Ex No: 12 Date: 04.10.19	MINI PROJECT

Aim :

To create a java application for the mini project BMI calculator using the java awt and swing.

Procedure:

Step 1: Start the process.

Step 2: The frame can be created and the size,layout,location,title,icon can be given.

Step 3: JFrame,JLabel,JButton,JPanel,JTextField are imported using the awt.

Step 4: Display the main frame with check boxes,labels,textfields and buttons.

Step 5: Enter the data into the textfields name,age,weight in kilogram and height in centimeter.

Step 6: If the user click the CALCULATE button the BMI can be generated by the formula (weight/(height*height))

Step 7: The BMI value can be displayed in the BMI textfield

Step 8: Then the BMI category can be obtained using the different categories like

Less than 18.5 = Underweight.

Between 19 to 24,9 = Normal.

Between 25 to 29.9 = Overweight.

Above 30 = Obese

Step 9: The respective BMI category can be displayed in the category textfield.

Step 10: If the user select the DIET button the new frame can be displayed with the Diet list.

Step 11: Click the close button on the right corner of the window for close the frames.

Step 12: Stop the process.

Program:

```
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;
public class bmi3 implements ActionListener
{
JLabel l1,l2,l3,l4,l6,l7;
JTextField name,age,weight,height,bmi,bmic;
JButton b1,b0;
String msg="";
Checkbox male,female;
CheckboxGroup cbg;
public bmi3()
{
JFrame f= new JFrame();
cbg = new CheckboxGroup();
male = new Checkbox("MALE",cbg,true);
female = new Checkbox("FEMALE",cbg,false);
l1= new JLabel("NAME");
l2= new JLabel("AGE");
l3= new JLabel("WEIGHT");
l4= new JLabel("HEIGHT");
l6= new JLabel("YOUR BMI");
l7= new JLabel("CATEGORY");
```

```
name=new JTextField();
name.setBounds(50,50,150,20);
age=new JTextField();
age.setBounds(50,50,150,20);
weight=new JTextField("WEIGHT IN kg");
weight.setBounds(50,50,150,20);
height=new JTextField("HEIGHT IN cm");
height.setBounds(50,100,150,20);
bmi=new JTextField();
bmi.setBounds(50,150,150,20);
bmi.setEditable(false);
bmic=new JTextField();
bmic.setBounds(50,150,150,20);
bmic.setEditable(false);
b1=new JButton("CALCULATE");
b1.setBounds(50,200,50,50);
b1.addActionListener(this);
b0=new JButton("DIET");
b0.setBounds(50,200,50,50);
b0.addActionListener(new print());
f.add(male);
f.add(female);
f.add(l1);
f.add(name);
```

```
f.add(l2);
f.add(age);
f.add(l3);
f.add(weight);
f.add(l4);
f.add(height);
f.add(b1);
f.add(b0);
f.add(l6);
f.add(bmi);
f.add(l7);
f.add(bmic);
f.setSize(300,300);
f.setTitle("BMI CALCULATOR");
f.setLayout(new GridLayout(0,2));
f.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
ImageIcon img=new ImageIcon("C:\\Users\\elavarasan\\Desktop\\project\\icon2.jpg");
f.setIconImage(img.getImage());
f.setVisible(true);
}
public void actionPerformed(ActionEvent e)
{
String s1=weight.getText();
String s2=height.getText();
```

```
double a=Double.parseDouble(s1);
double b=Double.parseDouble(s2);
double c=0;
if(e.getSource()==b1)
{
c=a/((b/100)*2);
String result1=String.valueOf(c);
bmi.setText(result1);
if(c<=18.5)
{
bmic.setText("UNDERWEIGHT!!!");
}
else if((c>18.5)&&(c<24.9))
{
bmic.setText("NORMAL!!!");
}
else if((c>25.0)&&(c<29.9))
{
bmic.setText("OVERWEIGHT!!!");
}
else if(c>30.0)
{
bmic.setText("OBESE!!!");
}
```

```
}
}
class printframe extends JFrame
{
public printframe()
{
JLabel imgl,output,a1,a2,a3,a4,b1,b2,b3,b4,b5,b6,b7;
JFrame frame1 = new JFrame();
frame1.setTitle("REPORT");
ImageIcon img=new ImageIcon("C:\\Users\\elavarasan\\Desktop\\project\\icon2.jpg");
frame1.setIconImage(img.getImage());
frame1.setVisible(true);
frame1.setSize(300,300);
frame1.setLayout(new BorderLayout());
frame1.setLocation(200,200);
frame1.setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
output = new JLabel(".....DIET LIST.....");
imgl=new JLabel
(newImageIcon("C:\\Users\\elavarasan\\Desktop\\project\\icon1.jpg"));
a1= new JLabel("Breakfast:");
b1= new JLabel("Corn Flakes and Glass of Milk");
a2= new JLabel("Lunch:");
b2= new JLabel("Medium Meals");
a3= new JLabel("Snacks:");
b3= new JLabel("Green Gram");
```

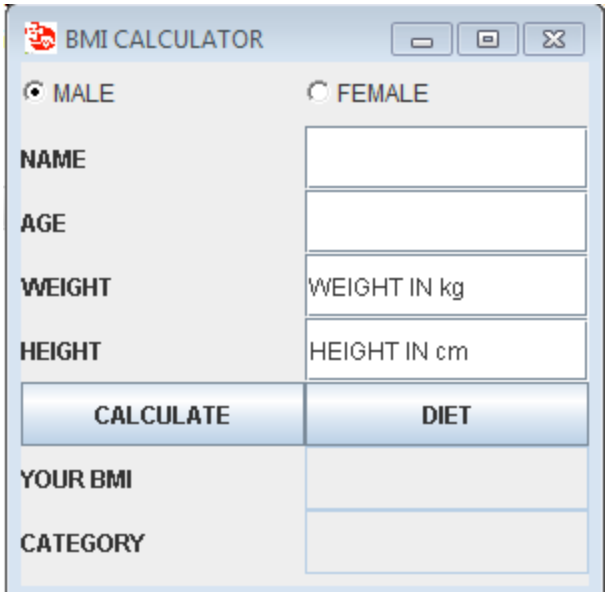
```
a4= new JLabel("Dinner");
b4= new JLabel("Non Cardohydrade foods");
b5= new JLabel("");
b6= new JLabel("");
b7= new JLabel("TAKE CARE !!!!");
JPanel p1=new JPanel();
p1.setLayout(new GridLayout(0,2));
p1.add(imgl);
p1.add(output);
p1.add(a1);
p1.add(b1);
p1.add(a2);
p1.add(b2);
p1.add(a3);
p1.add(b3);
p1.add(a4);
p1.add(b4);
p1.add(b5);
p1.add(b6);
p1.add(b7);
frame1.add(p1);
}
}
class print implements ActionListener
```

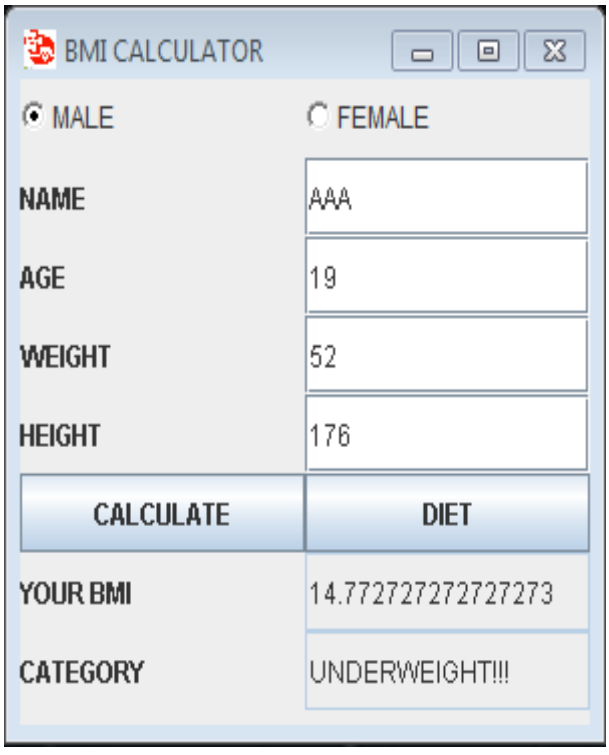
```
{
public void actionPerformed(ActionEvent e)
{
printframe pf = new printframe();
}
}
public static void main(String[] args)
{
new bmi3();
}
}
```

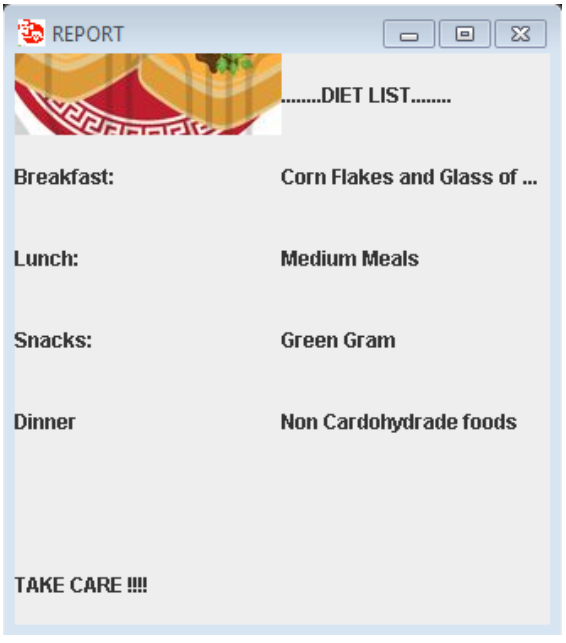
Result:

Thus the java GUI mini project BMI calculator can be developed using the awt and swing and the output verified successfully.

Output:


BMI CALCULATOR
MALE
FEMALE
NAME
AGE
WEIGHT
WEIGHT IN kg
HEIGHT
HEIGHT IN cm
CALCULATE
DIET
YOUR BMI
CATEGORY


BMI CALCULATOR
MALE
FEMALE
NAME
AAA
AGE
19
WEIGHT
52
HEIGHT
176
CALCULATE
DIET
YOUR BMI
14.772727272727273
CATEGORY
UNDERWEIGHT!!!


REPORT
.....DIET LIST.....
Breakfast:
Corn Flakes and Glass of ...
Lunch:
Medium Meals
Snacks:
Green Gram
Dinner
Non Cardohydrade foods
TAKE CARE !!!!