

Appendix

Emails between me and my client:

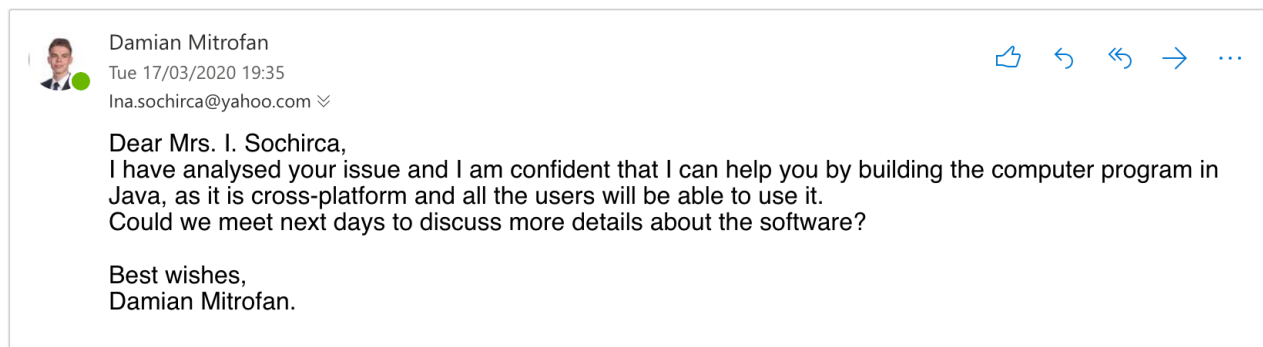
Dear Mrs. I. Sochirca,

I have analysed your issue and I am confident that I can help you by building the computer program in Java, as it is cross-platform and all the users will be able to use it.

Could we meet next days to discuss more details about the software?

Best wishes,

Damian Mitrofan.



Dear Damian,

I am happy to hear that you are able to help me.

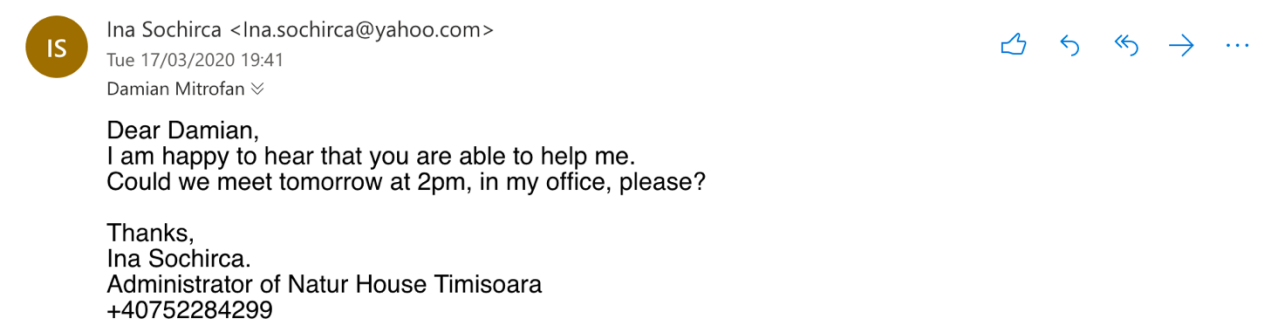
Could we meet tomorrow at 2pm, in my office, please?

Thanks,

Ina Sochirca.

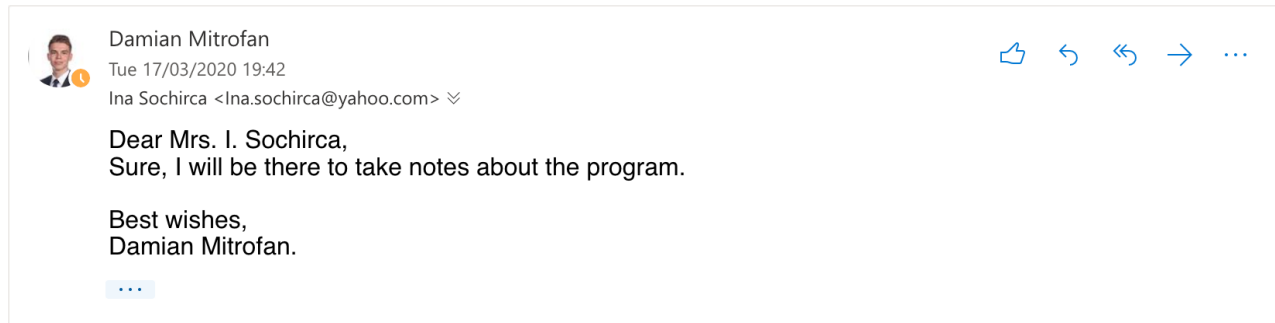
Administrator of Natur House Timisoara

+40752284299



Dear Mrs. I. Sochirca,
Sure, I will be there to take notes about the program.

Best wishes,
Damian Mitrofan.



Notes from meeting:

- Minimalistic GUI, with different sections for calculator, tracking and administrator page.
- Formulas to calculate:
 - **For men:** $(66 + (13.7 \times \text{weight}) + (5 \times \text{height}) - (6.8 \times \text{age})) \times (\text{Activity level points})$
 - **For women:** $(655 + (9.6 \times \text{weight}) + (1.8 \times \text{height}) - (4.7 \times \text{age})) \times (\text{Activity level points})$
 - 1.2 points for a person who does little to no exercise.
 - 1.37 points for a slightly active person who does light exercise 1–3 days a week.
 - 1.55 points for a moderately active person who performs moderate exercise 3–5 days a week.
 - 1.725 points for a very active person who exercises hard 6–7 days a week.
 - 1.9 points for an extra active person who either has a physically demanding job or has a particularly challenging exercise routine.
- Tracking page contains weight, waist size, arms size, legs size.
- Mrs. I. Sochirca's login.

Emails about the design section.

Hello,

I attached a sketch of the user interface for the program.

Please reply with any feedback/suggestions.

Thank you,

Damian Mitrofan.



Damian Mitrofan

Mon 11/05/2020 14:50

To: Ina.sochirca@yahoo.com <ina.sochirca@yahoo.com>



Hello,

I attached a sketch of the user interface for the program.

Please reply with any feedback/suggestions.

Thank you,

Damian Mitrofan.

Hello Damian,

The GUI looks fine so far, but I would prefer to have all the tools in one window, with a separate section (maybe different colour) with the results.

Stay safe,

Ina.



Ina Sochirca <ina.sochirca@yahoo.com>

Mon 11/05/2020 15:55

To: Damian Mitrofan



Hello Damian,

The GUI looks fine so far, but I would prefer to have all the tools in one window, with a separate section (maybe different colour) with the results.

Stay safe,


Ina.




Then we had a Zoom meeting where I did screen share with the updated sketch and she approved it after small changes with the buttons position.

Emails after development section.


BMI Program - Appointment1



Damian Mitrofan
Fri 08/01/2021 09:58
To: Ina Sochirca <Ina.sochirca@yahoo.com>

 **IA.jar**
78 KB

...




Damian Mitrofan
Fri 08/01/2021 09:57
To: Ina Sochirca <Ina.sochirca@yahoo.com>

Dear Mrs. I. Sochirca,

I have attached my latest version of the program. The MySQL database is already running in cPanel for natur-clinic.ro. Please have a look and advise me when we should meet to discuss the latest adjustments.

Kind regards,
Damian

...




Ina Sochirca <Ina.sochirca@yahoo.com>
Fri 08/01/2021 10:05
To: Damian Mitrofan

Hi Damian,

Great Job!
Come to my office whenever you can in the next 2 weeks from 12 - 4 pm to discuss the small details.

Thanks,
Ina Sochirca.
Administrator of Natur House Timisoara
+40752284299



...

This message has been checked by Libraesva ESG and is found to be clean.
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[Blacklist sender](#)

[Reply](#) | [Forward](#)

We met afterwards at her office, where she explained a few things I could improve to make it more GDPR friendly.

Code of the program

BMI class:

```
package com.naturhouse.ia;
```

```
/**
 *
 * @author Damian
 */
public class BMI {
    public int MaleBMI(int Age, int Weight, int Height, double Activity){
        double calories= (66 + (13.7*Weight) + (5*Height) - (6.8*Age))*Activity;
        int Calories=(int)calories; //calculate calories for male
        return Calories;
    }
    public int FemaleBMI(int Age, int Weight, int Height, double Activity){
        double calories=(655 + (9.6*Weight) + (1.8*Height) - (4.7*Age))*Activity;
        int Calories=(int)calories; //calculate calories for male
        return Calories;
    }
}
```

BodyFat class:

```
package com.naturhouse.ia;
```

```
import static java.lang.Math.log;
```

```
/**
 *
 * @author Damian
 */
public class BodyFat {
    public int MaleBodyFat(int Waist, int Hips, int Neck, int Age, int Height){
        double bodyfat=(495/(1.0324-0.19077*(log(Waist-Neck))+0.15456*(log(Height))))-450;
        //calculate body fat percentage for male
        int BodyFat=(int)bodyfat; //convert double to int
        return BodyFat;
    }
    public int FemaleBodyFat(int Waist, int Hips, int Neck, int Age, int Height){
        double bodyfat=(495/(1.29579-0.35004*(log(Waist+Hips-Neck))+0.22100*(log(Height))))-
450;
        //calculate body fat percentage for female
        int BodyFat=(int)bodyfat; //convert double to int
        return BodyFat;
    }
}
```

Download class:

```
package com.naturhouse.ia;

import java.awt.Desktop;
import java.io.IOException;
import java.net.URISyntaxException;
import java.net.URL;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.logging.Level;
import java.util.logging.Logger;

/**
 *
 * @author Damian
 */
public class Download {
    public void DietDownloadCut(int x){ //function to open the url
        try { //according to the inputed calories, Cut version.
            if (x < 1800){ //range of calories
                x = 1;
            } else if (x > 1800 | x < 2000){
                x = 2;
            } else if (x > 2000 | x < 2250){
                x = 3;
            } else if (x > 2250 | x < 2500){
                x = 4;
            } else if (x > 2500 | x < 2750){
                x = 5;
            } else if (x > 2750){
                x = 6;
            }
            String CutLink = null;
            PreparedStatement ps;
            ResultSet rs = null;
            String s=String.valueOf(x);
            String query = "SELECT link FROM diets WHERE id = '" + s + "'";
            ps = MyConnection.getConnection().prepareStatement(query);
            if(ps.execute())
            {
                rs=ps.getResultSet(); //send the query to db
            }
            while(rs.next()){
                CutLink = rs.getString(1); //receive from db once
            }
            OpenLink(CutLink); //pop the link in browser
        }
    }
}
```

```

    } catch (SQLException ex) {
        Logger.getLogger(Download.class.getName()).log(Level.SEVERE, null, ex);
    }
}

```

```

public void DietDownloadBulk(int x){ //function to open the url
    try { //according to the inputed calories, Bulk version.
        if (x < 1800){ //range of calories
            x = 1;
        } else if (x > 1800 | x < 2000){
            x = 2;
        } else if (x > 2000 | x < 2250){
            x = 3;
        } else if (x > 2250 | x < 2500){
            x = 4;
        } else if (x > 2500 | x < 2750){
            x = 5;
        } else if (x > 2750){
            x = 6;
        }
        String BulkLink = null;
        PreparedStatement ps;
        ResultSet rs = null;
        x = x+1;
        String s=String.valueOf(x);
        String query = "SELECT link FROM diets WHERE id = '" + s + "'";
        ps = MyConnection.getConnection().prepareStatement(query);
        if(ps.execute())
        {
            rs=ps.getResultSet(); //send the query to db
        }
        while(rs.next()){
            BulkLink = rs.getString(1); //receive from db once
        }
        OpenLink(BulkLink); //pop the link in browser
    } catch (SQLException ex) {
        Logger.getLogger(Download.class.getName()).log(Level.SEVERE, null, ex);
    }
}
}

```

```

public void OpenLink(String link){
    try { //open the link in the OS's default browser
        Desktop.getDesktop().browse(new URL(link).toURI());
    } catch (IOException | URISyntaxException e) {
    }
}
}
}

```

LoginPage class:

```
package com.naturhouse.ia;
import java.io.BufferedWriter;
import java.io.File;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.io.OutputStreamWriter;
import java.io.Writer;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.Scanner;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;

/**
 *
 * @author damian
 */
public class LoginPage extends javax.swing.JFrame {

    /**
     * Creates new form RegisterPage
     */
    public LoginPage() {
        initComponents();
    }

    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        jLabel2 = new javax.swing.JLabel();
        jLabel3 = new javax.swing.JLabel();
        EmailLogTextField = new javax.swing.JTextField();
        jLabel5 = new javax.swing.JLabel();
        PasswordLogTextField = new javax.swing.JPasswordField();
        LoginButton = new javax.swing.JButton();
    }
}
```



```

RegisterPageButton = new javax.swing.JButton();
LoggedInButton = new javax.swing.JToggleButton();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
setTitle("Login - Natur House");
setBackground(new java.awt.Color(255, 247, 216));
setResizable(false);

jPanel1.setBackground(new java.awt.Color(255, 247, 216));
jPanel1.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        jPanel1MouseEntered(evt);
    }
});

jLabel1.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/com/naturhouse/ia/logo.png"))); // NOI18N
jLabel1.setToolTipText("");

jLabel2.setFont(new java.awt.Font("Lucida Grande", 0, 20)); // NOI18N
jLabel2.setText("LOGIN FORM");

jLabel3.setFont(new java.awt.Font("Lucida Grande", 0, 18)); // NOI18N
jLabel3.setText("EMAIL:");
jLabel3.setToolTipText("");

EmailLogTextField.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        EmailLogTextFieldActionPerformed(evt);
    }
});

jLabel5.setFont(new java.awt.Font("Lucida Grande", 0, 18)); // NOI18N
jLabel5.setText("PASSWORD:");
jLabel5.setToolTipText("");

LoginButton.setText("LOGIN");
LoginButton.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        LoginButtonActionPerformed(evt);
    }
});

RegisterPageButton.setText("REGISTER");
RegisterPageButton.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseClicked(java.awt.event.MouseEvent evt) {
        RegisterPageButtonMouseClicked(evt);
    }
}

```

```

});

LoggedButton.setText("STAY LOGGED");

javax.swing.GroupLayout jPanel1Layout = new javax.swing.GroupLayout(jPanel1);
jPanel1.setLayout(jPanel1Layout);
jPanel1Layout.setHorizontalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(22, 22, 22)
            .addComponent(jLabel1)
            .addGap(109, 109, 109)
            .addComponent(jLabel2)
            .addGap(52, 52, 52)
            .addComponent(LoggedButton)
            .addContainerGap())
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING, false)
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addComponent(RegisterPageButton)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
                .addComponent(LoginButton)
                .addContainerGap())
            .addGroup(jPanel1Layout.createSequentialGroup()
                .addComponent(jLabel3)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
                .addComponent(EmailLogTextField)
                .addGap(29, 29, 29)
                .addComponent(jLabel5)
                .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
                .addComponent>PasswordLogTextField,
javax.swing.GroupLayout.PREFERRED_SIZE, 127, javax.swing.GroupLayout.PREFERRED_SIZE))))
        .addGap(29, 29, 29));
jPanel1Layout.setVerticalGroup(
    jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup()
            .addGap(21, 21, 21)
            .addComponent(jLabel1)
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED_SIZE, 37,

```

```

javax.swing.GroupLayout.PREFERRED_SIZE)
    .addGap(5, 5, 5)
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASE
LINE)
        .addComponent(EmailLogTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel3))
    .addGap(18, 18, 18)
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASE
LINE)
        .addComponent(jLabel5)
        .addComponent>PasswordLogTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 19,
Short.MAX_VALUE)
    .addComponent(LoggedButton)
    .addGap(18, 18, 18)
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASE
LINE)
        .addComponent(RegisterPageButton)
        .addComponent(LoginButton))
    .addGap(52, 52, 52))
);

```

```

javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
getContentPane().setLayout(layout);
layout.setHorizontalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
);
layout.setVerticalGroup(
    layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
);

```

```

pack();
} // </editor-fold>

```

```

private void EmailLogTextFieldActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
}

```

```

private void RegisterPageButtonMouseClicked(java.awt.event.MouseEvent evt) {
    // open the register page while closing the login one
    RegisterPage rgf = new RegisterPage();
    rgf.setVisible(true);
}

```

```

    rgf.pack();
    rgf.setLocationRelativeTo(null);
    rgf.setDefaultCloseOperation(LoginPage.EXIT_ON_CLOSE);
    this.dispose();
}

public void Login(){
    main rgf = new main();
    rgf.setVisible(true);
    rgf.pack();
    rgf.setLocationRelativeTo(null);
    rgf.setDefaultCloseOperation(LoginPage.EXIT_ON_CLOSE);
    this.dispose();
}

public void checkLogged(){ // function to check if user chose to stay logged
    PreparedStatement ps;
    ResultSet rs;
    String Logged = null;
    String email = null;
    String pass = null;
    File f = new File("credentials.txt"); //open the file
    try {
        Scanner read = new Scanner(f);
        read.useDelimiter(":"); //save the data between : into below variable
        while(read.hasNext()){
            email = read.next();
            pass = read.next();
            Logged = read.next();
        }
    } catch (FileNotFoundException ex) {
        Logger.getLogger(main.class.getName()).log(Level.SEVERE, null, ex);
    }
    if ("1".equals(Logged)){ //if it is then login using the credentials
        try {
            //saved in the credentials.txt
            String query = "SELECT * FROM `users` WHERE `email` =? AND `pass` =?";
            ps = MyConnection.getConnection().prepareStatement(query);
            ps.setString(1, email);
            ps.setString(2, pass);
            rs = ps.executeQuery();
            if(rs.next())
            {
                Login();
            }
        } catch (SQLException ex) {
            Logger.getLogger(LoginPage.class.getName()).log(Level.SEVERE, null, ex);
        }
    }
}
}

```

```

private void LoginButtonActionPerformed(java.awt.event.ActionEvent evt) {
    // function to login to MySQL database
    PreparedStatement ps;
    ResultSet rs;
    String email = EmailLogTextField.getText();
    String pass = String.valueOf>PasswordLogTextField.getPassword());

    String query = "SELECT * FROM `users` WHERE `email` =? AND `pass` =?";

    try {
        pass = MyConnection.encrypt(pass);
        ps = MyConnection.getConnection().prepareStatement(query);

        ps.setString(1, email);
        ps.setString(2, pass);

        rs = ps.executeQuery();

        if(rs.next())
        {
            try (Writer writer = new BufferedWriter(new OutputStreamWriter(
                new FileOutputStream("credentials.txt"), "utf-8"))) {
                if (LoggedButton.isSelected()==true){ //if stay logged box
                    //is pressed
                    writer.write(email + ":" + pass + ":1");
                } else {
                    writer.write(email + ":" + pass + ":0");
                }
            }
            Login();
        } catch (IOException ex) {
            Logger.getLogger(LoginPage.class.getName()).log(Level.SEVERE, null, ex);
        }
    }
    else{
        JOptionPane.showMessageDialog(null, "Incorrect email or password.", "Login failed", 2);
    }

} catch (SQLException ex) {
    Logger.getLogger(LoginPage.class.getName()).log(Level.SEVERE, null, ex);
}

}

/**
 * @param args the command line arguments
 */
public static void main(String args[]) {
    /* Set the Nimbus look and feel */

```

```

//<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
/* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
 * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
 */
try {
    for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
        if ("Nimbus".equals(info.getName())) {
            javax.swing.UIManager.setLookAndFeel(info.getClassName());
            break;
        }
    }
} catch (ClassNotFoundException ex) {

```

```

java.util.logging.Logger.getLogger(LoginPage.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (InstantiationException ex) {

```

```

java.util.logging.Logger.getLogger(LoginPage.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (IllegalAccessException ex) {

```

```

java.util.logging.Logger.getLogger(LoginPage.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {

```

```

java.util.logging.Logger.getLogger(LoginPage.class.getName()).log(java.util.logging.Level.SEVERE,
null, ex);
    }

```

```

//</editor-fold>

```

```

//</editor-fold>

```

```

/* Create and display the form */
java.awt.EventQueue.invokeLater(() -> {
    new LoginPage().setVisible(true);
});
}

```

```

private void jPanel1MouseEntered(java.awt.event.MouseEvent evt) {
    // check if the mouse entered the app in order to call the update function
    checkLogged();
}

```

```

// Variables declaration - do not modify
private javax.swing.JTextField EmailLogTextField;
private javax.swing.JToggleButton LoggedButton;
private javax.swing.JButton LoginButton;
private javax.swing.JPasswordField PasswordLogTextField;

```

```

private javax.swing.JButton RegisterPageButton;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel5;
private javax.swing.JPanel jPanel1;
// End of variables declaration
}

```

MyConnection class:

```

package com.naturhouse.ia;
import com.mysql.jdbc.jdbc2.optional.MysqlDataSource;
import java.security.MessageDigest;
import java.security.NoSuchAlgorithmException;
import java.sql.Connection;
import java.sql.SQLException;
import java.util.logging.Level;
import java.util.logging.Logger;

/**
 *
 * @author damian
 */
public class MyConnection {

    private static String servername = "127.0.0.1";
    private static String username = "root";
    private static String dbname = "ia";
    private static Integer portnumber = 3306;
    private static String password = "";

    public static Connection getConnection() //connects to the MySQL database
    {
        Connection cnx = null;

        MysqlDataSource datasource = new MysqlDataSource();

        datasource.setServerName(servername);
        datasource.setUser(username);
        datasource.setPassword(password);
        datasource.setDatabaseName(dbname);
        datasource.setPortNumber(portnumber);
        datasource.setUseSSL(false); // for secure connection, needs certificate

        try {
            cnx = datasource.getConnection();
        } catch (SQLException ex) {
            Logger.getLogger(MyConnection.class.getName()).log(Level.SEVERE, null, ex);

```

```

    }

    return cnx;
}
public static String encrypt(String data){ //encrypts string in SHA-256
    StringBuilder sb;           //for a hashed password
    sb = new StringBuilder();
    try{
        MessageDigest md = MessageDigest.getInstance("SHA-256");
        md.update(data.getBytes()); //get the type of encryption
        byte byteData[] = md.digest();
        for (int i = 0; i < byteData.length; i++) {
            //loop through the bytes and converts it to hex
            sb.append(Integer.toString((byteData[i] & 0xff) + 0x100, 16).substring(1));
        }
    } catch (NoSuchAlgorithmException e){
    }
    return sb.toString();
}
}

```

RegisterPage class:

```

package com.naturhouse.ia;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.text.SimpleDateFormat;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;
/**
 *
 * @author damian
 */
public class RegisterPage extends javax.swing.JFrame {

    /**
     * Creates new form RegisterPage
     */
    public RegisterPage() {
        initComponents();
    }

    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
}

```



```

@SuppressWarnings("unchecked")
// <editor-fold defaultstate="collapsed" desc="Generated Code">
private void initComponents() {

    jPanel1 = new javax.swing.JPanel();
    jLabel1 = new javax.swing.JLabel();
    jLabel2 = new javax.swing.JLabel();
    jLabel3 = new javax.swing.JLabel();
    EmailRegTextField = new javax.swing.JTextField();
    jLabel4 = new javax.swing.JLabel();
    NameTextField = new javax.swing.JTextField();
    jLabel5 = new javax.swing.JLabel();
    PasswordRegTextField = new javax.swing.JPasswordField();
    CancelButton = new javax.swing.JButton();
    RegisterButton = new javax.swing.JButton();
    jLabel6 = new javax.swing.JLabel();
    PasswordRegTextField2 = new javax.swing.JPasswordField();
    jDateChooser1 = new com.toedter.calendar.JDateChooser();
    jLabel7 = new javax.swing.JLabel();

    setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
    setTitle("Register - Natur House");
    setBackground(new java.awt.Color(255, 247, 216));
    setResizable(false);

    jPanel1.setBackground(new java.awt.Color(255, 247, 216));

    jLabel1.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/com/naturhouse/ia/logo.png"))); // NOI18N

    jLabel2.setFont(new java.awt.Font("Lucida Grande", 0, 20)); // NOI18N
    jLabel2.setText("REGISTER FORM");

    jLabel3.setFont(new java.awt.Font("Lucida Grande", 0, 18)); // NOI18N
    jLabel3.setText("EMAIL:");
    jLabel3.setToolTipText("");

    EmailRegTextField.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            EmailRegTextFieldActionPerformed(evt);
        }
    });

    jLabel4.setFont(new java.awt.Font("Lucida Grande", 0, 18)); // NOI18N
    jLabel4.setText("NAME:");
    jLabel4.setToolTipText("");

    NameTextField.addActionListener(new java.awt.event.ActionListener() {

```

ING)

EADING)

```
t.TRAILING, false)
```

```
.addGroup(javax.swing.GroupLayout.Alignment.LEADING,
```

```

jPanel1Layout.createSequentialGroup()
    .addComponent(CancelButton)
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
    .addComponent(RegisterButton))
    .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
jPanel1Layout.createSequentialGroup()
    .addComponent(jLabel5)
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED
)
    .addComponent>PasswordRegTextField))
    .addGroup(jPanel1Layout.createSequentialGroup()
    .addComponent(jLabel3)
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED
)
    .addComponent>EmailRegTextField,
javax.swing.GroupLayout.PREFERRED_SIZE, 201, javax.swing.GroupLayout.PREFERRED_SIZE))
    .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
jPanel1Layout.createSequentialGroup()
    .addGap(13, 13, 13)
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Align
ment.TRAILING)
    .addComponent(jLabel7)
    .addComponent(jLabel6))
    .addGap(12, 12, 12)
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Align
ment.LEADING)
    .addComponent>PasswordRegTextField2)
    .addComponent(jLabel4)
    .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
    .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignm
ent.LEADING)
    .addComponent(jLabel2)
    .addComponent(NameTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
201, javax.swing.GroupLayout.PREFERRED_SIZE))))))
    .addContainerGap(73, Short.MAX_VALUE))
);
jPanel1Layout.setVerticalGroup(
jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
    .addGroup(jPanel1Layout.createSequentialGroup()
    .addGap(12, 12, 12)
    .addComponent(jLabel1)
    .addGap(12, 12, 12)
    .addComponent(jLabel2, javax.swing.GroupLayout.PREFERRED_SIZE, 37,
javax.swing.GroupLayout.PREFERRED_SIZE)

```

```

        .addGap(18, 18, 18)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
            .addComponent(jLabel4)
            .addComponent(NameTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGap(18, 18, 18)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
            .addComponent(jLabel3)
            .addComponent(EmailRegTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGap(18, 18, 18)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
            .addComponent(jLabel5)
            .addComponent>PasswordRegTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent>PasswordRegTextField2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(jLabel7))
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNRELATED)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.TRAILING)
            .addComponent(jDateChooser1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
            .addComponent(jLabel6))
        .addGap(18, 18, 18)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(CancelButton)
            .addComponent(RegisterButton))
        .addContainerGap(39, Short.MAX_VALUE))
    );

    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addGroup(layout.createSequentialGroup()
                .addComponent(jPanel1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
                .addGap(0, 0, Short.MAX_VALUE))
    );
    layout.setVerticalGroup(

```

```

        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
            .addComponent(jPanel1, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
        );

        pack();
    } // </editor-fold>

    private void EmailRegTextFieldActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void NameTextFieldActionPerformed(java.awt.event.ActionEvent evt) {
        // TODO add your handling code here:
    }

    private void CancelButtonMouseClicked(java.awt.event.MouseEvent evt) {
        // open the login page while closing the register one
        LoginPage lgf = new LoginPage();
        lgf.setVisible(true);
        lgf.pack();
        lgf.setLocationRelativeTo(null);
        lgf.setDefaultCloseOperation(RegisterPage.EXIT_ON_CLOSE);
        this.dispose();
    }

    private void RegisterButtonActionPerformed(java.awt.event.ActionEvent evt) {
        // Sign in the user to the MySQL database
        String name = NameTextField.getText();
        String email = EmailRegTextField.getText();
        String pass = String.valueOf>PasswordRegTextField.getPassword());
        String re_pass = String.valueOf>PasswordRegTextField2.getPassword());
        String bdate = null;

        //error checking the string to have to appropriate data
        if (name.equals("")){
            JOptionPane.showMessageDialog(null, "Add a name.");
        }
        else if(email.equals("") || email.contains("@")==false)
        {
            JOptionPane.showMessageDialog(null, "Add a valid email.");
        }

        else if(pass.length() < 8)
        {
            JOptionPane.showMessageDialog(null, "Add a secured password.");
        }
        else if(!pass.equals(re_pass))
    }

```

```

{
    JOptionPane.showMessageDialog(null, "Retype the password again.");
}

else if(checkEmail(email))
{
    JOptionPane.showMessageDialog(null, "This email already exist.");
}

else if (jDateChooser1.getDate() == null){
    JOptionPane.showMessageDialog(null, "Input correct birthday format.");
} else {

if(jDateChooser1.getDate() != null)
{
    SimpleDateFormat dateformat = new SimpleDateFormat("yyyy-MM-dd");
    // check for the default MySQL data format
    bdate = dateformat.format(jDateChooser1.getDate());
}
PreparedStatement ps;
String query = "INSERT INTO `users`(`name`, `email`, `pass`, `birthday`) VALUES (?, ?, ?, ?)";

try {
    pass = MyConnection.encrypt(pass); //has password
    ps = MyConnection.getConnection().prepareStatement(query); //connect to db
    ps.setString(1, name);
    ps.setString(2, email);
    ps.setString(3, pass);

    if(bdate != null)
    {
        ps.setString(4, bdate);
    }else{
        ps.setNull(4, 0);
    }

    if(ps.executeUpdate() > 0)
    {
        JOptionPane.showMessageDialog(null, "New user added. Press Cancel to return.");
    }

} catch (SQLException ex) {
    Logger.getLogger(RegisterPage.class.getName()).log(Level.SEVERE, null, ex);
}
}
}

```

```

public boolean checkEmail(String email) // function to check if the email is already in used.

```

```

{
    PreparedStatement ps;
    ResultSet rs;
    boolean checkUser = false;
    String query = "SELECT * FROM `users` WHERE `email` =?";

    try {
        ps = MyConnection.getConnection().prepareStatement(query);
        ps.setString(1, email);

        rs = ps.executeQuery();

        if(rs.next()) // db returns only if there is something saved
        {
            checkUser = true; //therefore, already exist
        }
    } catch (SQLException ex) {
        Logger.getLogger(RegisterPage.class.getName()).log(Level.SEVERE, null, ex);
    }
    return checkUser;
}
/**
 * @param args the command line arguments
 */
public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    //<editor-fold defaultstate="collapsed" desc=" Look and feel setting code (optional) ">
    /* If Nimbus (introduced in Java SE 6) is not available, stay with the default look and feel.
     * For details see http://download.oracle.com/javase/tutorial/uiswing/lookandfeel/plaf.html
     */
    try {
        for (javax.swing.UIManager.LookAndFeelInfo info :
javax.swing.UIManager.getInstalledLookAndFeels()) {
            if ("Nimbus".equals(info.getName())) {
                javax.swing.UIManager.setLookAndFeel(info.getClassName());
                break;
            }
        }
    } catch (ClassNotFoundException ex) {

java.util.logging.Logger.getLogger(RegisterPage.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (InstantiationException ex) {

java.util.logging.Logger.getLogger(RegisterPage.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (IllegalAccessException ex) {

```

```

java.util.logging.Logger.getLogger(RegisterPage.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {

```

```

java.util.logging.Logger.getLogger(RegisterPage.class.getName()).log(java.util.logging.Level.SEVERE, null, ex);
    }
    //</editor-fold>

```

```

    /* Create and display the form */
    java.awt.EventQueue.invokeLater(() -> {
        new RegisterPage().setVisible(true);
    });
}

// Variables declaration - do not modify
private javax.swing.JButton CancelButton;
private javax.swing.JTextField EmailRegTextField;
private javax.swing.JTextField NameTextField;
private javax.swing.JPasswordField PasswordRegTextField;
private javax.swing.JPasswordField PasswordRegTextField2;
private javax.swing.JButton RegisterButton;
private com.toedter.calendar.JDateChooser jDateChooser1;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel2;
private javax.swing.JLabel jLabel3;
private javax.swing.JLabel jLabel4;
private javax.swing.JLabel jLabel5;
private javax.swing.JLabel jLabel6;
private javax.swing.JLabel jLabel7;
private javax.swing.JPanel jPanel1;
// End of variables declaration
}

```

Main class:

```

package com.naturhouse.ia;
import java.io.File;
import java.io.FileNotFoundException;
import java.io.PrintWriter;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.util.Scanner;
import java.util.logging.Level;
import java.util.logging.Logger;
import javax.swing.JOptionPane;

```

```

/**

```



```

*
* @author damian
*/
public class main extends javax.swing.JFrame {
    int x = 0;
    public int calories;
    /**
     * Creates new form main
     */
    public main(){
        initComponents();
        Update();
    }

    /**
     * This method is called from within the constructor to initialize the form.
     * WARNING: Do NOT modify this code. The content of this method is always
     * regenerated by the Form Editor.
     */
    @SuppressWarnings("unchecked")
    // <editor-fold defaultstate="collapsed" desc="Generated Code">
    private void initComponents() {

        jPanel1 = new javax.swing.JPanel();
        jLabel1 = new javax.swing.JLabel();
        jLabel4 = new javax.swing.JLabel();
        jLabel5 = new javax.swing.JLabel();
        HeightTextField = new javax.swing.JTextField();
        WeightTextField = new javax.swing.JTextField();
        jLabel6 = new javax.swing.JLabel();
        jLabel7 = new javax.swing.JLabel();
        SaveButton = new javax.swing.JButton();
        jLabel8 = new javax.swing.JLabel();
        jLabel9 = new javax.swing.JLabel();
        UserLabel = new javax.swing.JLabel();
        jLabel11 = new javax.swing.JLabel();
        jLabel12 = new javax.swing.JLabel();
        jLabel13 = new javax.swing.JLabel();
        jLabel14 = new javax.swing.JLabel();
        HipsTextField = new javax.swing.JTextField();
        NeckTextField = new javax.swing.JTextField();
        WaistTextField = new javax.swing.JTextField();
        jLabel15 = new javax.swing.JLabel();
        jLabel16 = new javax.swing.JLabel();
        jLabel17 = new javax.swing.JLabel();
        LogOutButton = new javax.swing.JButton();
        jPanel2 = new javax.swing.JPanel();
        jLabel20 = new javax.swing.JLabel();

```

```

jLabel21 = new javax.swing.JLabel();
jLabel22 = new javax.swing.JLabel();
jLabel23 = new javax.swing.JLabel();
jLabel24 = new javax.swing.JLabel();
CutButton = new javax.swing.JButton();
BulkButton = new javax.swing.JButton();
CutLabel = new javax.swing.JLabel();
BulkLabel = new javax.swing.JLabel();
BodyFatLabel = new javax.swing.JLabel();
jLabel28 = new javax.swing.JLabel();
jLabel29 = new javax.swing.JLabel();
jComboBox1 = new javax.swing.JComboBox<>();
jComboBox2 = new javax.swing.JComboBox<>();
RefreshButton = new javax.swing.JButton();

setDefaultCloseOperation(javax.swing.WindowConstants.EXIT_ON_CLOSE);
setTitle("BMI Calculator - Natur House");
setBackground(new java.awt.Color(255, 247, 216));
setResizable(false);

jPanel1.setBackground(new java.awt.Color(255, 247, 216));
jPanel1.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseEntered(java.awt.event.MouseEvent evt) {
        jPanel1MouseEntered(evt);
    }
});

jLabel1.setIcon(new
javax.swing.ImageIcon(getClass().getResource("/com/naturhouse/ia/logo.png"))); // NOI18N

jLabel4.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel4.setText("Weight:");

jLabel5.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel5.setText("cm");

HeightTextField.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        HeightTextFieldActionPerformed(evt);
    }
});

WeightTextField.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        WeightTextFieldActionPerformed(evt);
    }
});

```

```
jLabel6.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel6.setText("Height:");

jLabel7.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel7.setText("kg");

SaveButton.setText("Save");
SaveButton.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        SaveButtonActionPerformed(evt);
    }
});

jLabel8.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel8.setText("Gender:");

jLabel9.setFont(new java.awt.Font("Tahoma", 0, 12)); // NOI18N
jLabel9.setText("Hello,");

UserLabel.setFont(new java.awt.Font("Tahoma", 0, 12)); // NOI18N
UserLabel.setText("user");
UserLabel.addMouseListener(new java.awt.event.MouseAdapter() {
    public void mouseMoved(java.awt.event.MouseEvent evt) {
        UserLabelMouseMoved(evt);
    }
});

jLabel11.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel11.setText("Activity level:");

jLabel12.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel12.setText("Hips size:");

jLabel13.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel13.setText("Waist size:");

jLabel14.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N
jLabel14.setText("Neck size:");

HipsTextField.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        HipsTextFieldActionPerformed(evt);
    }
});

NeckTextField.addActionListener(new java.awt.event.ActionListener() {
    public void actionPerformed(java.awt.event.ActionEvent evt) {
        NeckTextFieldActionPerformed(evt);
    }
});
```

```
}  
});  
  
WaistTextField.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        WaistTextFieldActionPerformed(evt);  
    }  
});  
  
jLabel15.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N  
jLabel15.setText("cm");  
  
jLabel16.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N  
jLabel16.setText("cm");  
  
jLabel17.setFont(new java.awt.Font("Tahoma", 0, 18)); // NOI18N  
jLabel17.setText("cm");  
  
LogOutButton.setText("Log Out");  
LogOutButton.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        LogOutButtonActionPerformed(evt);  
    }  
});  
  
jLabel20.setText("Calories for cut:");  
  
jLabel21.setText("Calories for bulk:");  
  
jLabel22.setText("Estimated body fat:");  
  
jLabel23.setText("Diet for cut:");  
  
jLabel24.setText("Diet for bulk:");  
  
CutButton.setText("Download");  
CutButton.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        CutButtonActionPerformed(evt);  
    }  
});  
  
BulkButton.setText("Download");  
BulkButton.addActionListener(new java.awt.event.ActionListener() {  
    public void actionPerformed(java.awt.event.ActionEvent evt) {  
        BulkButtonActionPerformed(evt);  
    }  
});
```

```

CutLabel.setText("000");

BulkLabel.setText("000");

BodyFatLabel.setText("00");

jLabel28.setText("%");

jLabel29.setText("For any problems, email: contact@natur-clinic.ro");

javax.swing.GroupLayout jPanel2Layout = new javax.swing.GroupLayout(jPanel2);
jPanel2.setLayout(jPanel2Layout);
jPanel2Layout.setHorizontalGroup(
    jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel2Layout.createSequentialGroup()
            .addGap(18, 18, 18)
            .addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(jLabel22)
                .addComponent(BodyFatLabel)
                .addComponent(jLabel28))
            .addGap(18, 18, 18)
            .addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(jLabel20)
                .addComponent(jLabel21))
            .addGap(18, 18, 18)
            .addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addComponent(BulkLabel)
                .addComponent(CutLabel))
            .addGap(7, 7, 7)
            .addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
                .addGroup(jPanel2Layout.createSequentialGroup()
                    .addGap(114, 114, 114)
                    .addComponent(jLabel24)
                    .addGap(18, 18, 18)
                    .addComponent(BulkButton))
                .addGroup(jPanel2Layout.createSequentialGroup()
                    .addGap(74, 74, 74)
                    .addComponent(jLabel23)
                    .addGap(18, 18, 18)))
        .addGroup(jPanel2Layout.createSequentialGroup()
            .addGap(18, 18, 18)
            .addComponent(jLabel23)
            .addGap(18, 18, 18))
);

```

```

        .addComponent(CutButton))))
        .addComponent(jLabel29)
        .addContainerGap(164, Short.MAX_VALUE)
    );
    jPanel2Layout.setVerticalGroup(
        jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(jPanel2Layout.createSequentialGroup()
            .addContainerGap()
            .addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(jLabel20)
                .addComponent(jLabel23)
                .addComponent(CutButton)
                .addComponent(CutLabel))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(jLabel21)
                .addComponent(jLabel24)
                .addComponent(BulkButton)
                .addComponent(BulkLabel))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
            .addGroup(jPanel2Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
                .addComponent(jLabel22)
                .addComponent(BodyFatLabel)
                .addComponent(jLabel28))
            .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED, 49,
Short.MAX_VALUE)
            .addComponent(jLabel29)
            .addContainerGap())
        );

    jComboBox1.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] { "None",
"Low", "Medium", "High", "Performance" }));
    jComboBox1.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jComboBox1ActionPerformed(evt);
        }
    });

    jComboBox2.setModel(new javax.swing.DefaultComboBoxModel<>(new String[] { "Male",
"Female" }));
    jComboBox2.addActionListener(new java.awt.event.ActionListener() {
        public void actionPerformed(java.awt.event.ActionEvent evt) {
            jComboBox2ActionPerformed(evt);
        }
    });

```

[illegible]

```

javax.swing.GroupLayout.PREFERRED_SIZE, 100, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(HeightTextField,
javax.swing.GroupLayout.PREFERRED_SIZE, 100, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNR
ELATED)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout
t.Alignment.LEADING)
        .addComponent(jLabel15)
        .addComponent(jLabel7)))
        .addGroup(jPanel1Layout.createSequentialGroup())
        .addComponent(jLabel8)
        .addGap(18, 18, 18)
        .addComponent(jComboBox2,
javax.swing.GroupLayout.PREFERRED_SIZE, 131, javax.swing.GroupLayout.PREFERRED_SIZE)))
        .addGap(55, 55, 55)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Ali
gnment.LEADING)
        .addGroup(jPanel1Layout.createSequentialGroup())
        .addGap(49, 49, 49)
        .addComponent(jLabel13)
        .addGap(18, 18, 18)
        .addComponent(WaistTextField,
javax.swing.GroupLayout.PREFERRED_SIZE, 100, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNR
ELATED)
        .addComponent(jLabel17))
        .addGroup(jPanel1Layout.createSequentialGroup())
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout
t.Alignment.TRAILING)
        .addComponent(SaveButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 100, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLay
out.Alignment.TRAILING)
        .addGroup(javax.swing.GroupLayout.Alignment.LEADING,
jPanel1Layout.createSequentialGroup())
        .addGap(59, 59, 59)
        .addComponent(jLabel12)
        .addGap(18, 18, 18)
        .addComponent(HipsTextField,
javax.swing.GroupLayout.PREFERRED_SIZE, 100, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGroup(jPanel1Layout.createSequentialGroup())
        .addComponent(jLabel14)
        .addGap(18, 18, 18)
        .addComponent(NeckTextField,
javax.swing.GroupLayout.PREFERRED_SIZE, 100, javax.swing.GroupLayout.PREFERRED_SIZE)))
        .addComponent(RefreshButton,
javax.swing.GroupLayout.PREFERRED_SIZE, 100, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.UNR

```


ELATED)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addComponent(jLabel5)
.addComponent(jLabel16))))

.addGroup(jPanel1Layout.createSequentialGroup())

.addComponent(jLabel9)
.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
.addComponent(UserLabel)
.addGap(274, 274, 274))))

.addGap(0, 15, Short.MAX_VALUE))

.addGroup(jPanel1Layout.createSequentialGroup())

.addContainerGap()

.addComponent(jPanel2, javax.swing.GroupLayout.DEFAULT_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)))

.addContainerGap())

);

jPanel1Layout.setVerticalGroup(

jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

.addGroup(jPanel1Layout.createSequentialGroup())

.addGap(14, 14, 14)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)

ING)

.addComponent(jLabel1)

.addComponent(LogOutButton))

.addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

LINE)

.addComponent(jLabel9)

.addComponent(UserLabel))

.addGap(38, 38, 38)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

LINE)

.addComponent(jLabel13)

.addComponent(WaistTextField, javax.swing.GroupLayout.PREFERRED_SIZE,

javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

.addComponent(jLabel17)

.addComponent(jLabel4)

.addComponent(WeightTextField, javax.swing.GroupLayout.PREFERRED_SIZE,

javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

.addComponent(jLabel7))

.addGap(25, 25, 25)

.addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)

LINE)

.addComponent(jLabel12)

.addComponent(HipsTextField, javax.swing.GroupLayout.PREFERRED_SIZE,

javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)

.addComponent(jLabel16)

```

        .addComponent(jLabel6)
        .addComponent(HeightTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel15))
        .addGap(29, 29, 29)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
LINE)
        .addComponent(jLabel5)
        .addComponent(jLabel14)
        .addComponent(NeckTextField, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addComponent(jLabel8)
        .addComponent(jComboBox2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addGap(20, 20, 20)
        .addGroup(jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
ING)
        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
jPanel1Layout.createParallelGroup(javax.swing.GroupLayout.Alignment.BASELINE)
        .addComponent(SaveButton)
        .addComponent(jComboBox1, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE))
        .addComponent(jLabel11, javax.swing.GroupLayout.Alignment.TRAILING))
        .addPreferredGap(javax.swing.LayoutStyle.ComponentPlacement.RELATED)
        .addComponent(RefreshButton)
        .addGap(21, 21, 21)
        .addComponent(jPanel2, javax.swing.GroupLayout.PREFERRED_SIZE,
javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.PREFERRED_SIZE)
        .addContainerGap(javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE))
    );

    javax.swing.GroupLayout layout = new javax.swing.GroupLayout(getContentPane());
    getContentPane().setLayout(layout);
    layout.setHorizontalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(javax.swing.GroupLayout.Alignment.TRAILING,
        javax.swing.GroupLayout.DEFAULT_SIZE, javax.swing.GroupLayout.DEFAULT_SIZE,
Short.MAX_VALUE)
    );
    layout.setVerticalGroup(
        layout.createParallelGroup(javax.swing.GroupLayout.Alignment.LEADING)
        .addGroup(
        javax.swing.GroupLayout.DEFAULT_SIZE, Short.MAX_VALUE)
    );

    pack();
} // </editor-fold>

```

```
private void HeightTextFieldActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
}
```

```
private void WeightTextFieldActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
}
```

```
private void HipsTextFieldActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
}
```

```
private void NeckTextFieldActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
}
```

```
private void WaistTextFieldActionPerformed(java.awt.event.ActionEvent evt) {  
    // TODO add your handling code here:  
}
```

```
private void LogOutButtonActionPerformed(java.awt.event.ActionEvent evt) {  
    try {  
        // delete the file  
        new PrintWriter("credentials.txt").close();  
    } catch (FileNotFoundException ex) {  
        Logger.getLogger(main.class.getName()).log(Level.SEVERE, null, ex);  
    }  
    // change page  
    LoginPage rgf = new LoginPage();  
    rgf.setVisible(true);  
    rgf.pack();  
    rgf.setLocationRelativeTo(null);  
    rgf.setDefaultCloseOperation(main.EXIT_ON_CLOSE);  
    this.dispose();  
}
```

```
private void UserLabelMouseClicked(java.awt.event.MouseEvent evt) {  
    // TODO add your handling code here:  
}
```

```
private void SaveButtonActionPerformed(java.awt.event.ActionEvent evt) {  
    // Save details to MySQL database  
    // get details from TextFields and save to local variables  
    String weight = WeightTextField.getText();  
    String height = HeightTextField.getText();  
    String waist = WaistTextField.getText();  
    String hips = HipsTextField.getText();  
    String neck = NeckTextField.getText();
```

```

String gender = jComboBox2.getSelectedItem().toString();
String email = null;
String pass = null;
String activity = jComboBox1.getSelectedItem().toString();

File f = new File("credentials.txt"); //open the file
try {
    Scanner read = new Scanner(f);
    read.useDelimiter(":"); //save the data between :
    while(read.hasNext()){ //into below variable
        email = read.next();
        pass = read.next();
        String Logged = read.next();
    }
} catch (FileNotFoundException ex) {
    Logger.getLogger(main.class.getName()).log(Level.SEVERE, null, ex);
}

// switch case to associate strings with numbers
// for the db
if (null != activity) switch (activity) {
    case "None":
        activity = "1.2";
        break;
    case "Low":
        activity = "1.37";
        break;
    case "Medium":
        activity = "1.55";
        break;
    case "High":
        activity = "1.725";
        break;
    case "Performance":
        activity = "1.9";
        break;
    default:
        break;
}

if ("Male".equals(gender)){
    gender = "0";
} else if ("Female".equals(gender)){
    gender = "1";
}

PreparedStatement ps;
String query = "UPDATE users SET weight='"+ weight +"' , height='"+
    + height +"' , waist='"+ waist +"' , hips='"+ hips +"' , neck="

```

```

        + neck +"" , gender="" + gender +"" , activity="" + activity
        + "" WHERE email="" + email +"" AND pass="" + pass + "";
try {
    ps = MyConnection.getConnection().prepareStatement(query);
    ps.executeUpdate();
    JOptionPane.showMessageDialog(null, "Details updated.");
} catch (SQLException ex) {
    Logger.getLogger(main.class.getName()).log(Level.SEVERE, null, ex);
    JOptionPane.showMessageDialog(null, "Please check your input.");
    // error checking if the inputs are not accordingly
    // for example: inputing string into int
}
    Update(); //refresh GUI
}

```

```

public void Update(){ // Live update the details from MySQL database
    BMI calcs = new BMI();
    BodyFat fats = new BodyFat();
    int bodyfat = 0;
    PreparedStatement ps;
    ResultSet rs = null;
    String email = null;
    String pass = null;
    int height = 0;
    int waist = 0;
    int hips = 0;
    int neck = 0;
    int weight = 0;
    double activity = 0;
    int gender = 0;
    String name;
    File f = new File("credentials.txt"); //open the file
    try {
        Scanner read = new Scanner(f);
        read.useDelimiter(":"); //save the data between : into below variable
        while(read.hasNext()){
            email = read.next();
            pass = read.next();
            String Logged = read.next();
        }
    } catch (FileNotFoundException ex) {
        Logger.getLogger(main.class.getName()).log(Level.SEVERE, null, ex);
    }
    String query = "SELECT height,waist,hips,neck,weight,activity,gender,name FROM "
        + "users WHERE email="" + email +"" AND pass="" + pass + "";

    try {
        ps = MyConnection.getConnection().prepareStatement(query);

```

```

if(ps.execute())
{
    rs=ps.getResultSet();
}
else {
    System.err.println("Failed.");
}
while(rs.next()){ //loops while db sends data
    height=rs.getInt(1);
    waist=rs.getInt(2);
    hips=rs.getInt(3);
    neck=rs.getInt(4);
    weight=rs.getInt(5);
    activity=rs.getDouble(6);
    gender=rs.getInt(7);
    name=rs.getString(8);
    UserLabel.setText(name); //below updates the GUI
    HeightTextField.setText(""+height);
    WaistTextField.setText(""+waist);
    HipsTextField.setText(""+hips);
    NeckTextField.setText(""+neck);
    WeightTextField.setText(""+weight);
    if (activity==1.2){ //associate numbers with choices
        jComboBox1.setSelectedIndex(0);
    } else if (activity==1.37){
        jComboBox1.setSelectedIndex(1);
    } else if (activity==1.55){
        jComboBox1.setSelectedIndex(2);
    } else if (activity==1.725){
        jComboBox1.setSelectedIndex(3);
    } else if (activity==1.9){
        jComboBox1.setSelectedIndex(4);
    }
    if (gender==0){
        jComboBox2.setSelectedIndex(0);
    } else if (gender==1){
        jComboBox2.setSelectedIndex(1);
    }
}
} catch (SQLException ex) {
    Logger.getLogger(main.class.getName()).log(Level.SEVERE, null, ex);
}
int age = getAge(email);
if (gender==0){
    calories = cals.MaleBMI(age, weight, height, activity);
    bodyfat = fats.MaleBodyFat(waist, hips, neck, age, height);
} else if (gender==1){
    calories = cals.FemaleBMI(age, weight, height, activity);
}

```

```

        bodyfat = fats.FemaleBodyFat(waist, hips, neck, age, height);
    }
    BodyFatLabel.setText(""+bodyfat);
    int CutCalories=(int)calories;
    CutCalories=CutCalories-300;
    int BulkCalories=CutCalories+600;
    CutLabel.setText(""+CutCalories);
    BulkLabel.setText(""+BulkCalories);

}

public int getAge(String email){ // Calculate the user's age from his birthday
    PreparedStatement ps;
    ResultSet rs = null;
    int age = 0;
    try {
        String query = "SELECT DATE_FORMAT(FROM_DAYS(DATEDIFF(CURDATE(),birthday)), "
            + "'%Y')+0 AS age FROM users WHERE email='"+ email +"'";
        // change date to days and then make the difference
        // ending with converting it to years
        ps = MyConnection.getConnection().prepareStatement(query);
        if(ps.execute())
        {
            rs=ps.getResultSet();
        }
        else {
            System.err.println("Failed.");
        }
        while(rs.next()){
            age=rs.getInt(1);
        }
    } catch (SQLException ex) {
        Logger.getLogger(main.class.getName()).log(Level.SEVERE, null, ex);
    }
    return age;
}

```

```

private void jComboBox1ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
}

```

```

private void jComboBox2ActionPerformed(java.awt.event.ActionEvent evt) {
    // TODO add your handling code here:
}

```

```

private void jPanel1MouseEntered(java.awt.event.MouseEvent evt) {
    // TODO add your handling code here:
    if (x == 0) {
        Update();
    }
}

```

```

    x = 1;
    }
}

private void RefreshButtonActionPerformed(java.awt.event.ActionEvent evt) {
    // Refresh the GUI using the update function
    Update();
}

private void CutButtonActionPerformed(java.awt.event.ActionEvent evt) {
    // Open the download link for the cut
    Download DW = new Download();
    DW.DietDownloadCut(calories);
}

private void BulkButtonActionPerformed(java.awt.event.ActionEvent evt) {
    // Open the download link for the bulk
    Download DW = new Download();
    DW.DietDownloadBulk(calories);
}

/**
 * @param args the command line arguments
 */
public static void main(String args[]) {
    /* Set the Nimbus look and feel */
    //

```



```
java.util.logging.Logger.getLogger(main.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    } catch (javax.swing.UnsupportedLookAndFeelException ex) {
```

```
java.util.logging.Logger.getLogger(main.class.getName()).log(java.util.logging.Level.SEVERE, null,
ex);
    }
    //</editor-fold>
```

```
    /* Create and display the form */
    java.awt.EventQueue.invokeLater(() -> {
        new main().setVisible(true);
    });
}
```

```
// Variables declaration - do not modify
private javax.swing.JLabel BodyFatLabel;
private javax.swing.JButton BulkButton;
private javax.swing.JLabel BulkLabel;
private javax.swing.JButton CutButton;
private javax.swing.JLabel CutLabel;
private javax.swing.JTextField HeightTextField;
private javax.swing.JTextField HipsTextField;
private javax.swing.JButton LogOutButton;
private javax.swing.JTextField NeckTextField;
private javax.swing.JButton RefreshButton;
private javax.swing.JButton SaveButton;
private javax.swing.JLabel UserLabel;
private javax.swing.JTextField WaistTextField;
private javax.swing.JTextField WeightTextField;
private javax.swing.JComboBox<String> jComboBox1;
private javax.swing.JComboBox<String> jComboBox2;
private javax.swing.JLabel jLabel1;
private javax.swing.JLabel jLabel11;
private javax.swing.JLabel jLabel12;
private javax.swing.JLabel jLabel13;
private javax.swing.JLabel jLabel14;
private javax.swing.JLabel jLabel15;
private javax.swing.JLabel jLabel16;
private javax.swing.JLabel jLabel17;
private javax.swing.JLabel jLabel20;
private javax.swing.JLabel jLabel21;
private javax.swing.JLabel jLabel22;
private javax.swing.JLabel jLabel23;
private javax.swing.JLabel jLabel24;
private javax.swing.JLabel jLabel28;
private javax.swing.JLabel jLabel29;
private javax.swing.JLabel jLabel4;
```

```
private javax.swing.JLabel jLabel5;  
private javax.swing.JLabel jLabel6;  
private javax.swing.JLabel jLabel7;  
private javax.swing.JLabel jLabel8;  
private javax.swing.JLabel jLabel9;  
private javax.swing.JPanel jPanel1;  
private javax.swing.JPanel jPanel2;  
// End of variables declaration  
}
```