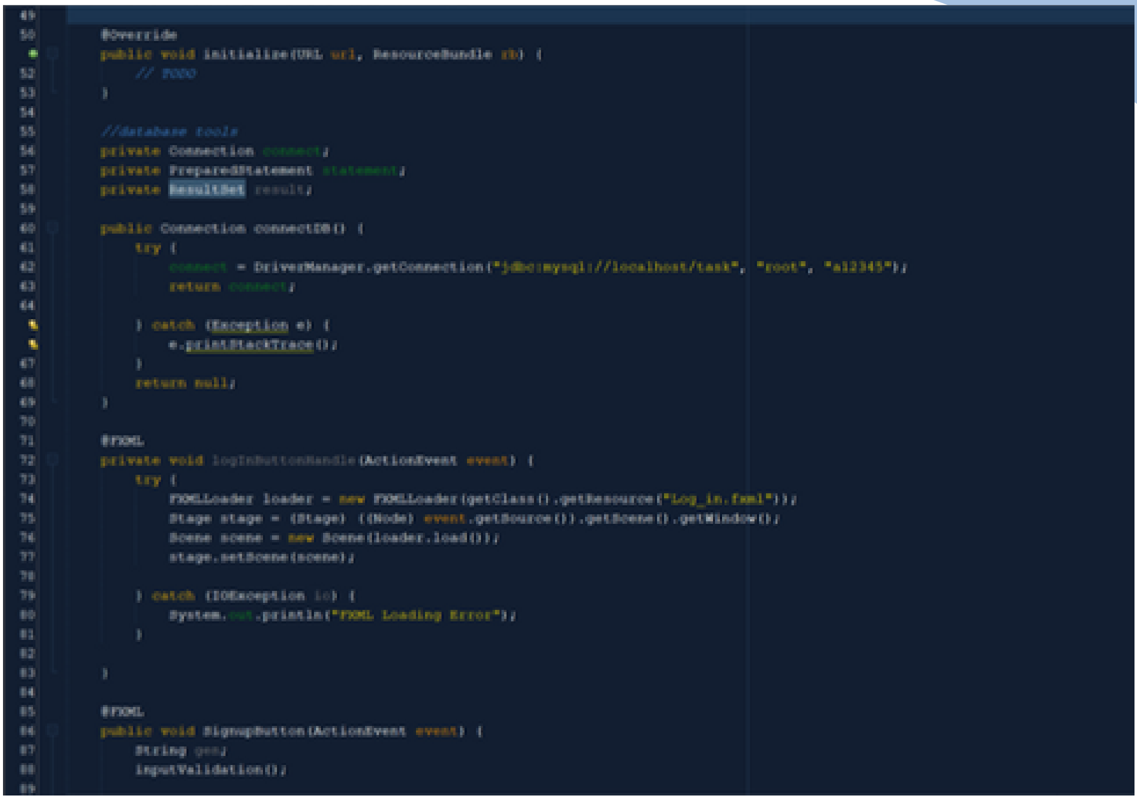


Kafd
University of Jeddah COVID-19 Vaccine Center
First name
Last name
Birthday
Message
New account has been registered successfully
OK
Password
Gender
Female
Male
Sign Up
you have an account? Log In

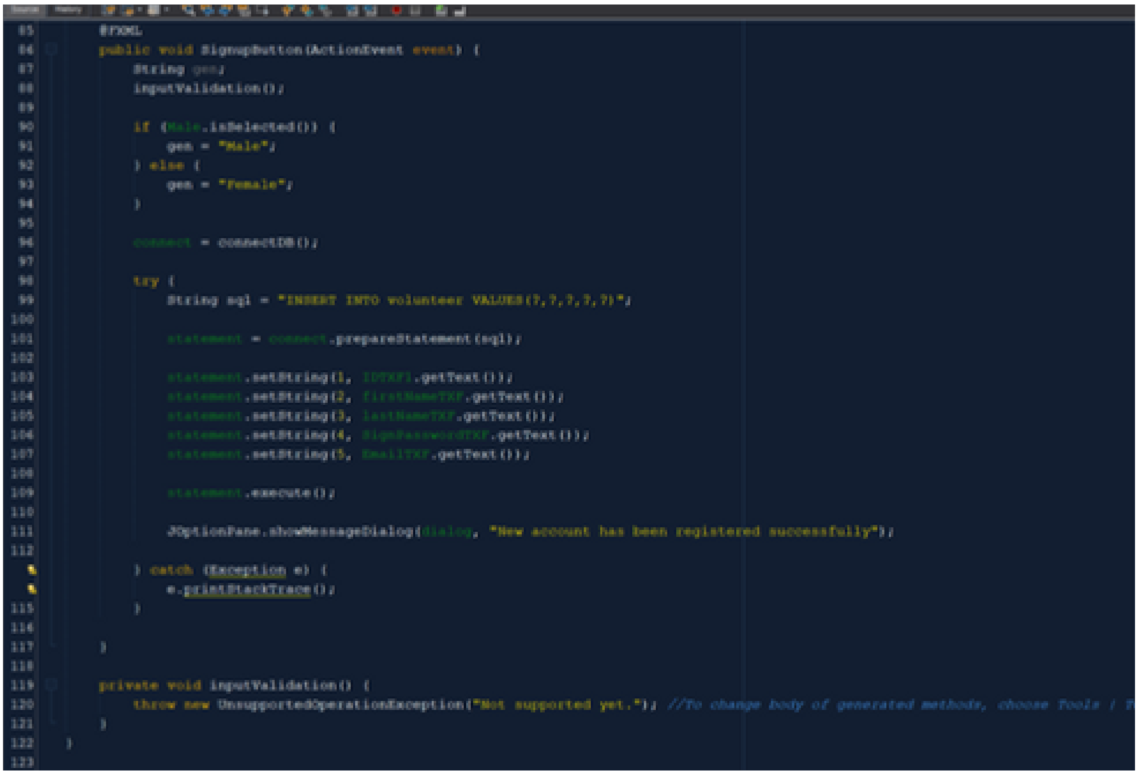
Page Interface design:

Instead of using the scene builder's default component, I used the Jfoenix library to design the page, which gives it a more contemporary look. I used JFXTeaxtField, JFXPasswordField for the password, JFXDatePicker, and JFXButton for the Signup button. I used JOptionPane.showMessageDialog to inform the user that the new account has been registered.

Sign up code

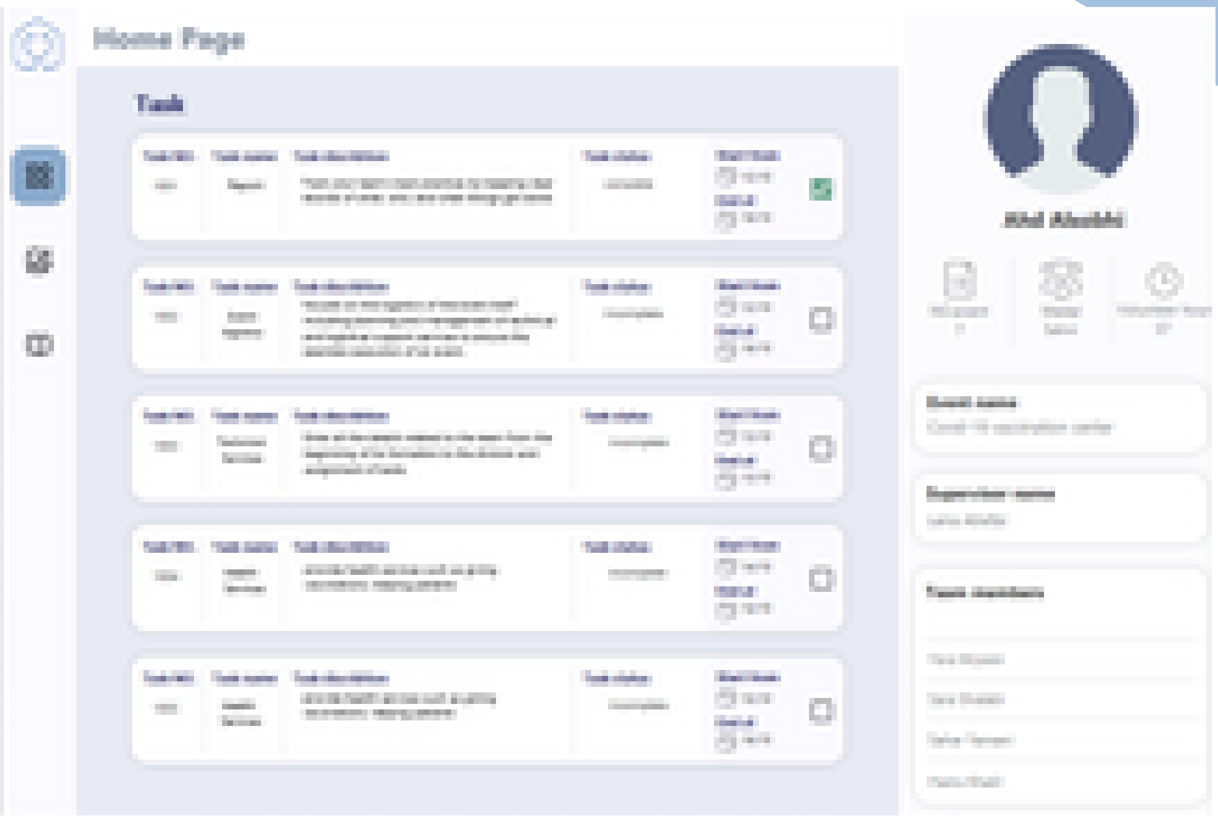


```java
    @Override
    public void initialize(URL url, ResourceBundle rb) {
        // TODO
    }

    //database tools
    private Connection connect;
    private PreparedStatement statement;
    private ResultSet result;

    public Connection connectDB() {
        try {
            connect = DriverManager.getConnection("jdbc:mysql://localhost/task", "root", "a12345");
            return connect;

        } catch (Exception e) {
            e.printStackTrace();
        }
        return null;
    }

    @FXML
    private void logInButtonHandle(ActionEvent event) {
        try {
            FXMLLoader loader = new FXMLLoader(getClass().getResource("Log_in.fxml"));
            Stage stage = (Stage) ((Node) event.getSource()).getScene().getWindow();
            Scene scene = new Scene(loader.load());
            stage.setScene(scene);

        } catch (IOException io) {
            System.out.println("FXML Loading Error");
        }

    }

    @FXML
    public void SignupButton(ActionEvent event) {
        String gen;
        inputValidation();
```



```java
    @FXML
    public void SignupButton(ActionEvent event) {
        String gen;
        inputValidation();

        if (Male.isSelected()) {
            gen = "Male";
        } else {
            gen = "Female";
        }

        connect = connectDB();

        try {
            String sql = "INSERT INTO volunteer VALUES(?,?,?,?,?)";

            statement = connect.prepareStatement(sql);

            statement.setString(1, IDTXF1.getText());
            statement.setString(2, firstNameTXF.getText());
            statement.setString(3, lastNameTXF.getText());
            statement.setString(4, SignPasswordTXF.getText());
            statement.setString(5, EmailTXF.getText());

            statement.execute();

            JOptionPane.showMessageDialog(dialog, "New account has been registered successfully");

        } catch (Exception e) {
            e.printStackTrace();
        }

    }

    private void inputValidation() {
        throw new UnsupportedOperationException("Not supported yet."); //To change body of generated methods, choose Tools | T
    }
}
```

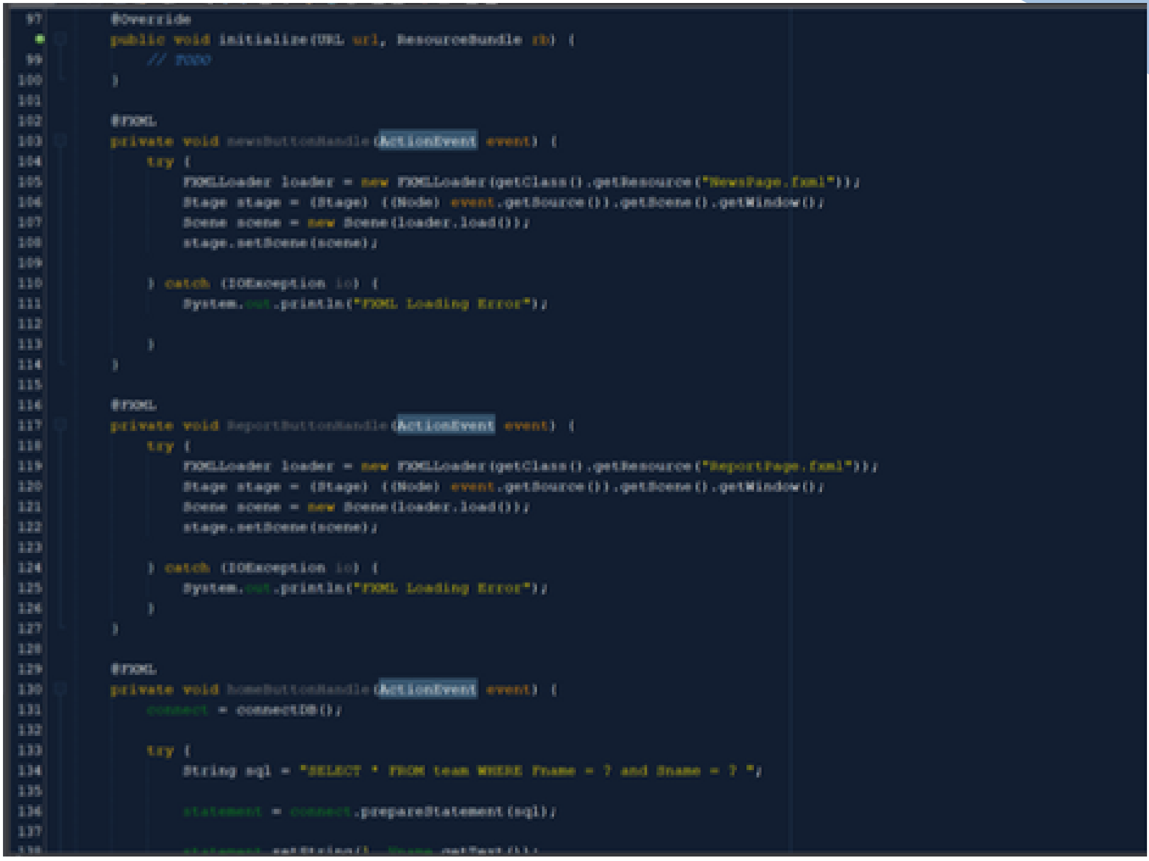
- **Home Page**



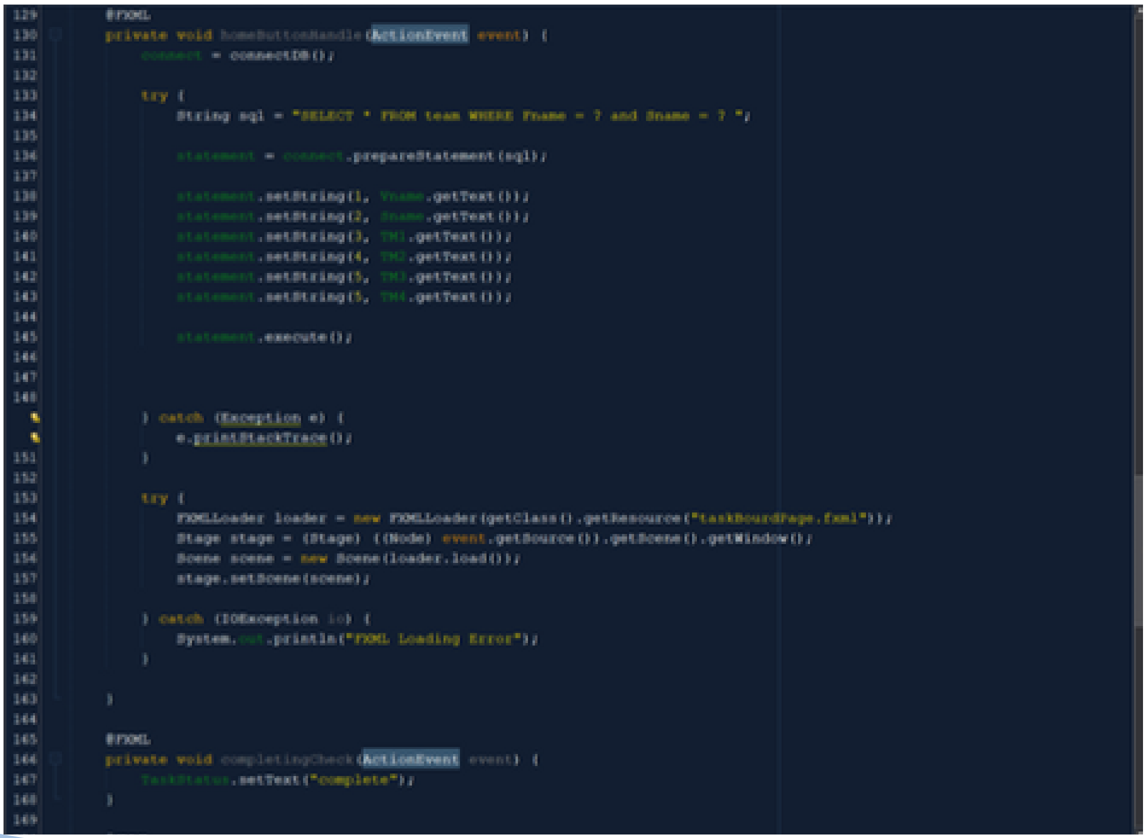
Page Interface design:

The home page is divided into three sections: the menu bar on the far left, followed by the tasks in the middle, which contain detailed information for each task, such as the name of the task, its id number, a description of this task, and the ability to change the state of completion by pressing the check box next to the date. every check box in the separated pane. The user's profile follows, which includes the user's name, avatar, number of volunteer hours, number of activities he participated in, and medals earned, as well as the name of the event he participated in and the names of the supervisor and team members, all of which were obtained from the database. The component used: are Label, Text, ImageView, JFXButton, and JFXCheckbox.

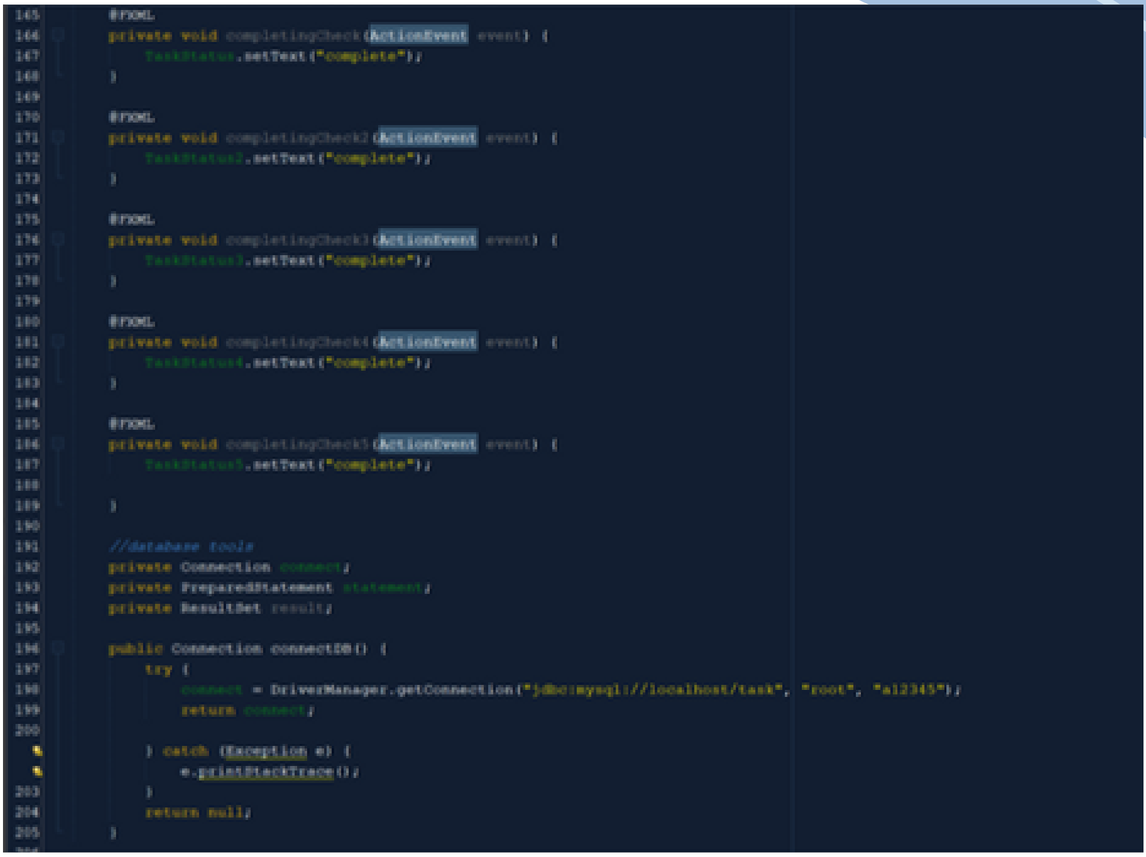
Home Page code



```java
    @Override
    public void initialize(URL url, ResourceBundle rb) {
        // TODO
    }

    @FXML
    private void newsButtonHandle(ActionEvent event) {
        try {
            FXMLLoader loader = new FXMLLoader(getClass().getResource("NewsPage.fxml"));
            Stage stage = (Stage) ((Node) event.getSource()).getScene().getWindow();
            Scene scene = new Scene(loader.load());
            stage.setScene(scene);

        } catch (IOException io) {
            System.out.println("FXML Loading Error");

        }
    }

    @FXML
    private void ReportButtonHandle(ActionEvent event) {
        try {
            FXMLLoader loader = new FXMLLoader(getClass().getResource("ReportPage.fxml"));
            Stage stage = (Stage) ((Node) event.getSource()).getScene().getWindow();
            Scene scene = new Scene(loader.load());
            stage.setScene(scene);

        } catch (IOException io) {
            System.out.println("FXML Loading Error");
        }
    }

    @FXML
    private void homeButtonHandle(ActionEvent event) {
        connect = connectDB();

        try {
            String sql = "SELECT * FROM team WHERE Fname = ? and Sname = ? ";

            statement = connect.prepareStatement(sql);

            statement.setString(1, Fname.getText());
```

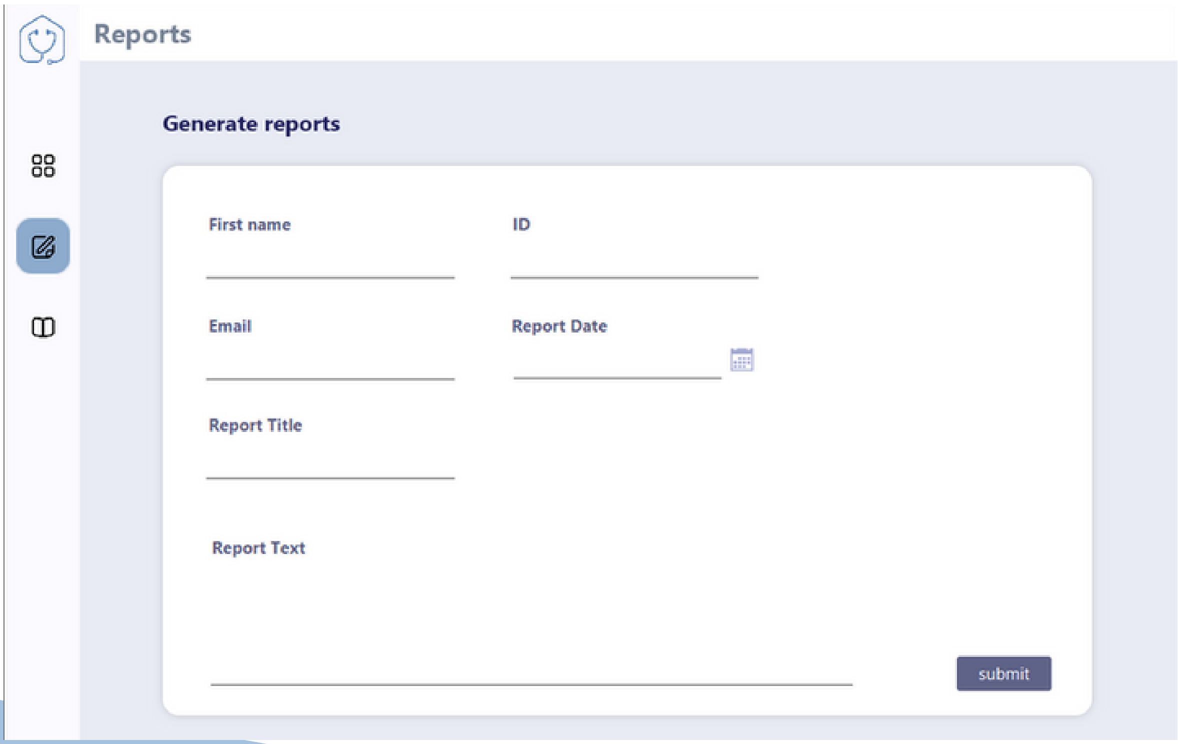


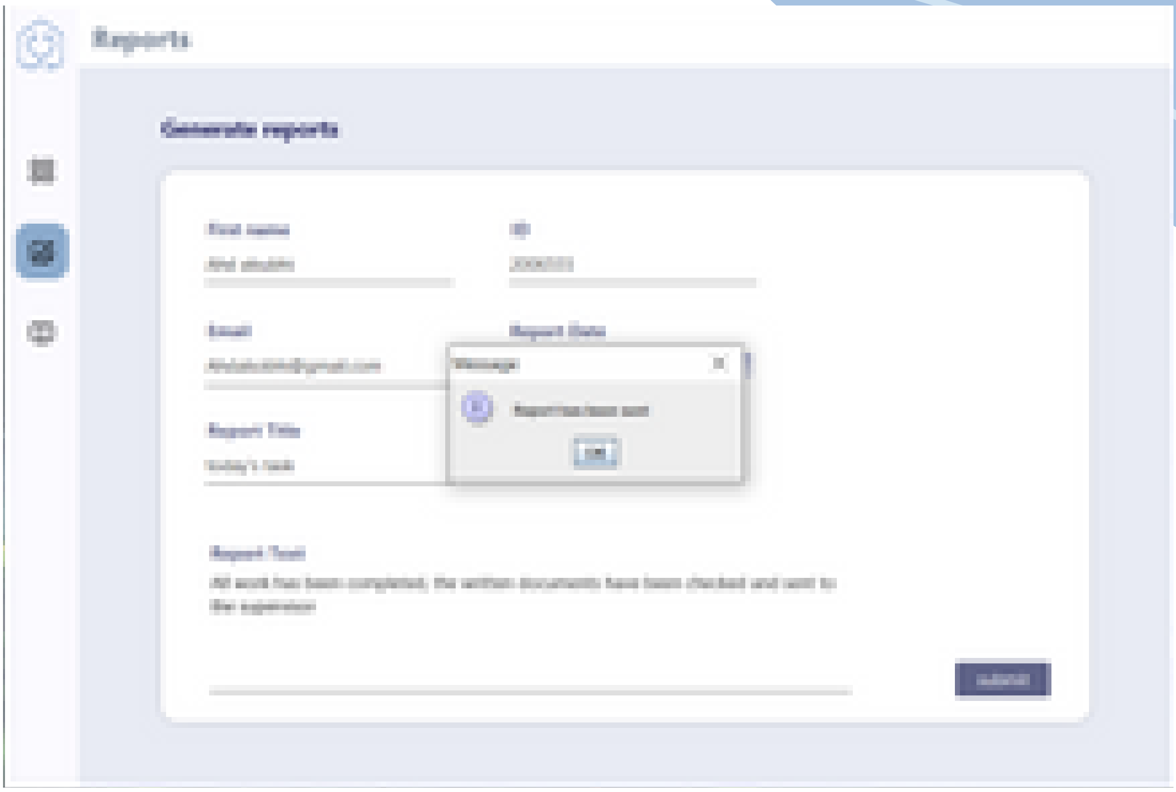
```java
    @FXML
    private void homeButtonHandle(ActionEvent event) {
        connect = connectDB();

        try {
            String sql = "SELECT * FROM team WHERE Fname = ? and Sname = ? ";

            statement = connect.prepareStatement(sql);

            statement.setString(1, Fname.getText());
            statement.setString(2, Sname.getText());
            statement.setString(3, TM1.getText());
            statement.setString(4, TM2.getText());
            statement.setString(5, TM3.getText());
            statement.setString(5, TM4.getText());

            statement.execute();



        } catch (Exception e) {
            e.printStackTrace();
        }

        try {
            FXMLLoader loader = new FXMLLoader(getClass().getResource("taskBoardPage.fxml"));
            Stage stage = (Stage) ((Node) event.getSource()).getScene().getWindow();
            Scene scene = new Scene(loader.load());
            stage.setScene(scene);

        } catch (IOException io) {
            System.out.println("FXML Loading Error");
        }

    }

    @FXML
    private void completingCheck(ActionEvent event) {
        TaskStatus.setText("complete");
    }
```



```java
    @FXML
    private void completingCheck(ActionEvent event) {
        TaskStatus.setText("complete");
    }

    @FXML
    private void completingCheck2(ActionEvent event) {
        TaskStatus2.setText("complete");
    }

    @FXML
    private void completingCheck3(ActionEvent event) {
        TaskStatus3.setText("complete");
    }

    @FXML
    private void completingCheck4(ActionEvent event) {
        TaskStatus4.setText("complete");
    }

    @FXML
    private void completingCheck5(ActionEvent event) {
        TaskStatus5.setText("complete");

    }

    //database tools
    private Connection connect;
    private PreparedStatement statement;
    private ResultSet result;

    public Connection connectDB() {
        try {
            connect = DriverManager.getConnection("jdbc:mysql://localhost/task", "root", "a12345");
            return connect;

        } catch (Exception e) {
            e.printStackTrace();
        }
        return null;
    }
```

- **Reports Page:**





Reports

Generate reports

First name

ID

Email

Report Date

Report Title

today's task

Report Text

All work has been completed, the written documents have been checked and sent to the supervisor

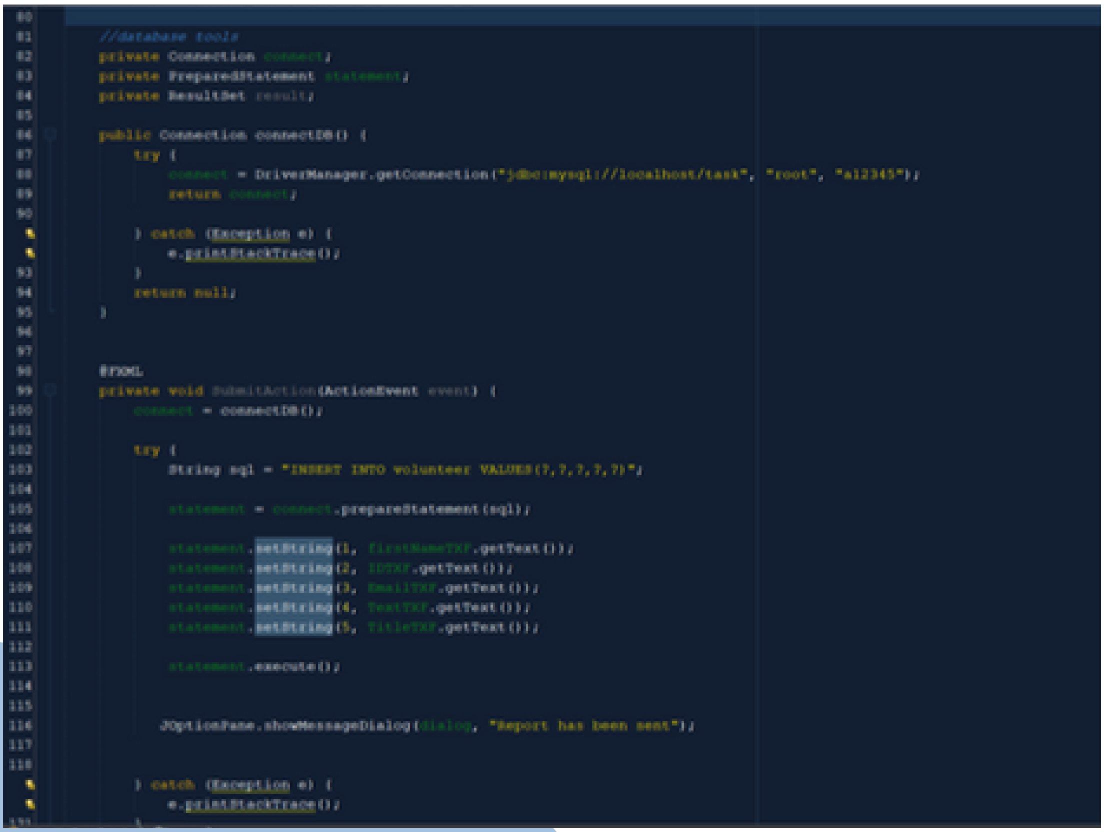
Message

Report has been sent

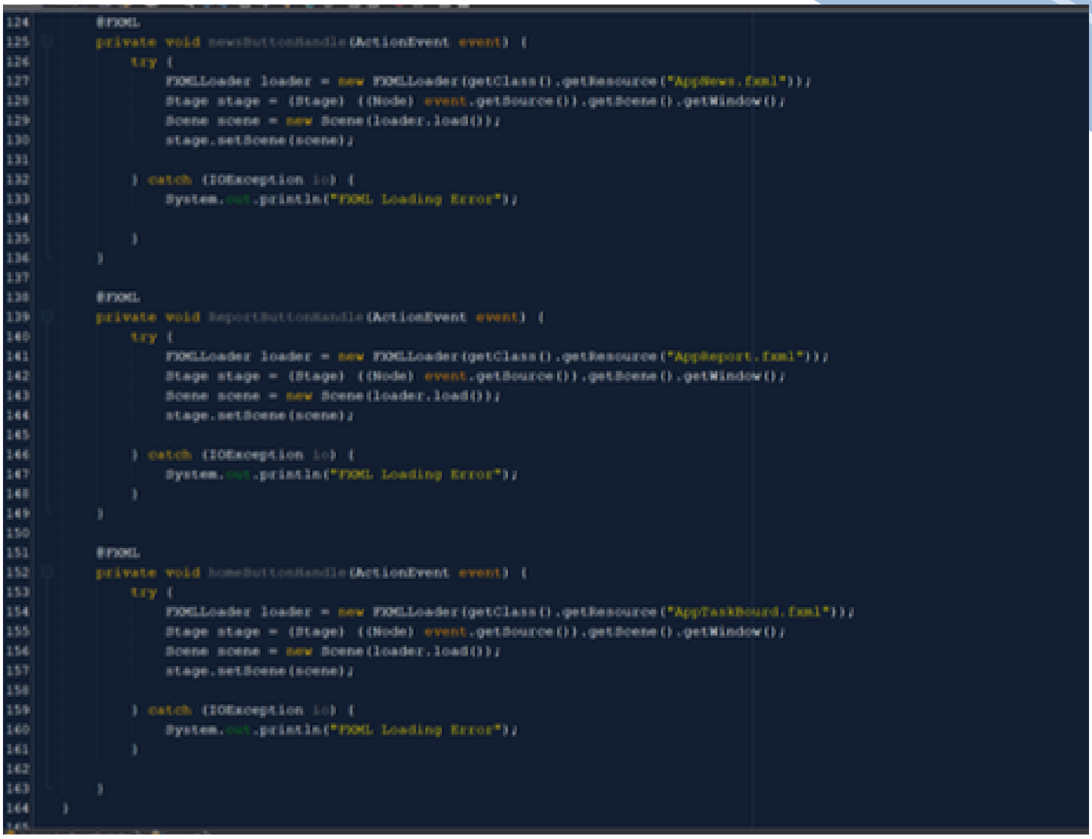
Page Interface design:

This page is for volunteers to write their daily and weekly reports on the tasks that have been completed so that they can be reviewed later by the supervisors. components used: Label, JFXTeaxtArea, JFXTeaxtField, JFXButton, and JFXDatePicker. I used JOptionPane.showMessageDialog to inform the user that the report has been sent.

Reports code:

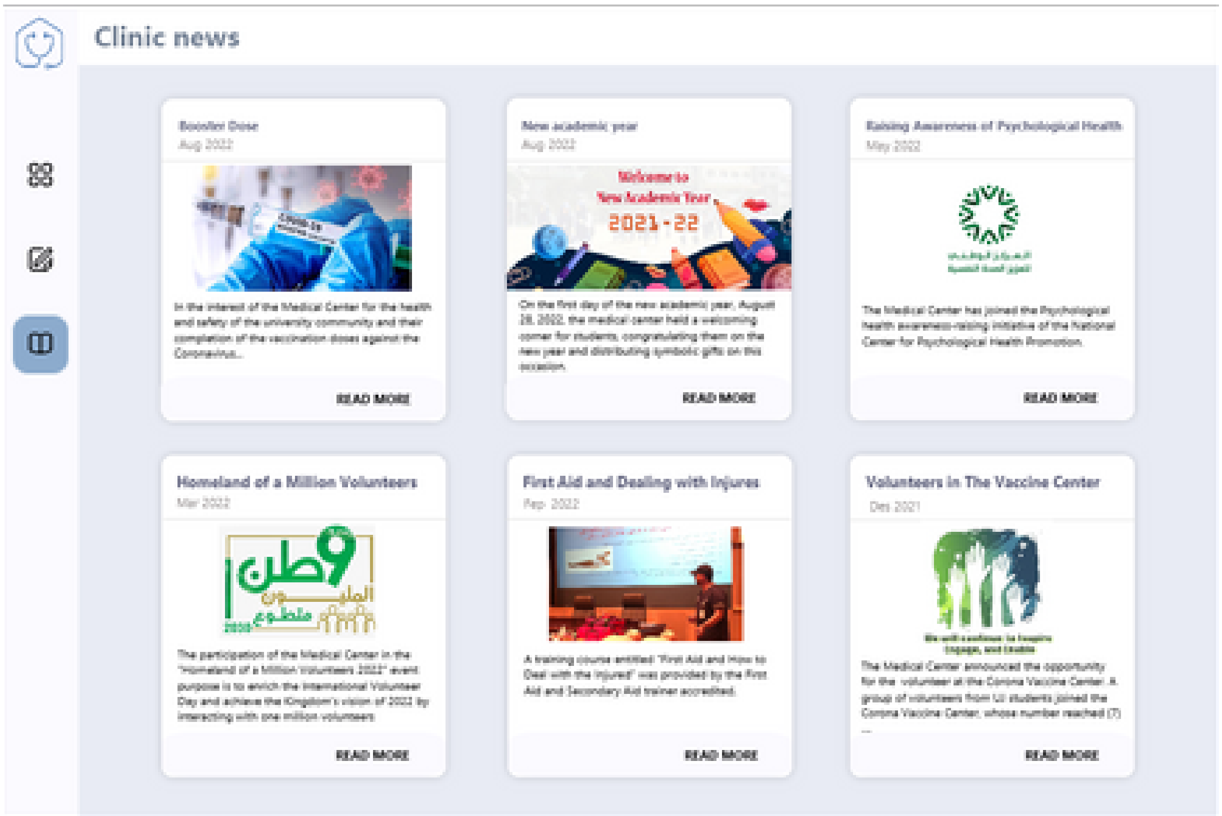


```java

    //database tools
    private Connection connect;
    private PreparedStatement statement;
    private ResultSet result;

    public Connection connectDB() {
        try {
            connect = DriverManager.getConnection("jdbc:mysql://localhost/task", "root", "a12345");
            return connect;

        } catch (Exception e) {
            e.printStackTrace();
        }
        return null;
    }


    @FXML
    private void SubmitAction(ActionEvent event) {
        connect = connectDB();

        try {
            String sql = "INSERT INTO volunteer VALUES(?,?,?,?,?)";

            statement = connect.prepareStatement(sql);

            statement.setString(1, firstNameTXF.getText());
            statement.setString(2, IDTXF.getText());
            statement.setString(3, EmailTXF.getText());
            statement.setString(4, TextTXF.getText());
            statement.setString(5, TitleTXF.getText());

            statement.execute();


           JOptionPane.showMessageDialog(dialog, "Report has been sent");


        } catch (Exception e) {
            e.printStackTrace();
```



```
    @FXML
    private void newsButtonHandle(ActionEvent event) {
        try {
            FXMLLoader loader = new FXMLLoader(getClass().getResource("AppNews.fxml"));
            Stage stage = (Stage) ((Node) event.getSource()).getScene().getWindow();
            Scene scene = new Scene(loader.load());
            stage.setScene(scene);

        } catch (IOException io) {
            System.out.println("FXML Loading Error");

        }
    }

    @FXML
    private void ReportButtonHandle(ActionEvent event) {
        try {
            FXMLLoader loader = new FXMLLoader(getClass().getResource("AppReport.fxml"));
            Stage stage = (Stage) ((Node) event.getSource()).getScene().getWindow();
            Scene scene = new Scene(loader.load());
            stage.setScene(scene);

        } catch (IOException io) {
            System.out.println("FXML Loading Error");
        }
    }

    @FXML
    private void homeButtonHandle(ActionEvent event) {
        try {
            FXMLLoader loader = new FXMLLoader(getClass().getResource("AppTaskBourd.fxml"));
            Stage stage = (Stage) ((Node) event.getSource()).getScene().getWindow();
            Scene scene = new Scene(loader.load());
            stage.setScene(scene);

        } catch (IOException io) {
            System.out.println("FXML Loading Error");
        }

    }
}
```

- **News Page:**



Clinic news

Booster Dose
Aug 2022

In the interest of the Medical Center for the health and safety of the university community and their completion of the vaccination doses against the Coronavirus...

READ MORE

New academic year
Aug 2022

On the first day of the new academic year, August 28, 2022, the medical center held a welcoming corner for students, congratulating them on the new year and distributing symbolic gifts on this occasion.

READ MORE

Raising Awareness of Psychological Health
May 2022

The Medical Center has joined the Psychological health awareness-raising initiative of the National Center for Psychological Health Promotion.

READ MORE

Homeland of a Million Volunteers
Mar 2022

The participation of the Medical Center in the "Homeland of a Million Volunteers 2022" event purpose is to enrich the International Volunteer Day and achieve the Kingdom's vision of 2022 by interacting with one million volunteers

READ MORE

First Aid and Dealing with Injures
Fep 2022

A training course entitled "First Aid and How to Deal with the Injured" was provided by the First Aid and Secondary Aid trainer accredited.

READ MORE

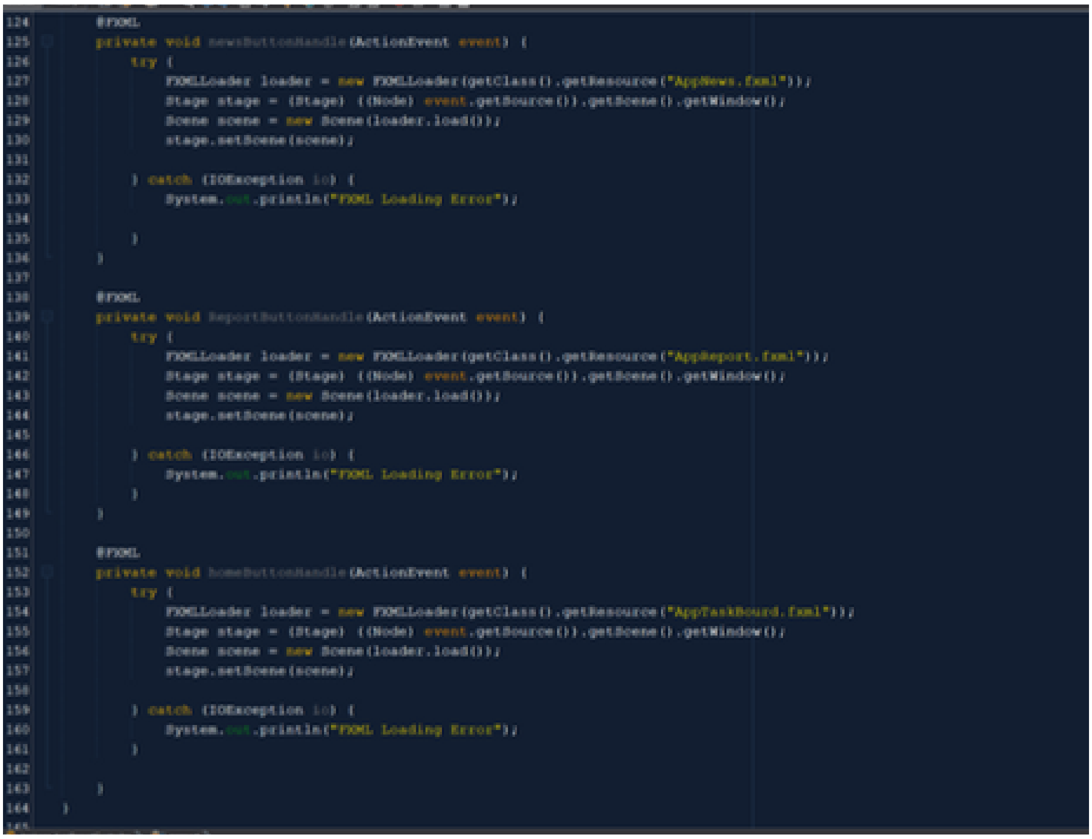
Volunteers in The Vaccine Center
Des 2021

The Medical Center announced the opportunity for the volunteer at the Corona Vaccine Center. A group of volunteers from UJ students joined the Corona Vaccine Center, whose number reached (7) ...

READ MORE

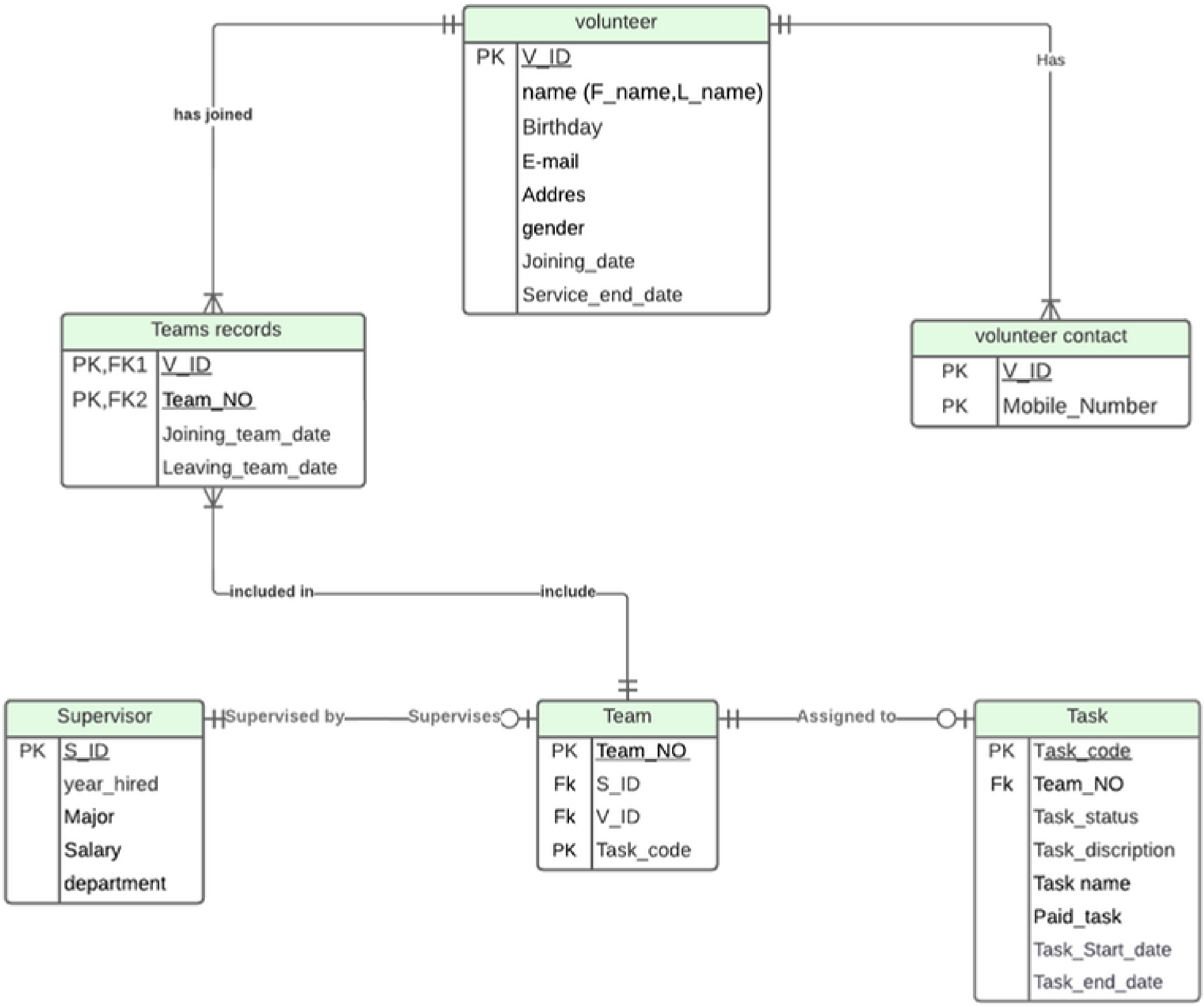
Page Interface design:

This page is to only show clinic news and the latest update for the volunteers. components used: Label, JFXTeaxtArea, JFXTeaxtField, JFXButtons, and ImageView.

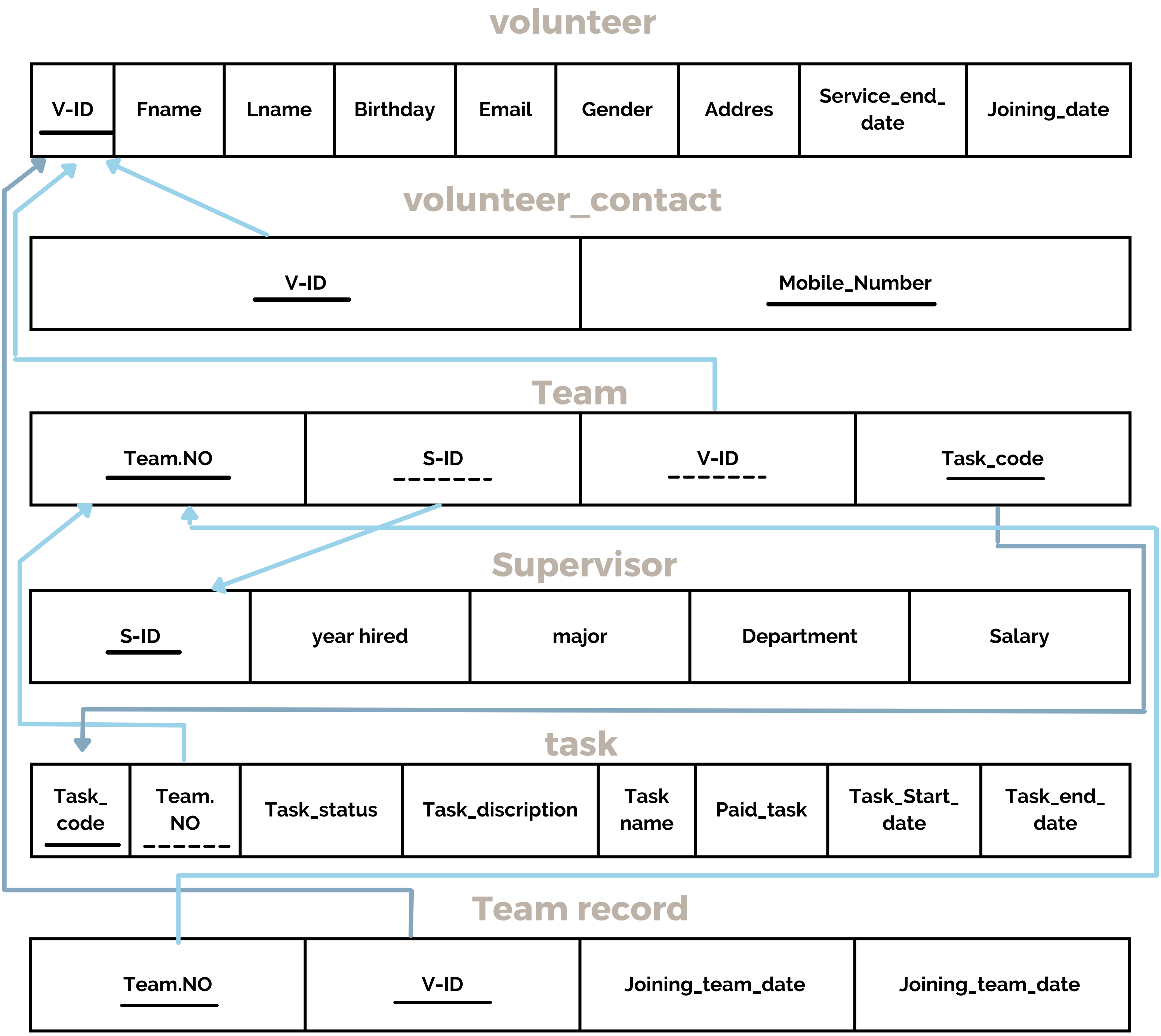


```java
    @FXML
    private void newsButtonHandle(ActionEvent event) {
        try {
            FXMLLoader loader = new FXMLLoader(getClass().getResource("AppNews.fxml"));
            Stage stage = (Stage) ((Node) event.getSource()).getScene().getWindow();
            Scene scene = new Scene(loader.load());
            stage.setScene(scene);

        } catch (IOException io) {
            System.out.println("FXML Loading Error");

        }
    }

    @FXML
    private void ReportButtonHandle(ActionEvent event) {
        try {
            FXMLLoader loader = new FXMLLoader(getClass().getResource("AppReport.fxml"));
            Stage stage = (Stage) ((Node) event.getSource()).getScene().getWindow();
            Scene scene = new Scene(loader.load());
            stage.setScene(scene);

        } catch (IOException io) {
            System.out.println("FXML Loading Error");
        }
    }

    @FXML
    private void homeButtonHandle(ActionEvent event) {
        try {
            FXMLLoader loader = new FXMLLoader(getClass().getResource("AppTaskBoard.fxml"));
            Stage stage = (Stage) ((Node) event.getSource()).getScene().getWindow();
            Scene scene = new Scene(loader.load());
            stage.setScene(scene);

        } catch (IOException io) {
            System.out.println("FXML Loading Error");
        }

    }
}
```

5. ER MODEL


volunteer
PK V_ID
name (F_name,L_name)
Birthday
E-mail
Addres
gender
Joining_date
Service_end_date
has joined
Has
Teams records
PK,FK1 V_ID
PK,FK2 Team_NO
Joining_team_date
Leaving_team_date
volunteer contact
PK V_ID
PK Mobile_Number
included in
include
Supervisor
PK S_ID
year_hired
Major
Salary
department
Supervised by
Supervises
Team
PK Team_NO
Fk S_ID
Fk V_ID
PK Task_code
Assigned to
Task
PK Task_code
Fk Team_NO
Task_status
Task_discription
Task name
Paid_task
Task_Start_date
Task_end_date

6. RELATIONAL SCHEMA



volunteer

V-ID	Fname	Lname	Birthday	Email	Gender	Addres	Service_end_date	Joining_date

volunteer_contact

V-ID	Mobile_Number

Team

Team.NO	S-ID	V-ID	Task_code

Supervisor

S-ID	year hired	major	Department	Salary

task

Task_code	Team.NO	Task_status	Task_discription	Task name	Paid_task	Task_Start_date	Task_end_date

Team record

Team.NO	V-ID	Joining_team_date	Joining_team_date

STAY SAFE