UNIVERSITY OF ENGINEERING AND TECHNOLOGY, TAXILA

SOFTWARE ENGINEERING

OOP-LAB 2

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REG NO: 20-SE-56

COURSE: OOP-LAB

DATED: September 30, 2021

TASK-1

Fuel efficiency measures the distance a motor vehicle can travel on a single gallon of fuel.
Take miles and gallons of fuel from the user as inputs using Scanner class and calculate fuel efficiency based on values entered by the user using the formula mpg = miles /gallons.
The result must be a floating-point value.

PROGRAM

```
package lab2;
//imported the scanner class
import java.util.Scanner;

public class task1_effic {

     public static void main(String[] args) {

          //created a new scanner object
          Scanner input = new Scanner(System.in);

               System.out.println("Miles Traveled: ");
               double miles= input.nextDouble();

                    System.out.println("Enter Gallons of Fuel
");
                    double gallons= input.nextDouble();

                    //used formula to calculate efficiency
                         double mpg = miles/gallons;

                         //printing out the result on console
                         System.out.println("Hence Fuel
Efficiency is = " + mpg + " mpg" );
}
}
```

OUTPUT

task1_effic.java × task2_mygpa.java

```java
package lab2;
//imported the scanner class
import java.util.Scanner;

public class task1_effic {

    public static void main(String[] args) {

        //created a new scanner object
        Scanner input = new Scanner(System.in);

            System.out.println("Miles Traveled: ");
            double miles= input.nextDouble();

                System.out.println("Enter Gallons of Fuel ");
                double gallons= input.nextDouble();

                //used formula to calculate efficiency
                    double mpg = miles/gallons;

                    //printing out the result on console
                    System.out.println("Hence Fuel Efficiency is = " + mpg + " mpg" );
}
}
```

Problems @ Javadoc Declaration Console × Coverage

<terminated> task1_effic [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Sep 30, 2021, 12:29:51 PM – 12:30:31 PM)

```
Miles Traveled:
30.1
Enter Gallons of Fuel
55.7
Hence Fuel Efficiency is = 0.5403949730700179 mpg
```

TASK-2

Take quality points and credits as inputs using JOptionPane class and calculates GPA using formula qp / credits.

PROGRAM

```java
package lab2;

    import javax.swing.JOptionPane;
    public class task2_mygpa {
    public static void main(String[] args) {
        //declaring variables
        String a;
        String b;
        double c;
        int d;
```

```
                a = JOptionPane.showInputDialog("Enter the Total
Quality Points: ");

                //converting string to double
                c=Double.parseDouble(a);

                b = JOptionPane.showInputDialog("Enter the  Total
Credits: ");
                d=Integer.parseInt(b);
                     double gpa=c/d;
                     JOptionPane.showMessageDialog(null," The GPA
of student  is "+ gpa,"GPA
Calculator",JOptionPane.PLAIN_MESSAGE);
}
}
```

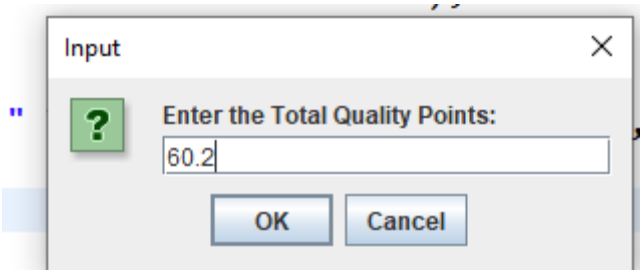
OUTPUT

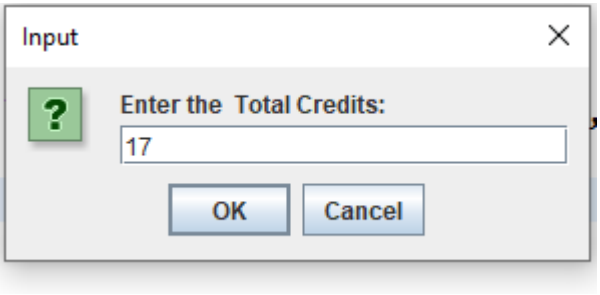
task1_effic.java task2_mygpa.java

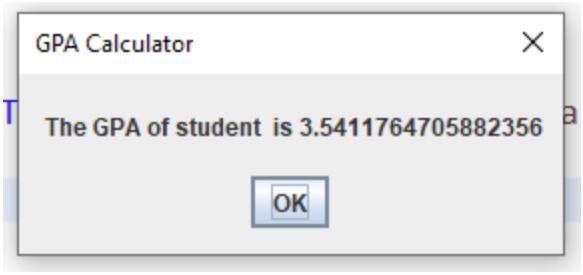
```
1  package lab2;
2
3      import javax.swing.JOptionPane;
4      public class task2_mygpa {
5      public static void main(String[] args) {
6          //declaring variables
7          String a;
8          String b;
9          double c;
10         int d;
11
12             a = JOptionPane.showInputDialog("Enter the Total Quality Points: ");
13
14             //converting string to double
15             c=Double.parseDouble(a);
16
17             b = JOptionPane.showInputDialog("Enter the  Total Credits: ");
18             d=Integer.parseInt(b);
19                 double gpa=c/d;
20                 JOptionPane.showMessageDialog(null," The GPA of student  is "+ gpa,"GPA Calculator",JOptionPane.PLAIN_MESSAGE);
21 }
22 }
```

Problems Javadoc Declaration Console Coverage

task2_mygpa [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (Sep 30, 2021, 12:35:10 PM)




Input
Enter the Total Credits:
17
OK
Cancel


GPA Calculator
The GPA of student is 3.5411764705882356
OK