UMS

UNIVERSITI MALAYSIA SABAH

KP14603 OBJECT ORIENTED PROGRAMMING
SEMESTER 2

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INDIVIDUAL PROJECT 2

TITLE : HEALTH INFORMATION SYSTEM SK MENTARI KOTA BELUD

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INTRODUCTION

For this project,we choose to create an Health Information System SK Mentari Kota Belud is a simplify for student and teacher. It help to school records and keep a track of student or teacher to access their level of health. This also helps the school to prevent the spread of infectious disease as is happening all over the country at present which is the transmission of covid19. This system develop to gather what all records health need to be stored regarding a student and teacher.

This system also provides easy way to school to detect if there are student or teacher who have symptom of this covid19 virus because this virus is a disease that is very dangerous to all student and teacher and regardless of age. All the details of the student and teacher will be saved by the school . this system will detect if there are symptoms among students or teachers before entering the school because they will fill and answer some questions before entering the school.

In this system student and teacher can login by entering username and password. The system will check whether the username and password that entered is true or false ,if false system will declare invalid username or password and should try to log in again. If the username and password entered by student or teacher are true,the system will asked the user to take self-risk assessment tool and answer some screening questions before submitting.

OBJECTIVE

The objectives of this system are:

Student and Lecture

1. To enable students and teachers to complete all health information systems before entering school.

School

1. To enable the school to detect if there are individuals who have symptoms of a Covid19.
2. To prevent the spread of this infectious disease in this school.

JAVA CODE :

In this project I use some OOP concept that is inheritance,encapsulation,interface,array and so on to implement this project as in code JFrame2 to JFrame5 is uses the concept of inheritance for one class to another class. Then some concept encapsulation by using private likes for checkbox,label and frame.

- Login

```
//LOGIN USER

package login;

import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

public class LOGIN implements ActionListener {

    JPanel panel = new JPanel();
    JFrame myFrame = new JFrame (" LOGIN HEALTH INFORMATION SYSTEM FOR SK MENTARI KOTA BELUD");
    JLabel username = new JLabel ();
    JTextField textusername = new JTextField();
    JLabel password = new JLabel();
    JPasswordField textPassword = new JPasswordField();
    JButton buttonLogin = new JButton (" LOGIN ");
    JButton buttonCancel = new JButton (" CANCEL ");
    JLabel message = new JLabel ();

    {
        //create a new JFrame container
        myFrame.add(panel);
        myFrame.setSize(500, 300);
        panel.setLayout(null);
        myFrame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

```
        //create login label
        username = new JLabel ( " USERNAME ID : ");
        username .setBounds(10,20,200,25);
        username.setForeground(Color.BLUE);
        panel.add(username);

        //create username textfield
        textusername = new JTextField();
        textusername.setBounds(100,20,165,25);
        textusername.addActionListener(this);
        panel.add(textusername);

        //create password label
        password = new JLabel(" PASSWORD    :");
        password.setBounds(10,50,100,25);
        password.setForeground(Color.BLUE);
        panel.add(password);

        //create password textField
        textPassword = new JPasswordField();
        textPassword.setBounds(100,50,165,25);
        textPassword.addActionListener(this);
        panel.add(textPassword);
```

```
        //make button login
        buttonLogin.addActionListener(this);
        buttonLogin.setBounds(100, 80, 80, 25);
        panel.add(buttonLogin);


        //make button cancel
        buttonCancel.addActionListener(this);
        buttonCancel.setBounds(200,80,90,25);
        panel.add(buttonCancel);

        //create message label
        message = new JLabel();
        message.setBounds(100,120,200,25);
        panel.add(message);

        // Display the frame
        myFrame.setVisible(true);
      }
      //Handle the performed
        @Override
        public void actionPerformed(ActionEvent ae)
            {
                String username = textusername.getText();
                String password = textPassword.getText();

                if(username.equals("981234567891")&& password.equals("ABC123")){
                   myFrame.dispose();
                   new JFrame2();
                }
                else {
                    message.setText(" Invalid Username or Password ");
                    message.setBounds(100,100,200,50);
                }
              //Cancel Button
              textusername.setText("");
              textPassword.setText("");

            }

    public static void main(String[] args) {
    //create the frame on the event dispatching thread
    SwingUtilities.invokeLater(new Runnable (){
        public void run(){
            new LOGIN ();
    }
    } );
    }
    }
```

➢ JFrame2 (Self-Risk Assessment)

```
//SELF-RISK ASSESSMENT

package login;
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;

/**
 *
 * @author Asus
 */
public class JFrame2 implements ActionListener {

    JPanel panel = new JPanel();
    JFrame myFrame = new JFrame ("  SELF-RISK ASSESSMENT SK MENTARI KOTA BELUD ");
    JLabel Hai = new JLabel ();
    JLabel welcome = new JLabel();
    JLabel staysafe = new JLabel();
    JLabel click = new JLabel ();
    JButton buttonself = new JButton (" Please Take Self-risk Asssessment Tool ");

    JFrame2()
    {
        myFrame.add(panel);
        myFrame.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        myFrame.setSize(400,300);
        myFrame.setVisible(true);
```

```
        //create label
        Hai = new JLabel (" HAI THERE, WELCOME TO SK MENTARI KOTA BELUD SHIELDS");
        welcome = new JLabel (" PLEASE STAY SAFE AND #KITAJAGAKITA");
        Hai.setBounds(10,20,150,25);
        welcome.setBounds(10,20,150,25);
        Hai.setForeground(Color.BLUE);
        welcome.setForeground(Color.BLUE);
        panel.add(Hai);
        panel.add(welcome);

        //button self
        buttonself.addActionListener(this);
        buttonself.setBounds(150,80,80,100);
        panel.add(buttonself);
       }
        //handle the performed
        public void actionPerformed(ActionEvent ae){

            myFrame.dispose();
            new JFrame3();
        }
         public static void main(String[] args) {

            //create the frame on the event dispatching thread

            new JFrame2();
```

- JFrame3 (Screening Question)

```
//SCREENING QUESTION

package login;
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
/**
 *
 * @author Asus
 */
public class JFrame3 extends JFrame implements ActionListener{

    private JFrame myFrame3 = new JFrame (" SELF-RISK ASSESSMENT SK MENTARI KOTA BELUD ");
    private JLabel label1 = new JLabel ();
    private JLabel quest1 = new JLabel ();
    private Checkbox checkbox1 = new Checkbox();
    private Checkbox checkbox2 = new Checkbox();
    private Checkbox checkbox3 = new Checkbox();
    private Checkbox checkbox4 = new Checkbox();
    private Checkbox checkbox5 = new Checkbox();
    private Checkbox checkbox6 = new Checkbox();
    private Checkbox checkbox7 = new Checkbox();
    private JButton button = new JButton (" NEXT");

```

```
    JFrame3() {
        myFrame3.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
        myFrame3.setSize(600,600);
        myFrame3.setVisible(true);
        myFrame3.getContentPane().setLayout(null);

        label1 = new JLabel (" SCREENING QUESTION ");
        label1.setBounds(10,20,200,50);
        label1.setForeground(Color.DARK_GRAY);
        label1.setFont(label1.getFont ().deriveFont (15.0f));
        myFrame3.getContentPane().add(label1);

        //question 1
        quest1 = new JLabel ("1. Have you experienced the following symptoms within the past 14 days? ");
        quest1.setBounds(10,50,450,50);
        myFrame3.getContentPane().add(quest1);
        checkbox1 = new Checkbox (" Fever ");
        checkbox1.setBounds(50,100,500,50);
        myFrame3.getContentPane().add(checkbox1);
        checkbox2 = new Checkbox (" Cough ");
        checkbox2.setBounds(50,150,500,50);
        myFrame3.getContentPane().add(checkbox2);
        checkbox3 = new Checkbox (" Runny nose ");
        checkbox3.setBounds(50,200,500,50);
        myFrame3.getContentPane().add(checkbox3);
        checkbox4 = new Checkbox (" Short of breath ");
```

```
52              checkbox4.setBounds(50,250,500,50);
53              myFrame3.getContentPane().add(checkbox4);
54              checkbox5 = new Checkbox (" Sore throat ");
55              checkbox5.setBounds(50,300,500,50);
56              checkbox6 = new Checkbox (" Headache ");
57              myFrame3.getContentPane().add(checkbox5);
58              checkbox6.setBounds(50,350,500,50);
59              myFrame3.getContentPane().add(checkbox6);
60              checkbox7 = new Checkbox (" No all above ");
61              checkbox7.setBounds(50,400,500,50);
62              myFrame3.getContentPane().add(checkbox7);
63
64
65              //button next question
66              button.addActionListener(this);
67              button.setBounds(50,500,100,25);
68              myFrame3.getContentPane().add(button);
69          }
70          @Override
71              //handle the performed
72          public void actionPerformed(ActionEvent ae ){
73
74
75
76              myFrame3.dispose();
77              new JFrame4();
78
79      }
80
81      public static void main(String args [])
82      {
83          new JFrame3();
84      }
85
86  }
```

➢ JFrame4 (Question)

```
1   //QUESTION
2
3   package login;
4   import java.awt.*;
5   import java.awt.event.*;
6   import javax.swing.*;
7   /**
8    *
9    * @author Asus
10   */
11  public class JFrame4 extends JFrame implements ActionListener {
12
13      private JFrame myFrame4 = new JFrame (" SELF-RISK ASSESSMENT SK MENTARI KOTA BELUD ");
14      private JLabel label1 = new JLabel ();
15      private JLabel quest2 = new JLabel ();
16      private Checkbox checkbox1 = new Checkbox();
17      private Checkbox checkbox2 = new Checkbox();
18      private Checkbox checkbox3 = new Checkbox();
19      private Checkbox checkbox4 = new Checkbox();
20      private Checkbox checkbox5 = new Checkbox();
21      private JButton button = new JButton (" NEXT");
22
23      JFrame4 (){
24          myFrame4.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
25          myFrame4.setSize(600,600);
26          myFrame4.setVisible(true);
```

```
            myFrame4.getContentPane().setLayout(null);

            //Question 2
            quest2 = new JLabel ("2. Have you come into contact with a confirmed case of COVID-19 before the onset of
            quest2.setBounds(10,50,550,50);
            myFrame4.getContentPane().add(quest2);
            checkbox1 = new Checkbox (" Staying/living in the same place ");
            checkbox1.setBounds(50,100,500,50);
            myFrame4.getContentPane().add(checkbox1);
            checkbox2 = new Checkbox (" Being in a small group of Tabligh with confirmed case of COVID-19 ");
            checkbox2.setBounds(50,150,500,50);
            myFrame4.getContentPane().add(checkbox2);
            checkbox3 = new Checkbox (" Being in close contact at as distance less than 1 meter for more than 15 minut
            checkbox3.setBounds(50,200,500,50);
            myFrame4.getContentPane().add(checkbox3);
            checkbox4 = new Checkbox (" Staying in the same air-conditioned closed space for more than 2 hours");
            checkbox4.setBounds(50,250,500,50);
            myFrame4.getContentPane().add(checkbox4);
            checkbox5 = new Checkbox (" Sitting at a distance less than 2 meter in the same vechicle for more than 2 h
            checkbox5.setBounds(50,300,500,50);
            myFrame4.getContentPane().add(checkbox5);

            //Button Next Question
            button.addActionListener(this);
            button.setBounds(50,500,100,25);
            myFrame4.getContentPane().add(button);

    }
      @Override
            //handle the performed
          public void actionPerformed(ActionEvent ae ){

              myFrame4.dispose();
              new JFrame5 ();

       }

        public static void main(String args [])
        {
            new JFrame4();
        }

}
```

- JFrame5 (Question and Submission)

```
//QUESTION and SUBMITION


package login;
import java.awt.*;
import java.awt.event.*;
import javax.swing.*;
/**
 *
 * @author Asus
 */

public class JFrame5 extends JFrame implements ActionListener {


    JFrame myFrame5 = new JFrame (" SELF-RISK ASSESSMENT SK MENTARI KOTA BELUD ");
    JLabel quest3 = new JLabel ();
    JLabel quest4 = new JLabel ();
    JComboBox comboBox = new JComboBox ();
    JComboBox comboBox1 = new JComboBox();
    JButton sub = new JButton (" SUBMIT ");
    JTextArea message = new JTextArea ();
    JTextArea tout = new JTextArea();
    JLabel res = new JLabel();

    //Array implementation
    public String comboBoxs[]= {"Yes","No" };
```

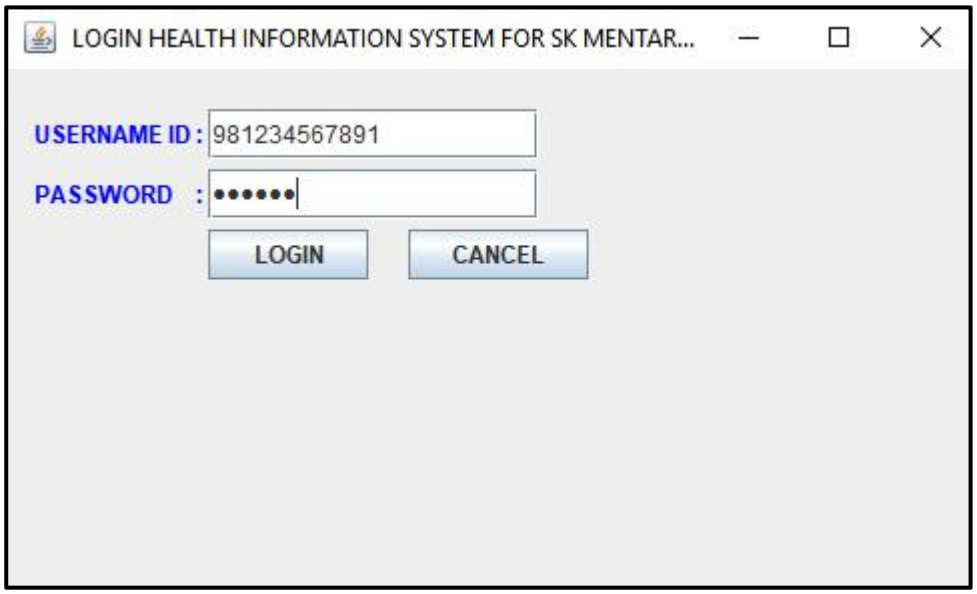
```
28
29      JFrame5 ()
30      {
31         myFrame5.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
32         myFrame5.setSize(900,600);
33         myFrame5.setVisible(true);
34         myFrame5.getContentPane().setLayout(null);
35
36        //Question 3
37        quest3 = new JLabel (" 3. Have you visited the countries affected with COVID-19 within the past 14 days befo
38        quest3.setBounds(10,50,800,50);
39        myFrame5.getContentPane().add(quest3);
40
41        //Question 4
42        quest4 = new JLabel (" 4. Have you participated in any gathering within the past 14 days like Religious gath
43        quest4.setBounds(10,150,800,50);
44        myFrame5.getContentPane().add(quest4);
45
46        //combobox for yes/no
47        comboBox = new JComboBox(comboBoxs);
48        comboBox.setFont(new Font("Arial",Font.PLAIN,15));
49        comboBox.setBounds(20,90,100,30);
50        myFrame5.getContentPane().add(comboBox);
51
52        //combobox for yes/no
53        comboBox1 = new JComboBox (comboBoxs);
54        comboBox1.setFont(new Font("Arial",Font.PLAIN,15));
55        comboBox1.setBounds(20,200,100,30);
56        myFrame5.getContentPane().add(comboBox1);
57
58        //button next question
          sub.addActionListener(this);
60        sub.setBounds(50,500,100,25);
61        myFrame5.getContentPane().add(sub);
62
63      }
64        @Override
65
            public void actionPerformed(ActionEvent ae )
67          {
68                  JOptionPane.showMessageDialog(this,"Successfully Submit ");
69              myFrame5.dispose();
                new JFrame ();
71            }
72
73        public static void main(String args [])
74        {
              new JFrame5 ();
76        }
77
78  }
```

USER MANUAL

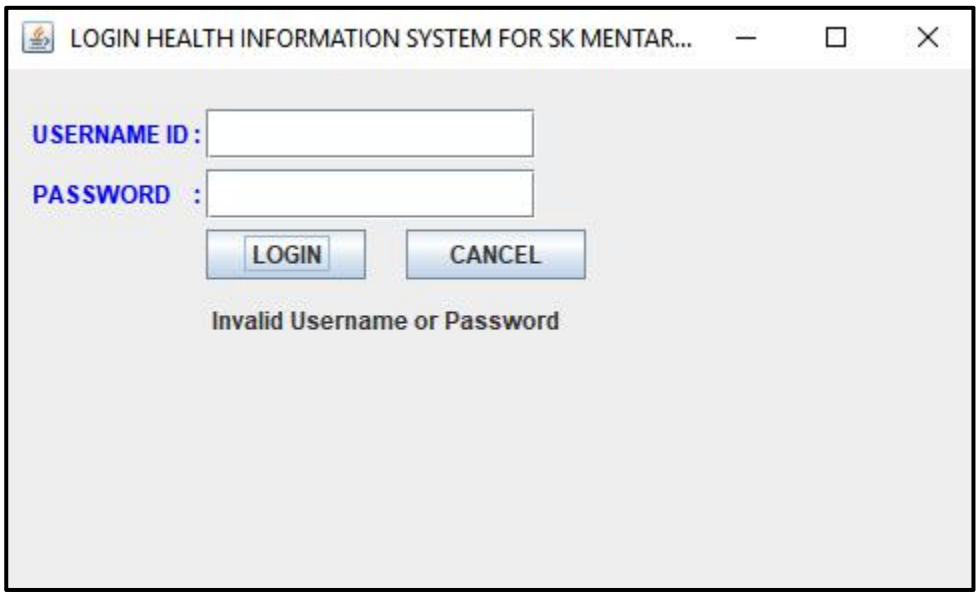
The following steps show on how to use the system:

1. Open all file in Java Software
2. Compile and Run
3. Log in to the system (Enter username ID,Password).

   Valid username and password:

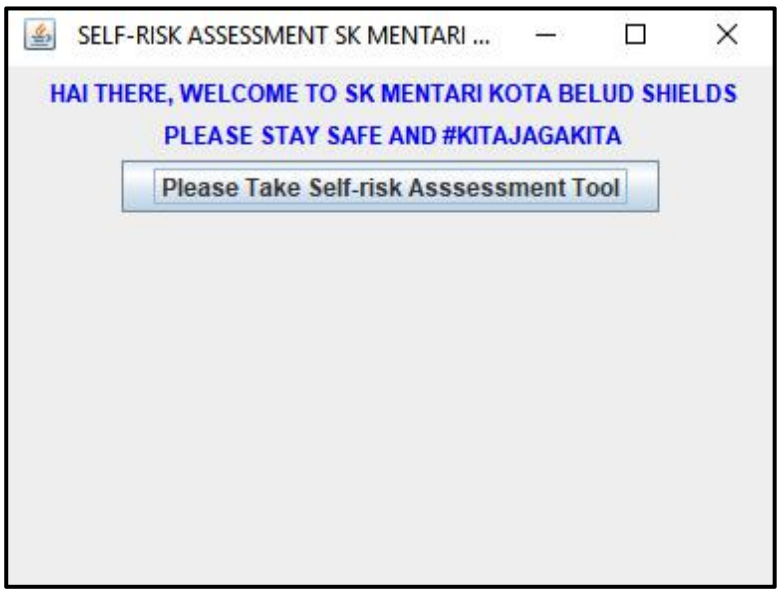


   Invalid username or password :



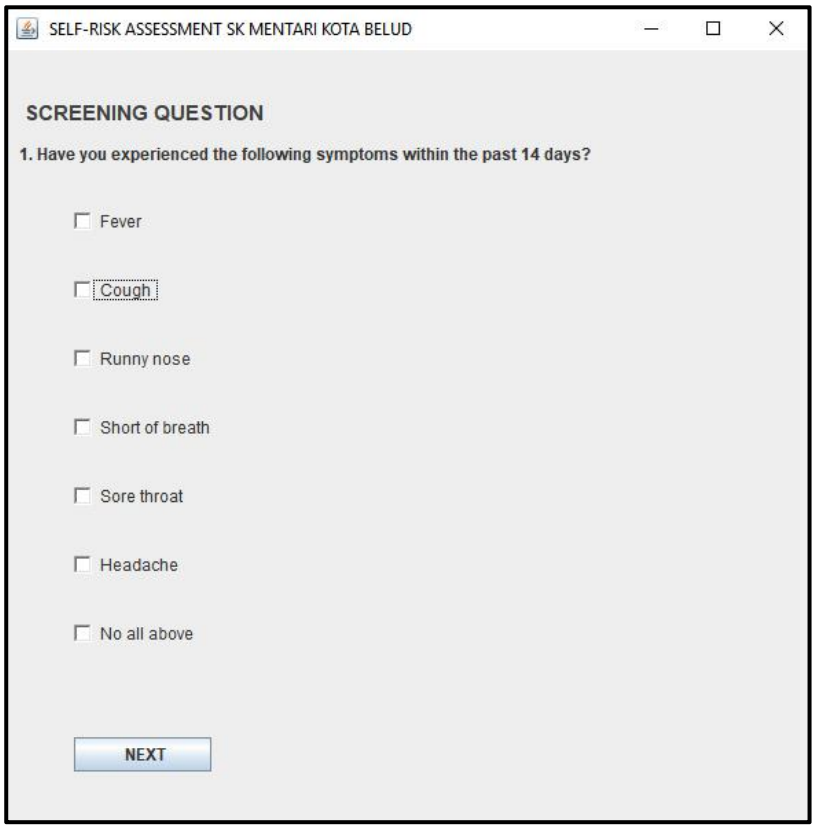
4. Enter self-risk assessment :

Click button for take self-risk assessment tool :

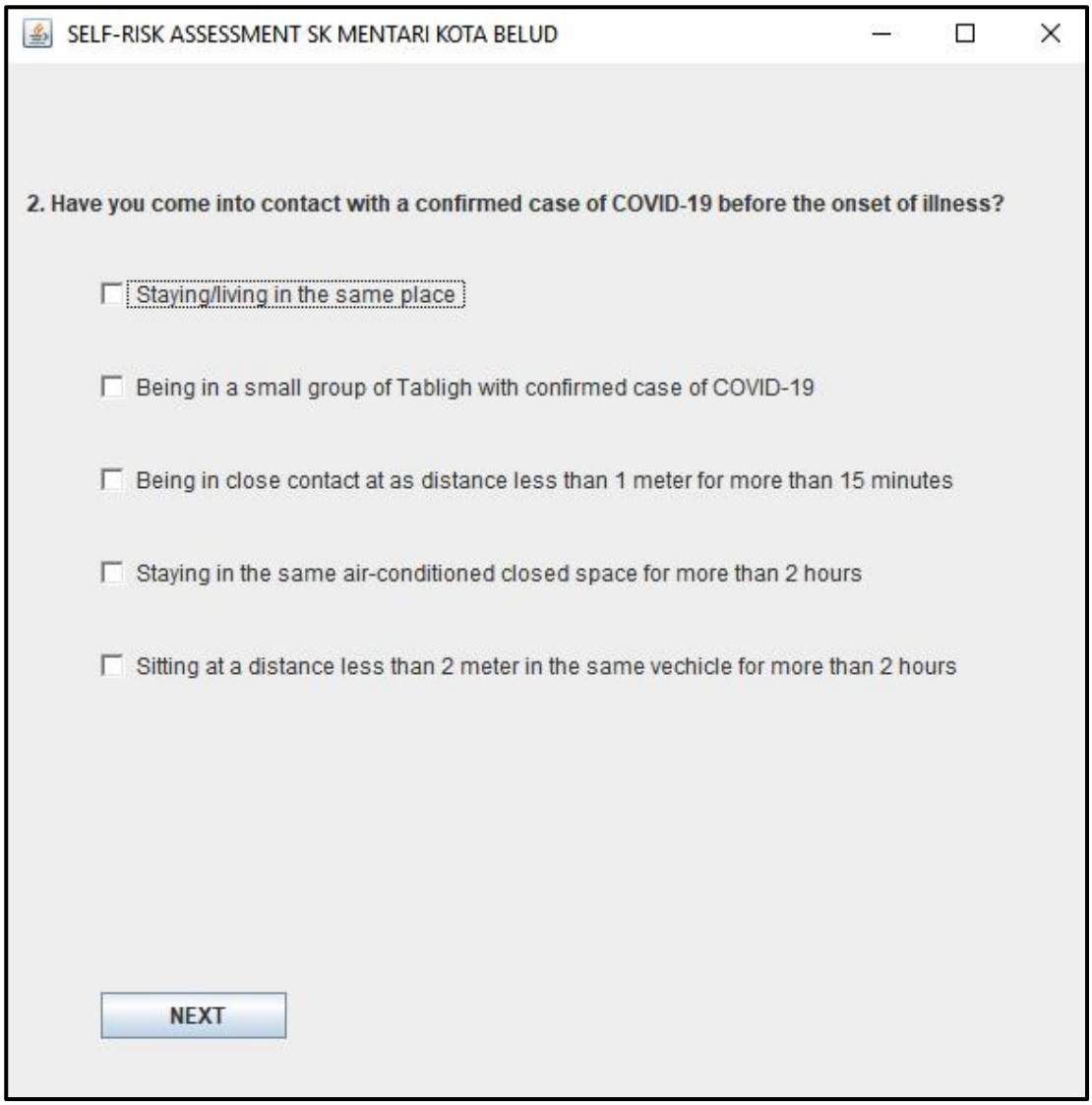


5. Fill in and answer the screening questions.

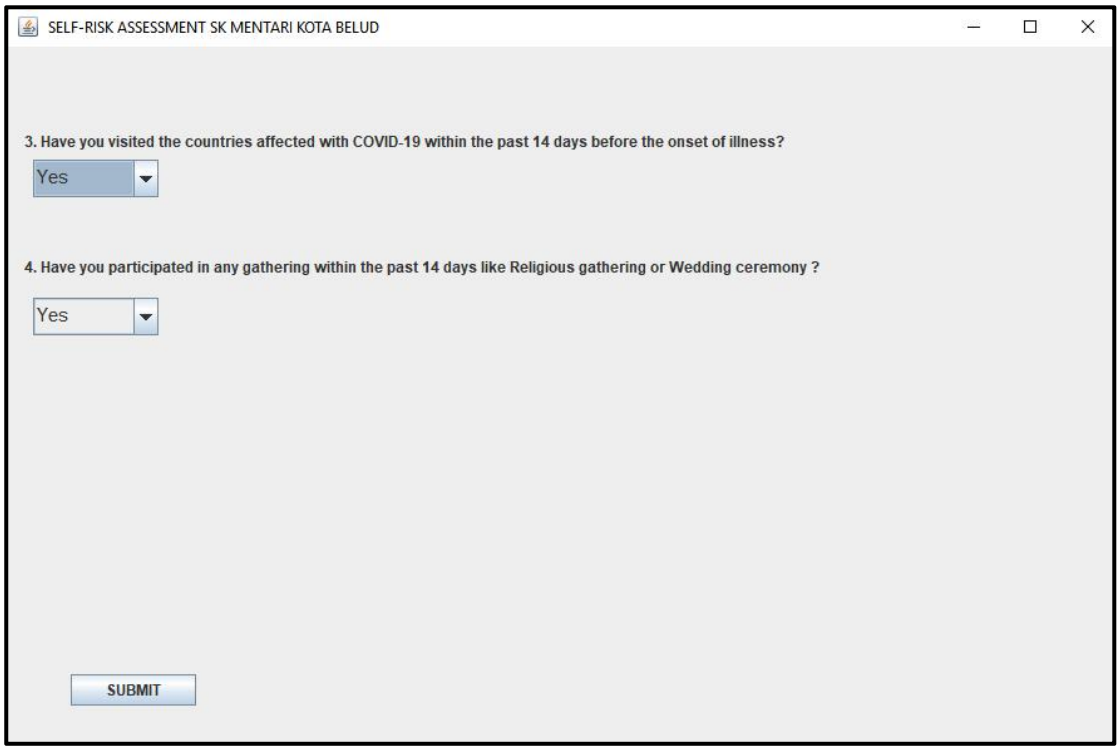
- First question



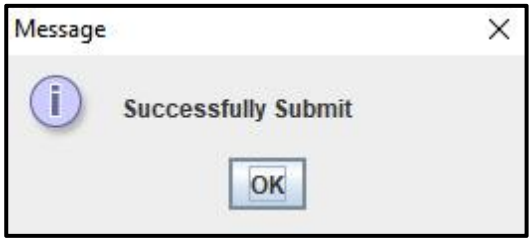
- Second question



- Third question

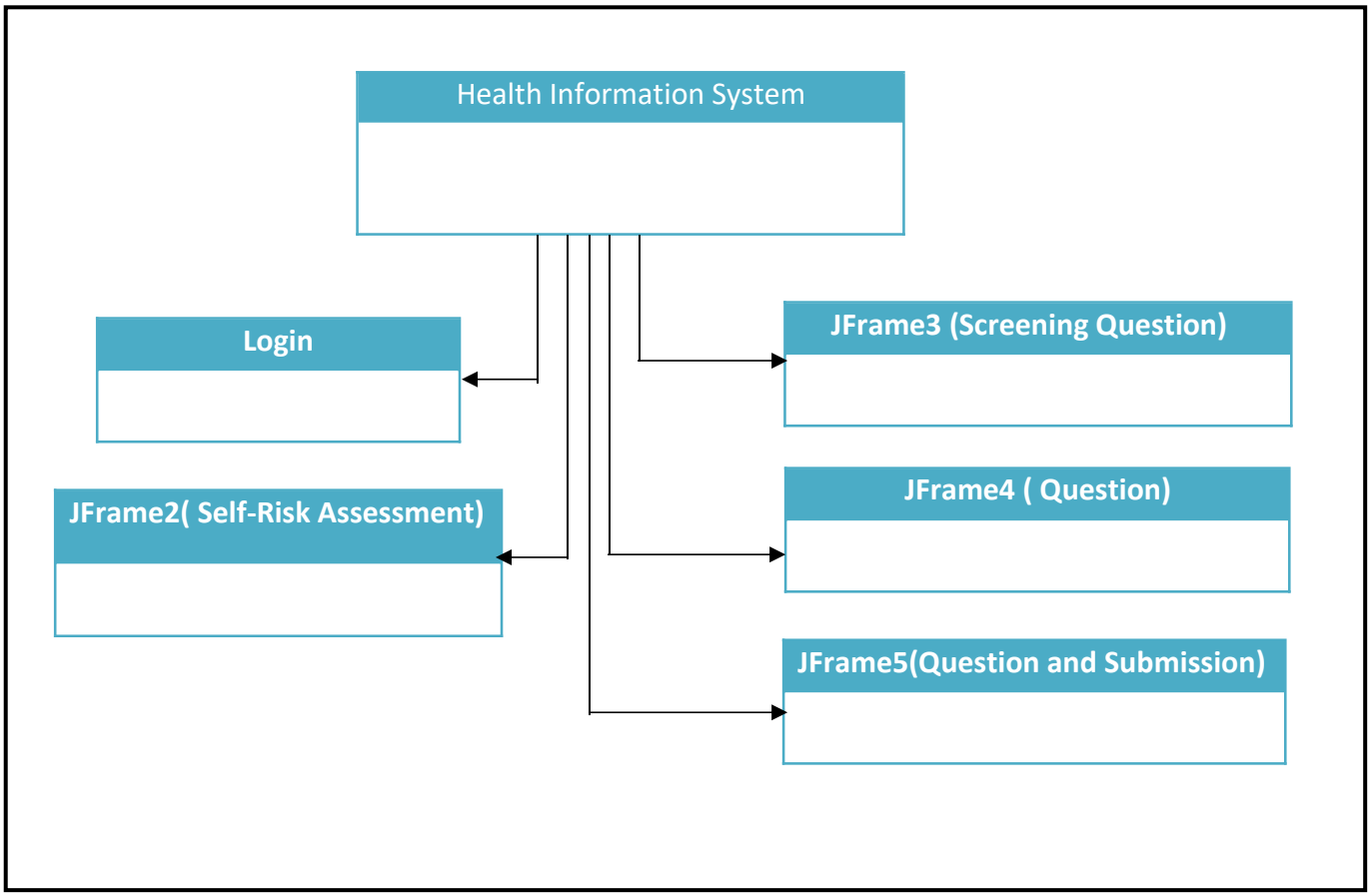


6. Message for successfully submit



7. To exit,click "OK"

CODE EXPLAINTION



Health Information System(Main Class) :

Login:

In the main class name Health Information System. Codes to create for all 5 class and library also coded. Firstly,the program will ask user to their username and password. If the user input all inputs correctly,the program will continue to the system. If not the invalid username or password will display and log in back. After that,the system will be log in and go to screening question.

JFrame2 (self-risk assessment) :

In the JFrame2 class,firstly the system will ask the user to the click button for take self-risk assessment.

JFrame3(Screening question):

For the JFrame3 class,the system will show the screening question,then display the label for question 1 ask for choice some answer. Then,to the next question click button next.

JFrame4(question) :

For the JFrame4 class,the system will be display question 2 which is 5 choice answer before to next question.

JFrame5 (question and submission):

In the JFrame5 class,the system will show the question 3 and 4 for choose yes or no. After that,all the data of the user will be submit to be save and evaluated by the school.

CONCLUSION

In conclusion ,by developing the Health Information System,the school can prevent the spread of covid19 virus among students and teachers. Moreover,if there are individuals who have symptoms it can be detected early by using this health system. However,it also helps us all deal with the epidemic of covid19 from time to time so that it is no longer spread to others.