Reg. # 2020-CE-168 Section A Name Ammar Shahid

Department: **Computer Engineering** Program: **B.S (CE)**

**Assignment 1**

**CE-206 Advanced Object Oriented Programming**

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| --- | --- | --- | --- |
| Announced date: | Due Date: | Total Marks = **5** | |
|  | |  | Marks Obtained = |

Teacher Name: **(Assistant Professor) Dr. Umm-e-Laila (Course coordinator)**

**(Assistant Professor) Engr. Adnan Afroz**

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| **Sr. No** | **Course Learning Outcomes** | **PLOs** | **Blooms Taxonomy** |
| CLO\_2 | Apply the advanced concepts in java i.e. GUI Application, event handling, Multithreading and Socket Programming | PLO\_2  (Problem Analysis) | C3 (Applying) |

**Question # 1 :** Write a simple currency converter, as shown in the figure. User can enter the amount of "Singapore Dollars", "US Dollars", or "Euros", in floating-point number. The converted values shall be displayed to 2 decimal places. Assume that 1 USD = 1.41 SGD, 1 USD = 0.92 Euro, 1 SGD = 0.65 Euro.

**Code:**

**//Skipping Autogenerated Code**

private void txt\_SingaFocusLost(java.awt.event.FocusEvent evt) {

double sngD= Double.parseDouble(txt\_Singa.getText());

double usd= sngD\*1/1.41;

double euro=sngD\*0.65;

txt\_Usd.setText(String.format("%.2f", usd));

txt\_Euro.setText(String.format("%.2f", euro));

}

private void txt\_UsdFocusLost(java.awt.event.FocusEvent evt) {

double usd= Double.parseDouble(txt\_Usd.getText());

double sngD= usd\*1.41;

double euro= usd\*0.92;

txt\_Singa.setText(String.format("%.2f", sngD));

txt\_Euro.setText(String.format("%.2f", euro));

}

private void txt\_EuroFocusLost(java.awt.event.FocusEvent evt) {

double euro=Double.parseDouble(txt\_Euro.getText());

double usd= euro/0.95;

double sngD= euro/0.65;

txt\_Usd.setText(String.format("%.2f", usd));

txt\_Singa.setText(String.format("%.2f", sngD)); :

}

**Output Snips:**

Graphical user interface, application

Description automatically generatedGraphical user interface, text, application

Description automatically generated

Graphical user interface, application

Description automatically generated

**Question # 2 :** Write a GUI program called Snake Eyes that populate the two textFields by rolls 2 Dice randomly. Generates message when both Dice gives 1. Otherwise, user will press button to re-roll dice.

**Source Code:**

**//Skipping Auto Generated Code**

private void btn\_rollActionPerformed(java.awt.event.ActionEvent evt) {

Random r = new Random();

int low = 1;

int high = 7;

int d1 = r.nextInt(high-low) + low;

int d2 = r.nextInt(high-low) + low;

txt\_d1.setText(""+d1);

txt\_d2.setText(""+d2);

if (d1==1 && d2==1){

opt\_info.showMessageDialog(this ,"Snake Eyes");

}

}

**Output Snips:**

Graphical user interface, application

Description automatically generated

Graphical user interface, application

Description automatically generated

**Question # 3 :** Write a simple BMI calculator, as shown in the figure. User can enter the Height and Weight via Sliders.inInteger number. The Calculate Button calculate the BMI for values. Provided Formulas.

CM/KG: BMI=Weight/height2 \* 10000

Inch/Lb: BMI=Weight\*703/height2

**Source Code:**

**//Skipping Auto Generated Code**

private void sli\_heightStateChanged(javax.swing.event.ChangeEvent evt) {

int value= sli\_height.getValue();

txt\_height.setText(""+value);

// TODO add your handling code here:

}

private void sli\_weightStateChanged(javax.swing.event.ChangeEvent evt) {

int value= sli\_weight.getValue();

txt\_weight.setText(""+value);

}

private void rbtn\_imperialStateChanged(javax.swing.event.ChangeEvent evt) {

if (rbtn\_imperial.isSelected()){

sli\_weight.setMaximum(300);

sli\_height.setMaximum(96);

sli\_weight.setMinimum(50);

sli\_height.setMinimum(36);

sli\_weightStateChanged(evt);

sli\_heightStateChanged(evt);

}

else {

sli\_weight.setMaximum(200);

sli\_height.setMaximum(200);

sli\_weight.setMinimum(20);

sli\_height.setMinimum(50);

sli\_weightStateChanged(evt);

sli\_heightStateChanged(evt);

}

}

private void btn\_calcActionPerformed(java.awt.event.ActionEvent evt) {

double bmi=22;

int height= Integer.parseInt(txt\_height.getText());

int weight= Integer.parseInt(txt\_weight.getText());

if (rbtn\_imperial.isSelected()){

bmi=(weight\*703)/(height\*height);

}

else{

bmi=(weight\*10000)/(height\*height);

}

opt\_info.showMessageDialog(this ,"BMI: "+bmi);

}

Graphical user interface, application

Description automatically generated

Graphical user interface, application

Description automatically generated

Graphical user interface, application

Description automatically generated