TAKSHASHILA UNIVERSITY

(State Private University)

(Established under Tamil Nadu Private Universities Act 2019)
Ongur, Tindivanam Taluk, Villupuram District, Tamil Nadu - 604305

TAKSHASHILA
UNIVERSITY

FACULTY OF SCIENCES

SCHOOL OF COMPUTER SCIENCE

STUDENT RECORD

REGISTER NUMBER : _____

NAME OF THE STUDENT : _____

PROGRAM NAME : _____

YEAR / SEMESTER : _____

COURSE CODE : _____

COURSE NAME : _____

TAKSHASHILA UNIVERSITY

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Ongur, Tindivanam Taluk, Villupuram District, Tamil Nadu – 604305

Faculty of Sciences

SCHOOL OF COMPUTER SCIENCE

Bonafide Certificate

This is to certify that this is a Bonafide Record of practical work done by Mr./Ms. _____ of **Master of Computer Applications** in Second Semester for the **Java Programming for Application Development** Laboratory during the academic year 2024-25.

Course In-charge School In-charge

Submitted the University Practical Examination held on ……

Internal Examiner External Examine

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DEAN-FSC

PART-I

CONSOLE APPLICATIONS

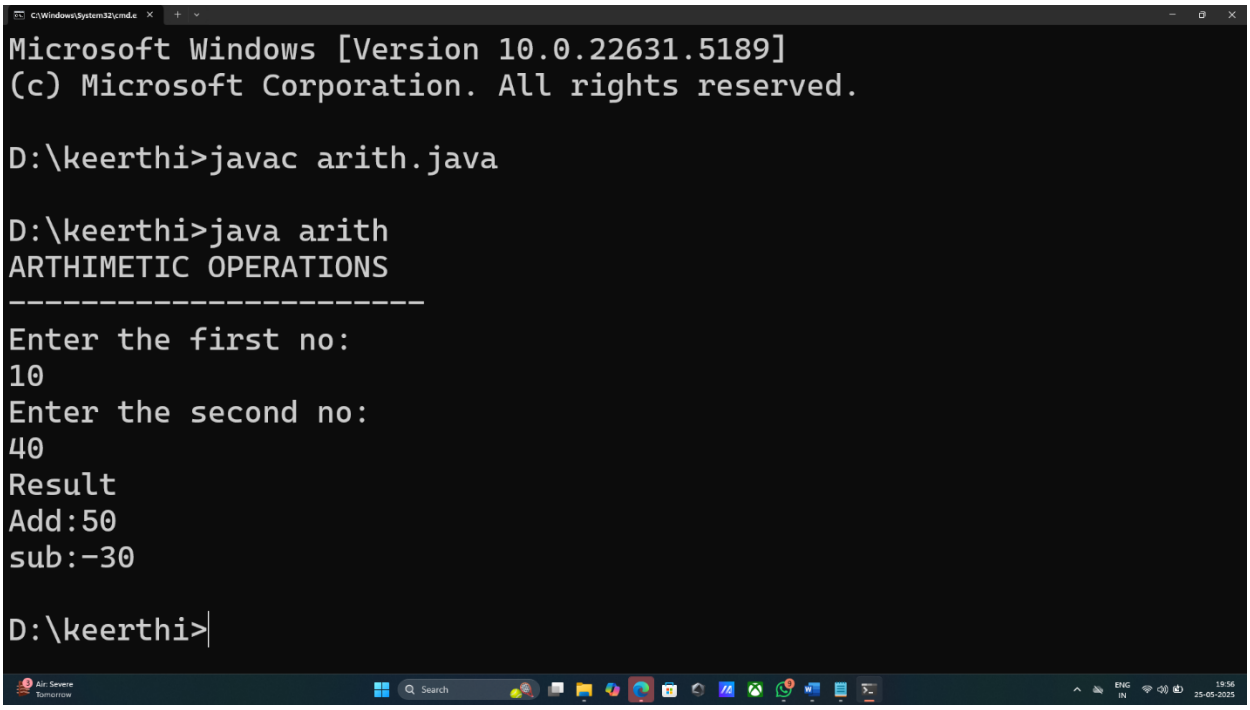
Using Java Programming

Ex. No.:		
Date :		

Program Code:

```
import java.io.*;
class arith
{
public static void main (String[] args)
{
        try{
      InputStreamReader isr = new InputStreamReader(System.in);
       BufferedReader br = new BufferedReader(isr);
       System.out.println("ARTHIMETIC OPERATIONS");
       System.out.println("----------------------");
       System.out.println("Enter the first no:");
       String s1 = br.readLine();
       int a = Integer.parseInt(s1);
       System.out.println("Enter the second no:");
       String s2=br.readLine();
       int b = Integer.parseInt(s2);
       System.out.println("Result");
       int x = a+b;
       System.out.println("Add:" + x);
       int y = a-b;
       System.out.println("sub:" + y);
       }
          catch(Exception e)
          {
                  System.out.println("error:"+e.getMessage());
          }
  }
}
```

Output:


C:\Windows\System32\cmd.e
Microsoft Windows [Version 10.0.22631.5189]
(c) Microsoft Corporation. All rights reserved.
D:\keerthi>javac arith.java
D:\keerthi>java arith
ARTHIMETIC OPERATIONS
Enter the first no:
10
Enter the second no:
40
Result
Add:50
sub:-30
D:\keerthi>
Air: Severe
Tomorrow
Search
ENG
IN
19:56
25-05-2025

Ex. No.:		
Date :		

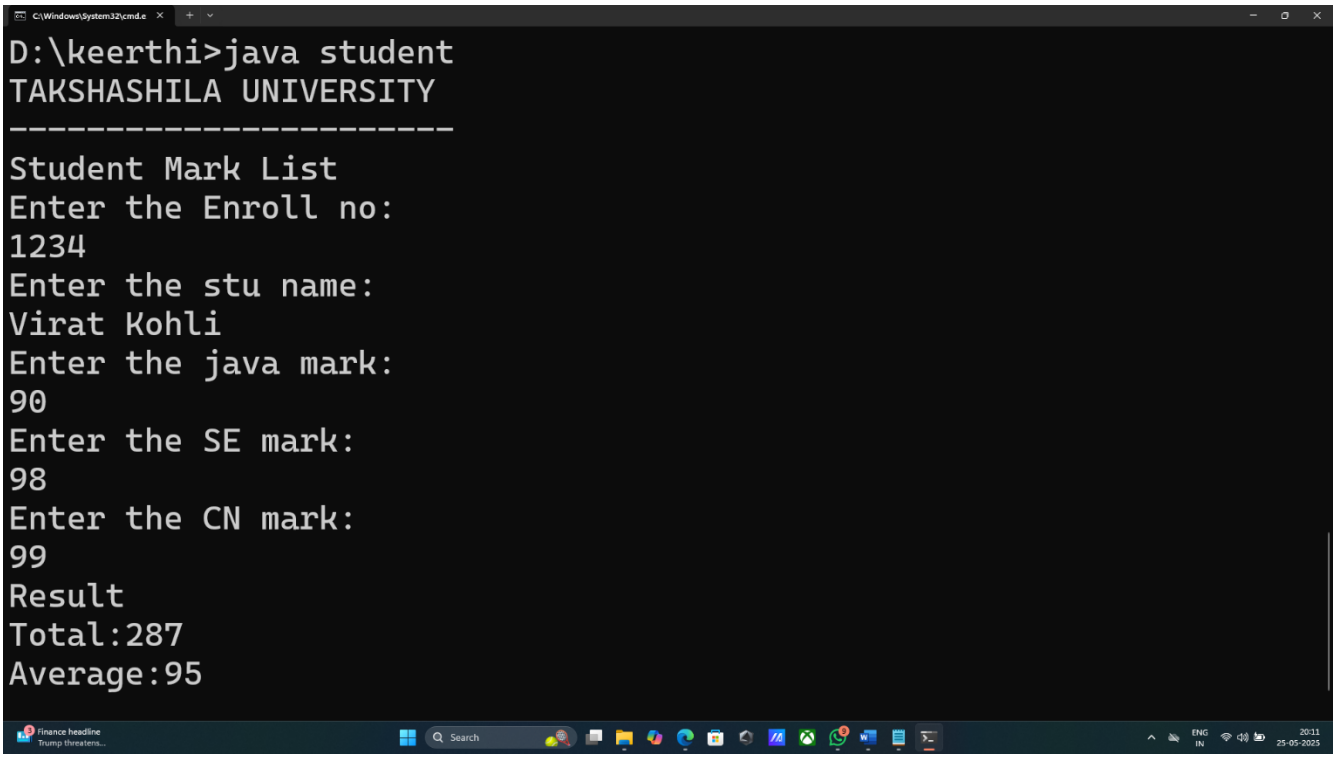
Program Code:

```
import java.io.*;
class student
{
public static void main (String[] args)
{
        try
   {
      InputStreamReader isr = new InputStreamReader(System.in);
      BufferedReader br = new BufferedReader(isr);
      System.out.println("TAKSHASHILA UNIVERSITY");
      System.out.println("----------------------");
         System.out.println("Student Mark List");
      System.out.println("Enter the Enroll no:");
      String s1 = br.readLine();
      int a = Integer.parseInt(s1);
      System.out.println("Enter the stu name:");
      String s2=br.readLine();
      System.out.println("Enter the java mark:");
         String s3 = br.readLine();
      int x = Integer.parseInt(s3);
         System.out.println("Enter the SE mark:");
         String s4 = br.readLine();
      int y = Integer.parseInt(s4);
         System.out.println("Enter the CN mark:");
         String s5= br.readLine();
      int z = Integer.parseInt(s5);
      System.out.println("Result");
      int t = x+y+z;
```

```
        System.out.println("Total:" + t);
        int v = t/3;
        System.out.println("Average:" + v);


            }
            catch(Exception e)
            {
                    System.out.println("error:"+e.getMessage());
            }
    }
}
```

Output:


C:\Windows\System32\cmd.e
D:\keerthi>java student
TAKSHASHILA UNIVERSITY
Student Mark List
Enter the Enroll no:
1234
Enter the stu name:
Virat Kohli
Enter the java mark:
90
Enter the SE mark:
98
Enter the CN mark:
99
Result
Total:287
Average:95
Search

Ex. No.:		
Date :		

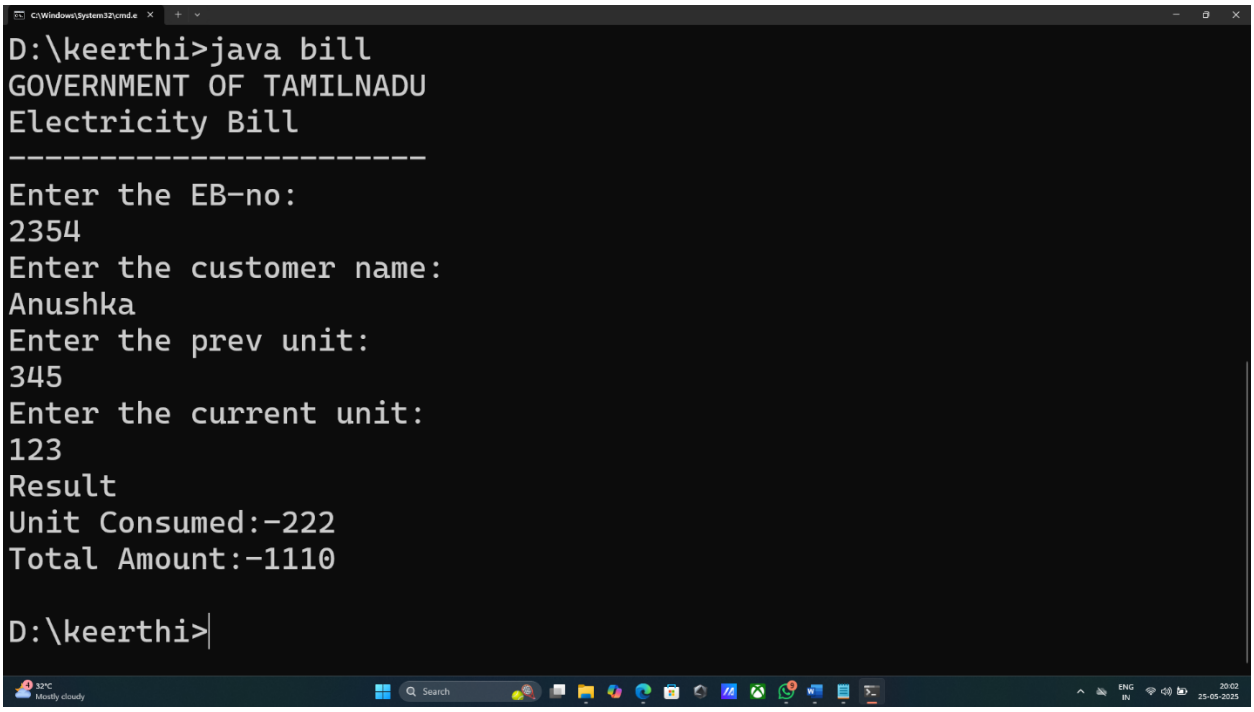
Program Code:

```
import java.io.*;
class bill
{
   public static void main (String[] args)
  {
        try{

      InputStreamReader isr = new InputStreamReader(System.in);
         BufferedReader br = new BufferedReader(isr);
      System.out.println("GOVERNMENT OF TAMILNADU");
         System.out.println("Electricity Bill");
         System.out.println("-----------------------");
      System.out.println("Enter the EB-no:");
      String s1 = br.readLine();
      int a = Integer.parseInt(s1);
      System.out.println("Enter the customer name:");
      String s2=br.readLine();
      System.out.println("Enter the prev unit:");
         String s3 = br.readLine();
      int x = Integer.parseInt(s3);
         System.out.println("Enter the current unit:");
         String s4 = br.readLine();
      int y = Integer.parseInt(s4);
      System.out.println("Result");
      int z = y-x;
      System.out.println("Unit Consumed:" + z);
      int w = z*5;
      System.out.println("Total Amount:" + w);
```

```
        }
        catch(Exception e)
        {
                System.out.println("error:"+e.getMessage());
        }
    }
}
```

Output:


C:\Windows\System32\cmd.e
D:\keerthi>java bill
GOVERNMENT OF TAMILNADU
Electricity Bill

Enter the EB-no:
2354
Enter the customer name:
Anushka
Enter the prev unit:
345
Enter the current unit:
123
Result
Unit Consumed:-222
Total Amount:-1110
D:\keerthi>
32°C
Mostly cloudy
Search
ENG
IN
20:02
25-05-2025

Ex. No.:		
Date :		

Program Code:

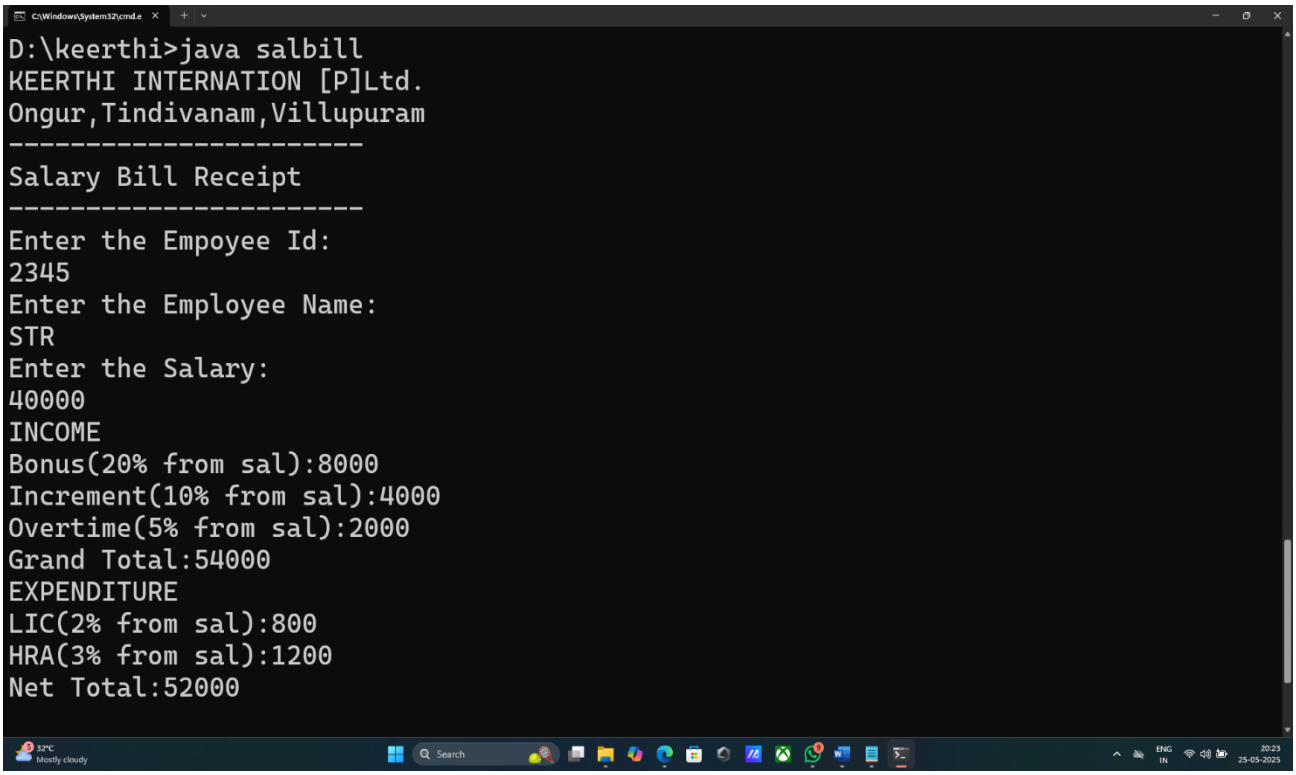
```
import java.io.*;
class salbill
{
  public static void main (String[] args)
 {
        try{

     InputStreamReader isr = new InputStreamReader(System.in);
     BufferedReader br = new BufferedReader(isr);
     System.out.println("KEERTHI INTERNATION [P]Ltd.");
        System.out.println("Ongur,Tindivanam,Villupuram");
     System.out.println("-----------------------");
        System.out.println("Salary Bill Receipt");
        System.out.println("-----------------------");
     System.out.println("Enter the Empoyee Id:");
     String s1 = br.readLine();
     int a = Integer.parseInt(s1);
     System.out.println("Enter the Employee Name:");
     String s2=br.readLine();
     System.out.println("Enter the Salary:");
        String s3 = br.readLine();
     int x = Integer.parseInt(s3);
        System.out.println("INCOME");
        int b = x*20/100;
        System.out.println("Bonus(20% from sal):" + b);
        int i = x*10/100;
        System.out.println("Increment(10% from sal):" + i);
        int o = x*5/100;
```

```
        System.out.println("Overtime(5% from sal):" + o);
        int g = b + i + o + x;
      System.out.println("Grand Total:" + g);
      System.out.println("EXPENDITURE");
        int l = x*2/100;
        System.out.println("LIC(2% from sal):" + l);
        int h = x*3/100;
        System.out.println("HRA(3% from sal):" + h);
        int n = g - l - h ;
        System.out.println("Net Total:" + n);

        }
        catch(Exception e)
        {
                System.out.println("error:"+e.getMessage());
        }
   }
}
```

Output


C:\Windows\System32\cmd.e
D:\keerthi>java salbill
KEERTHI INTERNATION [P]Ltd.
Ongur,Tindivanam,Villupuram

Salary Bill Receipt

Enter the Empoyee Id:
2345
Enter the Employee Name:
STR
Enter the Salary:
40000
INCOME
Bonus(20% from sal):8000
Increment(10% from sal):4000
Overtime(5% from sal):2000
Grand Total:54000
EXPENDITURE
LIC(2% from sal):800
HRA(3% from sal):1200
Net Total:52000
32°C
Mostly cloudy
Search
ENG
IN
20:23
25-05-2025

Ex. No.:		
Date :		

Program Code:

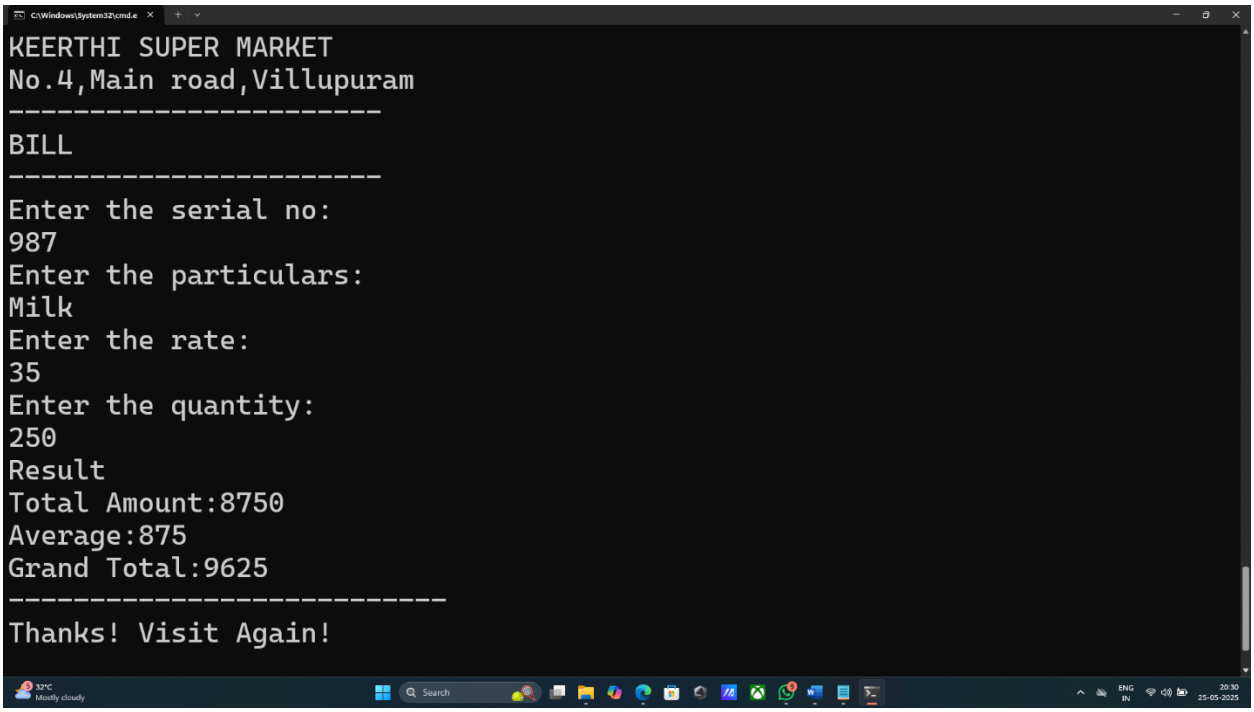
```
import java.io.*;
class supermarket
{
   public static void main (String[] args)
   {
        try{

      InputStreamReader isr = new InputStreamReader(System.in);
      BufferedReader br = new BufferedReader(isr);
      System.out.println("KEERTHI SUPER MARKET");
         System.out.println("No.4,Main road,Villupuram");
      System.out.println("-----------------------");
         System.out.println("BILL");
         System.out.println("-----------------------");
      System.out.println("Enter the serial no:");
      String s1 = br.readLine();
      int a = Integer.parseInt(s1);
      System.out.println("Enter the particulars:");
      String s2=br.readLine();
      System.out.println("Enter the rate:");
         String s3 = br.readLine();
      int x = Integer.parseInt(s3);
         System.out.println("Enter the quantity:");
         String s4 = br.readLine();
      int y = Integer.parseInt(s4);
      System.out.println("Result");
      int z = x*y;
      System.out.println("Total Amount:" + z);
```

```
        int w = z*10/100;
        System.out.println("Average:" + w);
            int m = z+w;
            System.out.println("Grand Total:" + m);
            System.out.println("---------------------------");
            System.out.println("Thanks! Visit Again!");


            }
            catch(Exception e)
            {
                    System.out.println("error:"+e.getMessage());
            }
    }
}
```

Output:


KEERTHI SUPER MARKET
No.4,Main road,Villupuram
BILL
Enter the serial no:
987
Enter the particulars:
Milk
Enter the rate:
35
Enter the quantity:
250
Result
Total Amount:8750
Average:875
Grand Total:9625
Thanks! Visit Again!

PART-II

OOPS CONCEPTS

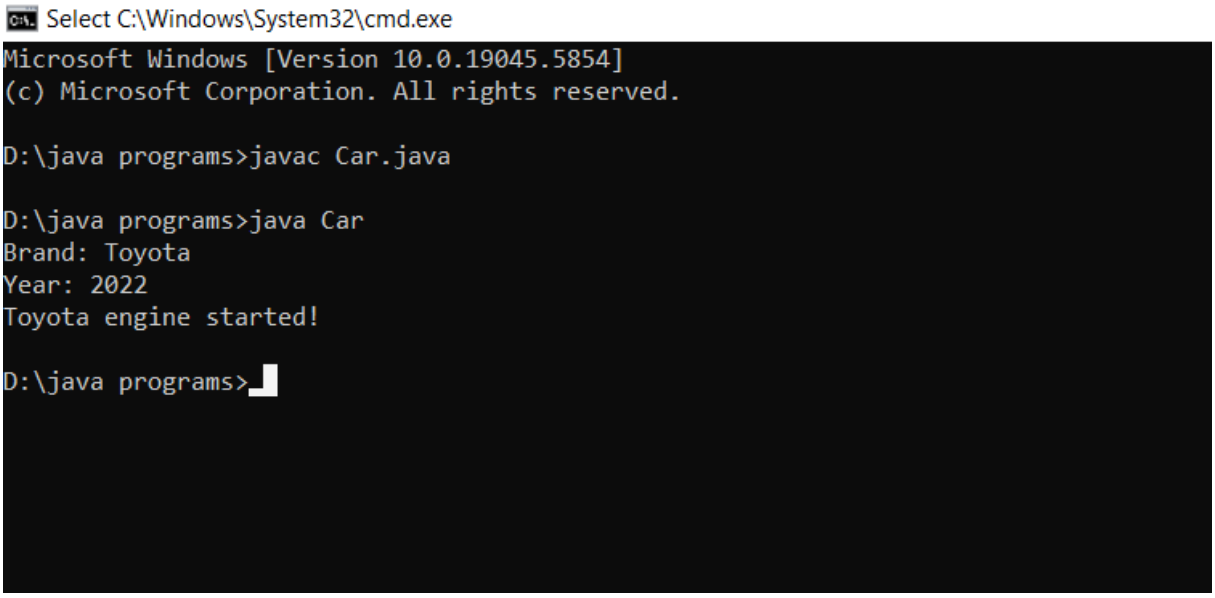
Using Java Programming

Ex. No.:		
Date :		

Program Code:

```
public class Car
{
   String brand;
   int year;
   void displayInfo()
     {
       System.out.println("Brand: " + brand);
       System.out.println("Year: " + year);
     }
   void startEngine()
   {
       System.out.println(brand + " engine started!");
   }
  public static void main(String[] args)
{
       Car myCar = new Car();
       myCar.brand = "Toyota";
       myCar.year = 2022;
       myCar.displayInfo();
       myCar.startEngine();
   }
}
```

Output:


Select C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.5854]
(c) Microsoft Corporation. All rights reserved.
D:\java programs>javac Car.java
D:\java programs>java Car
Brand: Toyota
Year: 2022
Toyota engine started!
D:\java programs>

Ex. No.:		
Date :		

Program: Abstraction

```
abstract class Animal
{
  public abstract void animalSound();
  public void sleep()
{
    System.out.println("Zzz");
  }
}
class Pig extends Animal
{
  public void animalSound()
{
    System.out.println("The pig says: wee wee");
  }
}
class Main
{
  public static void main(String[] args)
  {
    Pig myPig = new Pig();
    myPig.animalSound();
    myPig.sleep();
  }
}
```

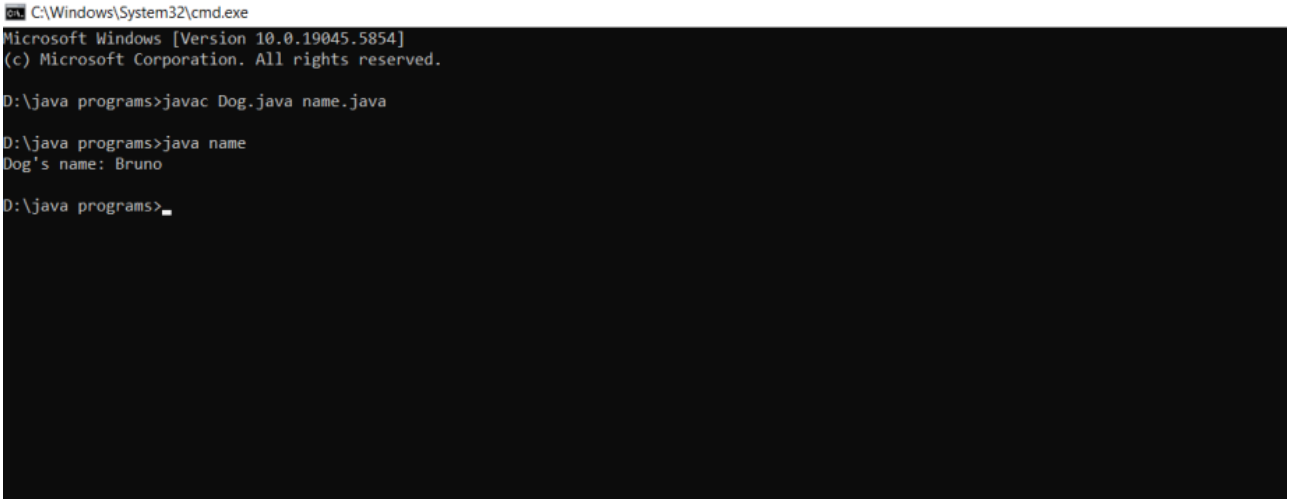
Output:


C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.5854]
(c) Microsoft Corporation. All rights reserved.
D:\java programs>javac Main.java
D:\java programs>java Main
The pig says: wee wee
Zzz
D:\java programs>

Program: Encapsulation

```
public class Dog
{
    private String name;
    public void setName(String newName)
  {
        name = newName;
  }
    public String getName()
   {
        return name;
   }
}
public class name
{
    public static void main(String[] args)
    {
    Dog myDog = new Dog();
    myDog.setName("Bruno");
    System.out.println("Dog's name: " + myDog.getName());
    }
}
```

Output:

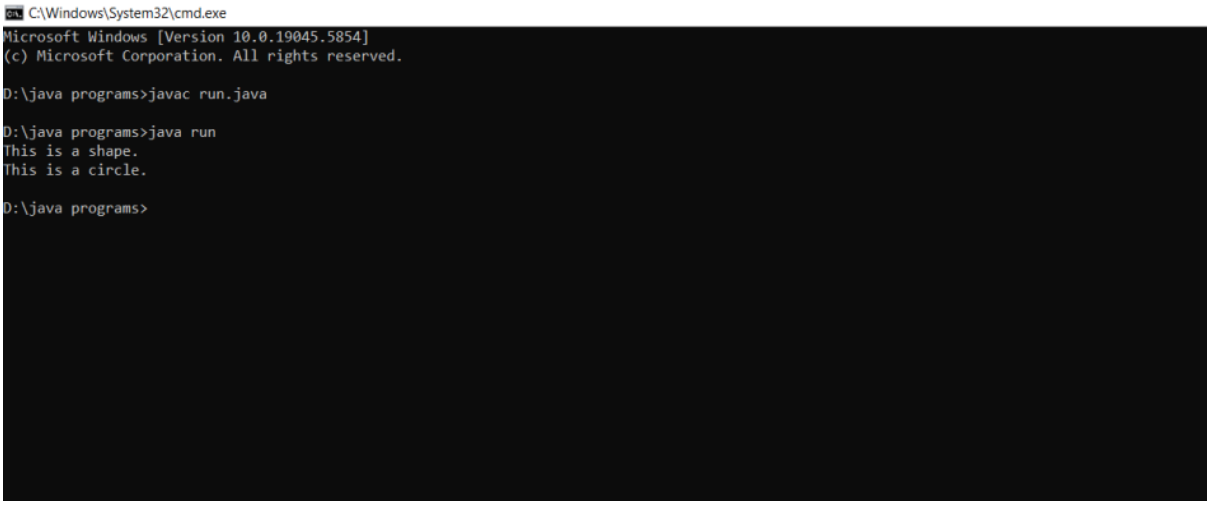

C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.5854]
(c) Microsoft Corporation. All rights reserved.
D:\java programs>javac Dog.java name.java
D:\java programs>java name
Dog's name: Bruno
D:\java programs>

Ex. No.:		
Date :		

Program: Single Inheritance

```
class Shape
{
    void displayShape()
   {
    System.out.println("This is a shape.");
     }
}
class Circle extends Shape
{
    void displayCircle()
   {
    System.out.println("This is a circle.");
   }
}
public class run
{
    public static void main(String[] args)
   {
    Circle c = new Circle();
    c.displayShape();
    c.displayCircle();
    }
}
```

Output:

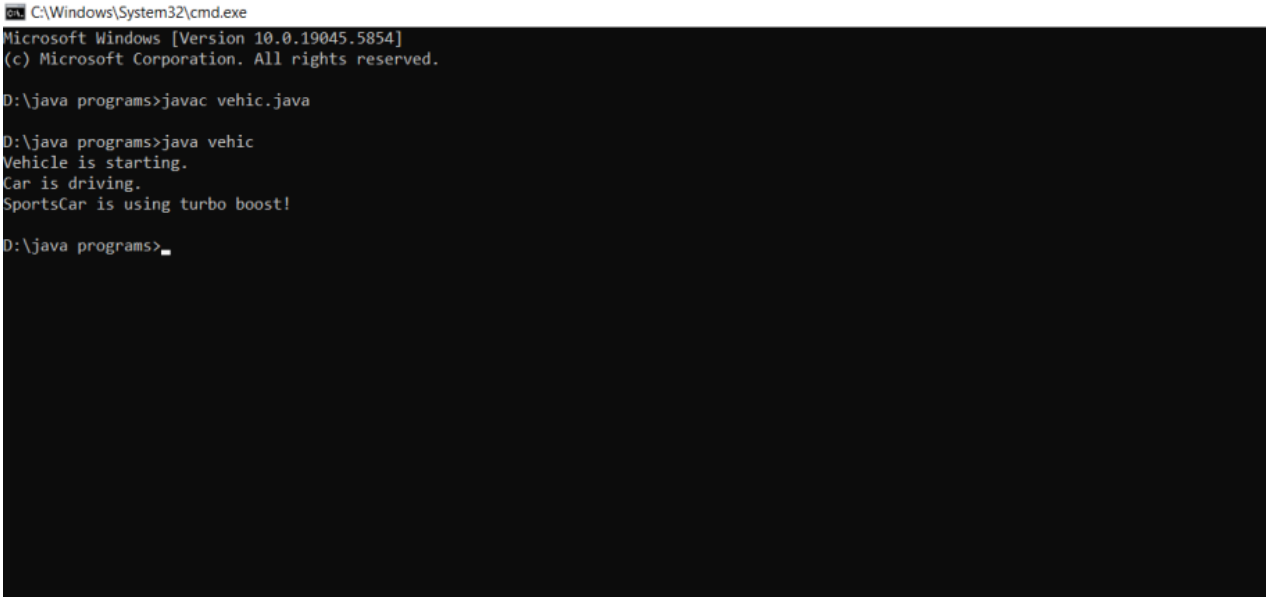

C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.5854]
(c) Microsoft Corporation. All rights reserved.
D:\java programs>javac run.java
D:\java programs>java run
This is a shape.
This is a circle.
D:\java programs>

Ex. No.:		
Date :		

Program: Multiple Inheritance

```
class Vehicle {
    void start() {
        System.out.println("Vehicle is starting.");
    }
}
class Car extends Vehicle {
    void drive() {
        System.out.println("Car is driving.");
    }
}
class SportsCar extends Car {
    void turboBoost() {
        System.out.println("SportsCar is using turbo boost!");
    }
}
public class vehic
{
    public static void main(String[] args)
   {
        SportsCar sc = new SportsCar();
        sc.start();
        sc.drive();
        sc.turboBoost();
    }
}
```

Output:


C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.5854]
(c) Microsoft Corporation. All rights reserved.
D:\java programs>javac vehic.java
D:\java programs>java vehic
Vehicle is starting.
Car is driving.
SportsCar is using turbo boost!
D:\java programs>

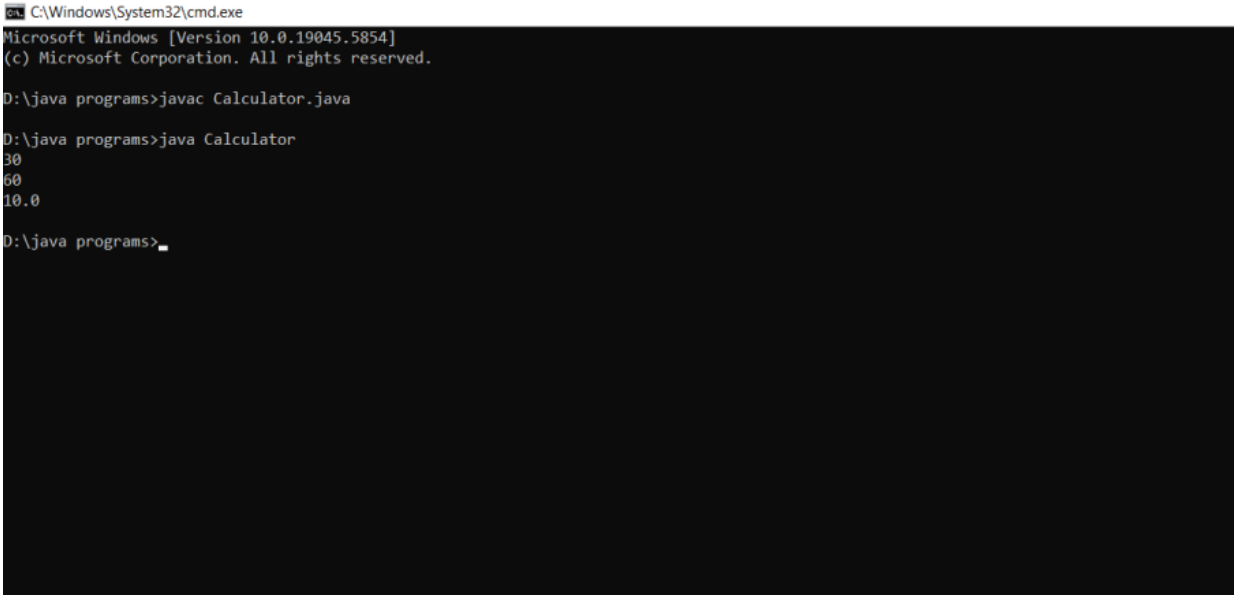
Ex. No.:		
Date :		

Program: Method Overloading

```
public class Calculator
{
    int add(int a, int b)
   {
        return a + b;
    }
    int add(int a, int b, int c)
    {
        return a + b + c;
    }
    double add(double a, double b)
    {
        return a + b;
    }

    public static void main(String[] args)
   {
        Calculator calc = new Calculator();
        System.out.println(calc.add(10, 20));
        System.out.println(calc.add(10, 20, 30));
        System.out.println(calc.add(5.5, 4.5));
    }
}
```

Output:


C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.5854]
(c) Microsoft Corporation. All rights reserved.
D:\java programs>javac Calculator.java
D:\java programs>java Calculator
30
60
10.0
D:\java programs>

PART-III

APPS DEVELOPMENT

AWT & SWING Using Java Programming

Ex. No.:		
Date :		

Program Code: Arithmetic Operation

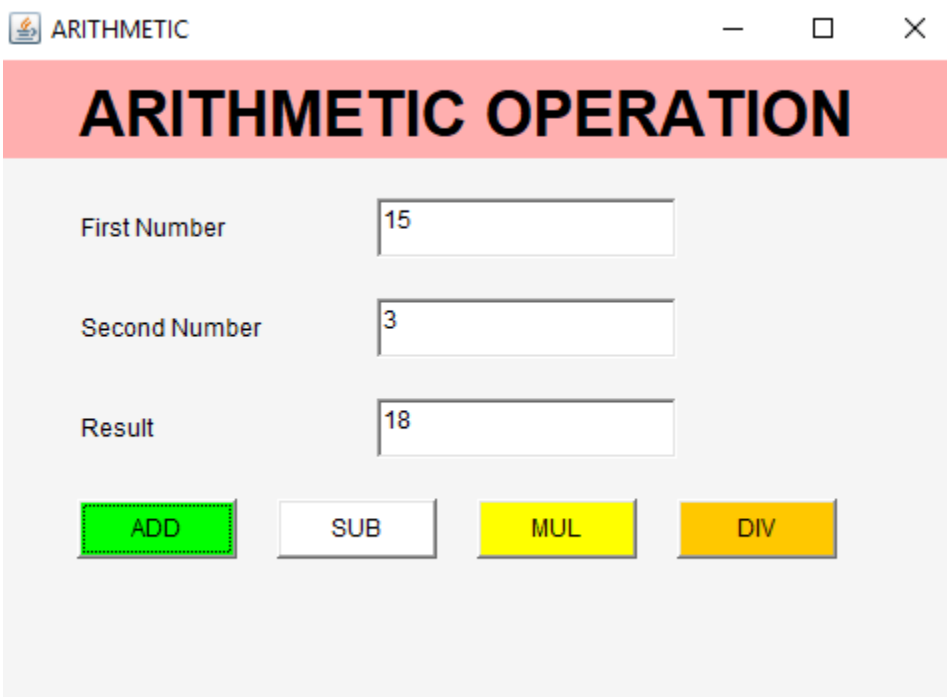
```
import java.awt.*;
import java.awt.event.*;
class arith extends Frame implements ActionListener
{
TextField t1,t2,t3,t4;
Button b1,b2,b3,b4;
public static void main(String args[])
{
arith f = new arith();
f.setTitle("ARITHMETIC");
f.setSize(500,400);
f.setVisible(true);
}
arith()
{
this.setLayout(null);
this.setBackground(new Color(245,245,245));
Panel p1=new Panel();
Label l0= new Label("ARITHMETIC OPERATION");
p1.setBackground(Color.PINK);
Font f0= new Font("Arial",Font.BOLD,32);
l0.setFont(f0);
p1.add(l0);
this.add(p1);
p1.setBounds(0,30,500,50);
Label l1 = new Label("First Number");
Label l2 = new Label("Second Number");
Label l3 = new Label("Result");
t1 = new TextField(20);
t2 = new TextField(20);
```

```
t3 = new TextField(20);
b1 = new Button("ADD");
b1.setBackground(Color.GREEN);
b2 = new Button("SUB");
b2.setBackground(Color.WHITE);
b3 = new Button("MUL");
b3.setBackground(Color.YELLOW);
b4 = new Button("DIV");
b4.setBackground(Color.ORANGE);
this.add(t1);
this.add(l1);
this.add(l2);
this.add(l3);
this.add(t1);
this.add(t2);
this.add(t3);
this.add(b1);
this.add(b2);
this.add(b3);
this.add(b4);
l0.setBounds(100,50,250,30);
l1.setBounds(50,100,150,30);
l2.setBounds(50,150,150,30);
l3.setBounds(50,200,150,30);
t1.setBounds(200,100,150,30);
t2.setBounds(200,150,150,30);
t3.setBounds(200,200,150,30);
b1.setBounds(50,250,80,30);
b2.setBounds(150,250,80,30);
b3.setBounds(250,250,80,30);
b4.setBounds(350,250,80,30);
```

```
b1.addActionListener(this);
b2.addActionListener(this);
b3.addActionListener(this);
b4.addActionListener(this);
}
public void actionPerformed(ActionEvent ae)
{
if(ae.getSource() == b1){
String s1 = t1.getText();
String s2 = t2.getText();
int a = Integer.parseInt(s1);
int b = Integer.parseInt(s2);
int c = a + b;
t3.setText("" + c);
}
if(ae.getSource() == b2){
String s1 = t1.getText();
String s2 = t2.getText();
int a = Integer.parseInt(s1);
int b = Integer.parseInt(s2);
int c = a - b;
t3.setText("" + c);
}
if(ae.getSource() == b3){
String s1 = t1.getText();
String s2 = t2.getText();
int a = Integer.parseInt(s1);
int b = Integer.parseInt(s2);
int c = a * b;
t3.setText("" + c);
}
```

```
if(ae.getSource() == b4){
String s1 = t1.getText();
String s2 = t2.getText();
int a = Integer.parseInt(s1);
int b = Integer.parseInt(s2);
int c = a / b;
t3.setText("" + c);
}
}
}
```

Output:



Ex. No.:		
Date :		

Program code: Student Mark List

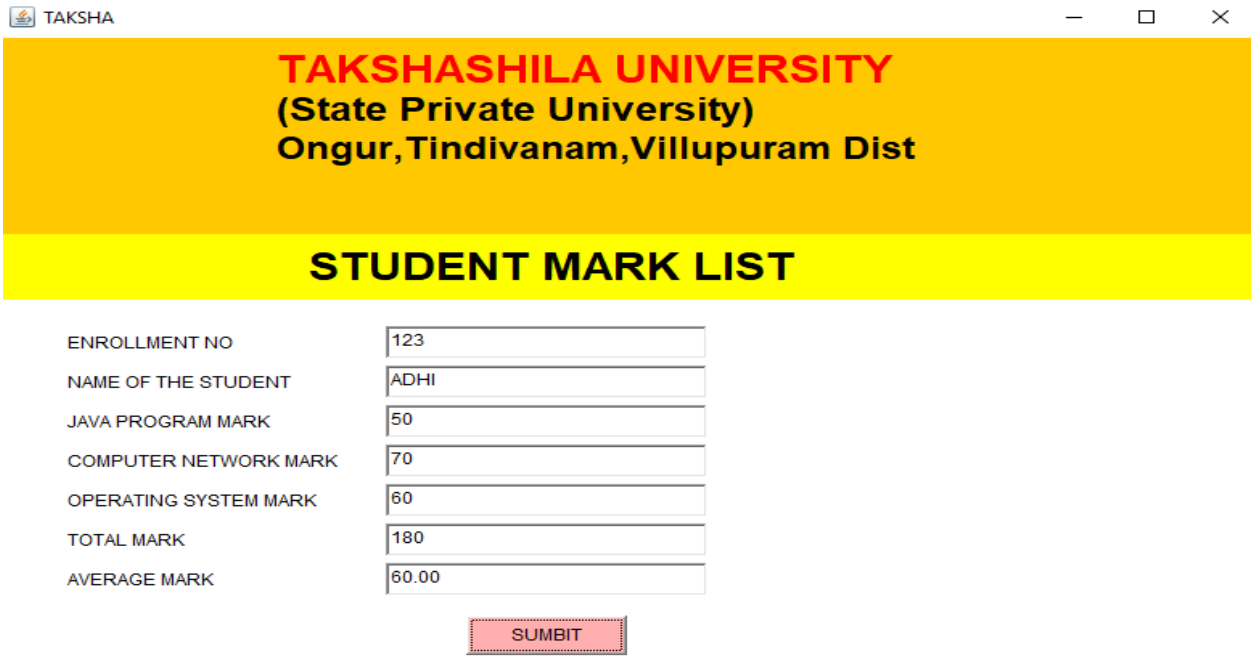
```
import java.awt.*;
import java.awt.event.*;
class Taksha extends Frame implements ActionListener
{
TextField t3,t4,t5,t6,t7;
public static void main(String[] args)
{
Taksha f = new Taksha();
f.setSize(800,600);
f.setTitle("TAKSHA");
f.setLayout(null);
f.setVisible(true);
}
Taksha()
{
 this.setBackground(Color.WHITE);
 Panel p1 = new Panel();
p1.setLayout(null);
p1.setBackground(Color.ORANGE);
p1.setBounds(0, 30, 800, 150);
 Label l0 = new Label("TAKSHASHILA UNIVERSITY");
Label l1 = new Label("(State Private University)");
Label l2 = new Label("Ongur,Tindivanam,Villupuram Dist");
 Font f0 = new Font("Arial",Font.BOLD,29);
Font f1 = new Font("Arial",Font.BOLD,25);
Font f2 = new Font("Arial",Font.BOLD,24);
l0.setFont(f0);
l0.setForeground(Color.RED);
l1.setFont(f1);
l2.setFont(f2);
```

```
 l0.setBounds(180,10,400,30);
l1.setBounds(180,40,400,30);
l2.setBounds(180,70,400,30);
 p1.add(l0);
p1.add(l1);
p1.add(l2);
this.add(p1);
 Panel p2 = new Panel();
p2.setLayout(null);
p2.setBackground(Color.YELLOW);
p2.setBounds(0,180,800,50);
 Label l3 = new Label("STUDENT MARK LIST");
l3.setFont(f0);
l3.setBounds(200,10,400,30);
p2.add(l3);
this.add(p2);
 Label l11 = new Label("ENROLLMENT NO");
l11.setBounds(50,250,150,25);
this.add(l11);
TextField t1 = new TextField(20);
t1.setBounds(250,250,200,25);
this.add(t1);
 Label l12 = new Label("NAME OF THE STUDENT");
l12.setBounds(50,280,150,25);
this.add(l12);
TextField t2 = new TextField(20);
t2.setBounds(250,280,200,25);
this.add(t2);
Label l13 = new Label("JAVA PROGRAM MARK");
l13.setBounds(50,310,150,25);
this.add(l13);
```

```
t3 = new TextField(20);
t3.setBounds(250,310,200,25);
this.add(t3);
 Label l14 = new Label("COMPUTER NETWORK MARK");
l14.setBounds(50,340,180,25);
this.add(l14);
t4 = new TextField(20);
t4.setBounds(250,340,200,25);
this.add(t4);
 Label l15 = new Label("OPERATING SYSTEM MARK");
l15.setBounds(50,370,180,25);
this.add(l15);
t5 = new TextField(20);
t5.setBounds(250,370,200,25);
this.add(t5);
 Label l16 = new Label("TOTAL MARK");
l16.setBounds(50,400,150,25);
this.add(l16);
t6 = new TextField(20);
t6.setBounds(250,400,200,25);
this.add(t6);
 Label l17 = new Label("AVERAGE MARK");
l17.setBounds(50,430,150,25);
this.add(l17);
t7 = new TextField(20);
t7.setBounds(250,430,200,25);
this.add(t7);
 Button b1 = new Button("SUMBIT");
b1.setBackground(Color.PINK);
b1.setBounds(300,470,100,30);
this.add(b1);
```

```
b1.addActionListener(this);
}
public void actionPerformed(ActionEvent ae){
try{
int m1 = Integer.parseInt(t3.getText());
int m2 = Integer.parseInt(t4.getText());
int m3 = Integer.parseInt(t5.getText());
 int total = m1 + m2 + m3;
float avg = total / 3.0f;
 t6.setText(String.valueOf(total));
t7.setText(String.format("%.2f", avg));
}
catch (NumberFormatException e) {
t6.setText("Invalid Input");
t7.setText("Check Marks");
} } }
```

Output:



Ex. No.:		
Date :		

Program code: Electricity Bills

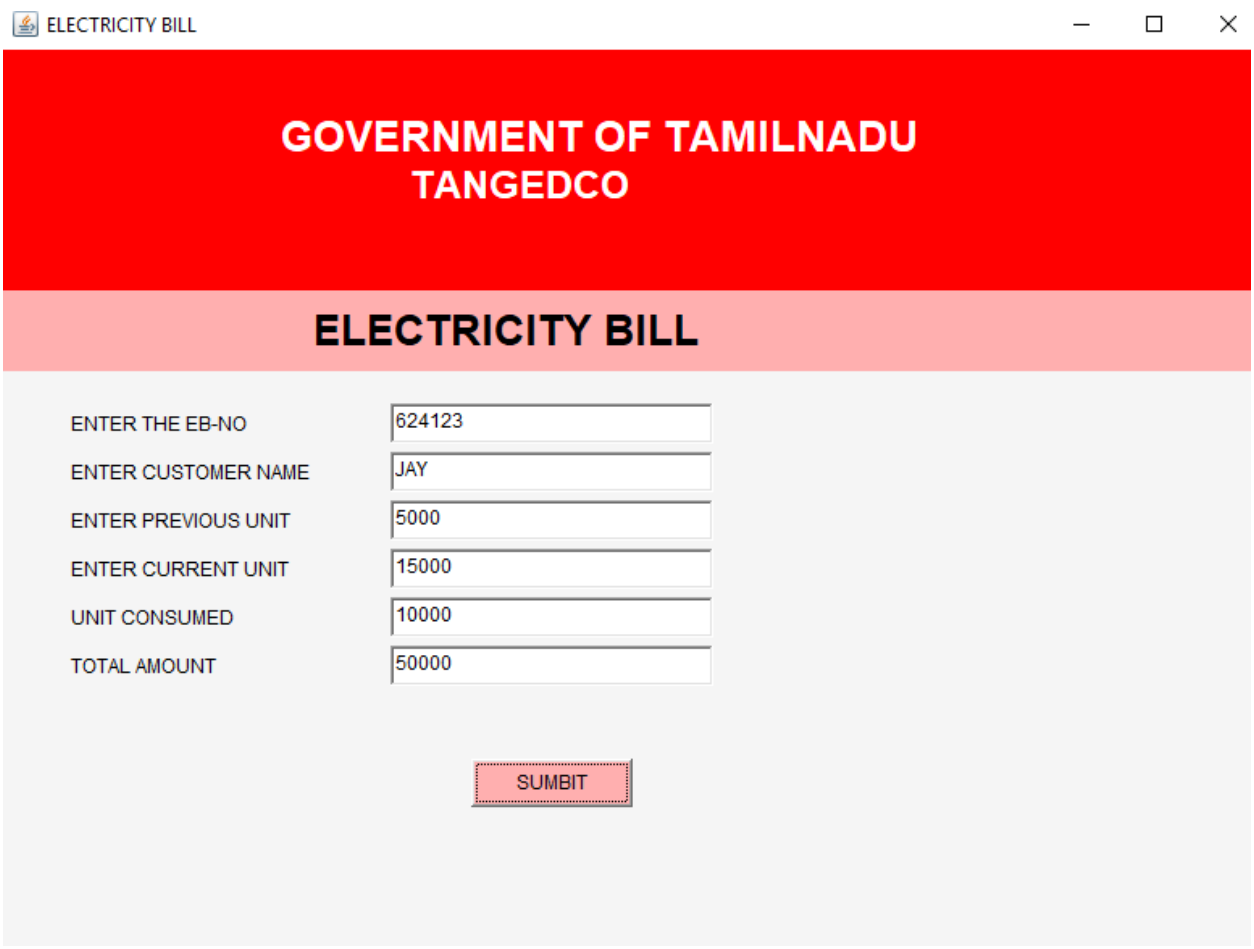
```
 import java.awt.*;
import java.awt.event.*;
class Bill extends Frame implements ActionListener
{
TextField t3,t4,t5,t6,t7;
public static void main(String[] args)
{
Bill f = new Bill();
f.setSize(800,600);
f.setTitle("ELECTRICITY BILL");
f.setLayout(null);
f.setVisible(true);
}
Bill()
{
this.setBackground(new Color(245,245,245));
Panel p1 = new Panel();
p1.setLayout(null);
p1.setBackground(Color.RED);
p1.setBounds(0, 30, 800, 150);
 Label l0 = new Label("GOVERNMENT OF TAMILNADU");
Label l1 = new Label("TANGEDCO");
 Font f0 = new Font("Arial",Font.BOLD,26);
Font f1 = new Font("Arial",Font.BOLD,25);
Font f2 = new Font("Arial",Font.BOLD,24);
l0.setFont(f0);
l0.setForeground(Color.WHITE);
l1.setForeground(Color.WHITE);
l1.setFont(f2);
```

```
 l0.setBounds(180,40,400,30);
l1.setBounds(260,70,400,30);
 p1.add(l0);
p1.add(l1);
 this.add(p1);
 Panel p2 = new Panel();
p2.setLayout(null);
p2.setBackground(Color.PINK);
p2.setBounds(0,180,800,50);
 Label l3 = new Label("ELECTRICITY BILL");
l3.setFont(f0);
l3.setBounds(200,10,400,30);
p2.add(l3);
this.add(p2);
 Label l11 = new Label("ENTER THE EB-NO");
l11.setBounds(50,250,150,25);
this.add(l11);
TextField t1 = new TextField(20);
t1.setBounds(250,250,200,25);
this.add(t1);
 Label l12 = new Label("ENTER CUSTOMER NAME");
l12.setBounds(50,280,150,25);
this.add(l12);
TextField t2 = new TextField(20);
t2.setBounds(250,280,200,25);
this.add(t2);
 Label l13 = new Label("ENTER PREVIOUS UNIT");
l13.setBounds(50,310,150,25);
this.add(l13);
t3 = new TextField(20);
t3.setBounds(250,310,200,25);
```

```
this.add(t3);
 Label l14 = new Label("ENTER CURRENT UNIT");
l14.setBounds(50,340,180,25);
this.add(l14);
t4 = new TextField(20);
t4.setBounds(250,340,200,25);
this.add(t4);
 Label l15 = new Label("UNIT CONSUMED");
l15.setBounds(50,370,180,25);
this.add(l15);
t5 = new TextField(20);
t5.setBounds(250,370,200,25);
this.add(t5);
 Label l16 = new Label("TOTAL AMOUNT");
l16.setBounds(50,400,150,25);
this.add(l16);
t6 = new TextField(20);
t6.setBounds(250,400,200,25);
this.add(t6);
 Button b1 = new Button("SUMBIT");
b1.setBackground(Color.PINK);
b1.setBounds(300,470,100,30);
this.add(b1);
 b1.addActionListener(this);
 }
public void actionPerformed(ActionEvent ae)
{
try
{
int m1 = Integer.parseInt(t3.getText());
int m2 = Integer.parseInt(t4.getText());
```

```
int unit = m2-m1;
int amount = unit*5;
 t5.setText(String.valueOf(unit));
t6.setText(String.valueOf(amount));
t6.setText("Invalid Input");
t7.setText("Check Unit");
}
catch (NumberFormatException e)  {}
}
}
```

Output:



Ex. No.:		
Date :		

Program Code: Store Bill Reciept

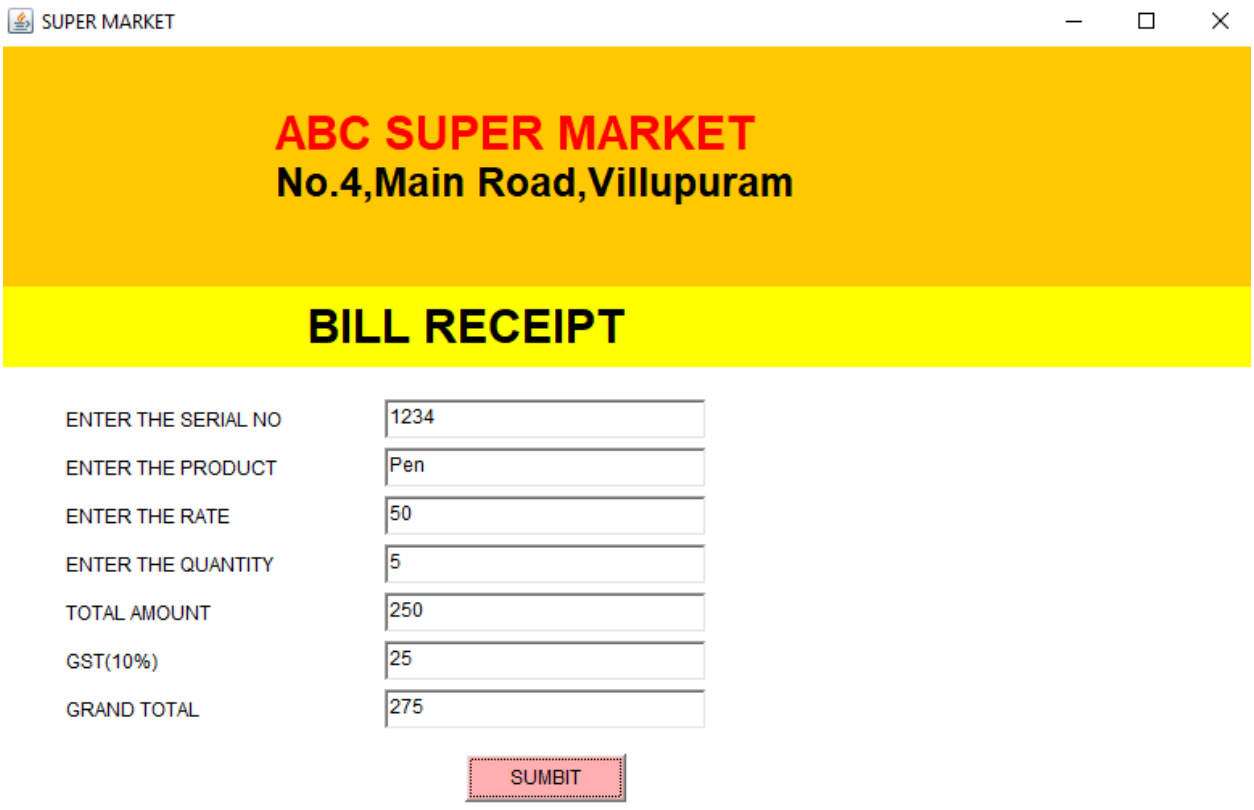
```
import java.awt.*;
import java.awt.event.*;
class Market extends Frame implements ActionListener
{
TextField t3,t4,t5,t6,t7;
public static void main(String[] args)
{
Market f = new Market();
f.setSize(800,600);
f.setTitle("SUPER MARKET");
f.setLayout(null);
f.setVisible(true);
}
Market()
{
 this.setBackground(Color.WHITE);
 Panel p1 = new Panel();
p1.setLayout(null);
p1.setBackground(Color.ORANGE);
p1.setBounds(0, 30, 800, 150);
 Label l0 = new Label("ABC SUPER MARKET");
Label l1 = new Label("No.4,Main Road,Villupuram");
Font f0 = new Font("Arial",Font.BOLD,29);
Font f1 = new Font("Arial",Font.BOLD,25);
Font f2 = new Font("Arial",Font.BOLD,24);
l0.setFont(f0);
l0.setForeground(Color.RED);
l1.setFont(f1);
 l0.setBounds(180,40,400,30);
l1.setBounds(180,70,400,30);
```

```
 p1.add(l0);
p1.add(l1);
 this.add(p1);
 Panel p2 = new Panel();
p2.setLayout(null);
p2.setBackground(Color.YELLOW);
p2.setBounds(0,180,800,50);
Label l3 = new Label("BILL RECEIPT");
l3.setFont(f0);
l3.setBounds(200,10,400,30);
p2.add(l3);
this.add(p2);
 Label l11 = new Label("ENTER THE SERIAL NO");
l11.setBounds(50,250,150,25);
this.add(l11);
TextField t1 = new TextField(20);
t1.setBounds(250,250,200,25);
this.add(t1);
 Label l12 = new Label("ENTER THE PRODUCT");
l12.setBounds(50,280,150,25);
this.add(l12);
TextField t2 = new TextField(20);
t2.setBounds(250,280,200,25);
this.add(t2);
 Label l13 = new Label("ENTER THE RATE");
l13.setBounds(50,310,150,25);
this.add(l13);
t3 = new TextField(20);
t3.setBounds(250,310,200,25);
this.add(t3);
 Label l14 = new Label("ENTER THE QUANTITY");
```

```
l14.setBounds(50,340,180,25);
this.add(l14);
t4 = new TextField(20);
t4.setBounds(250,340,200,25);
this.add(t4);
 Label l15 = new Label("TOTAL AMOUNT");
l15.setBounds(50,370,180,25);
this.add(l15);
t5 = new TextField(20);
t5.setBounds(250,370,200,25);
this.add(t5);
 Label l16 = new Label("GST(10%)");
l16.setBounds(50,400,150,25);
this.add(l16);
t6 = new TextField(20);
t6.setBounds(250,400,200,25);
this.add(t6);
 Label l17 = new Label("GRAND TOTAL");
l17.setBounds(50,430,150,25);
this.add(l17);
t7 = new TextField(20);
t7.setBounds(250,430,200,25);
this.add(t7);
 Button b1 = new Button("SUMBIT");
b1.setBackground(Color.PINK);
b1.setBounds(300,470,100,30);
this.add(b1);
b1.addActionListener(this);
}
```

```
public void actionPerformed(ActionEvent ae){
try{
        int r = Integer.parseInt(t3.getText());
        int q = Integer.parseInt(t4.getText());
         int total = r*q;
        int gst = total*10/100;
        int gt = total+gst;
         t5.setText(String.valueOf(total));
        t6.setText(String.valueOf(gst));
        t7.setText(String.valueOf(gt));
}
catch (NumberFormatException e) {}
} }
```

Output:



Ex. No.:		
Date :		

Program Code: Employee Payroll System

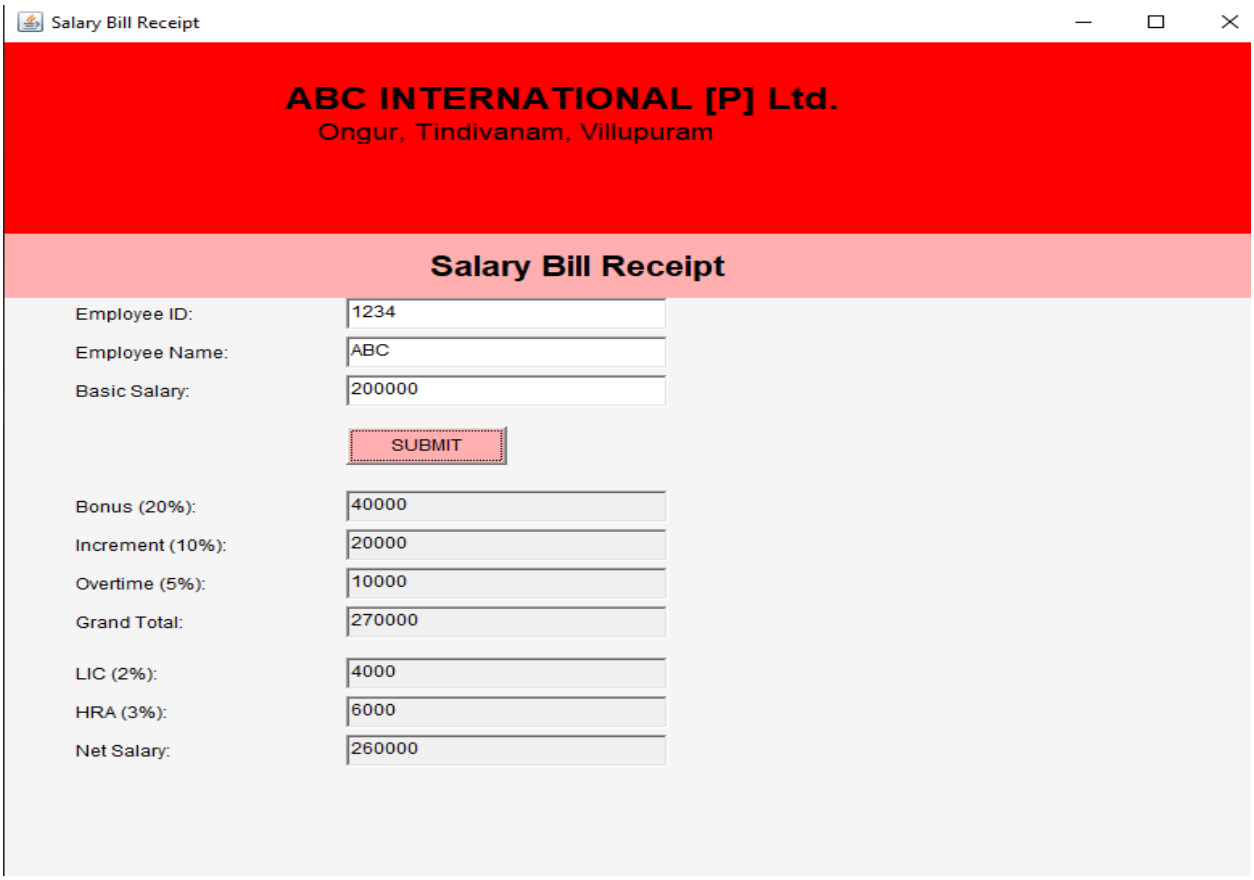
```
import java.awt.*;
import java.awt.event.*;
 class SalBill extends Frame implements ActionListener
{
TextField t1, t2, t3, t4, t5, t6, t7, t8, t9, t10;
 public static void main(String[] args)
{
SalBill f = new SalBill();
f.setSize(800, 800);
f.setTitle("Salary Bill Receipt");
f.setLayout(null);
f.setVisible(true);
}
 SalBill() {
this.setBackground(new Color(245, 245, 245));
 Panel p1 = new Panel();
p1.setLayout(null);
p1.setBackground(Color.RED);
p1.setBounds(0, 30, 800, 150);
 Label l0 = new Label("ABC INTERNATIONAL [P] Ltd.");
l0.setFont(new Font("Arial", Font.BOLD, 24));
l0.setBounds(180, 30, 500, 30);
p1.add(l0);
 Label l11 = new Label("Ongur, Tindivanam, Villupuram");
l11.setFont(new Font("Arial", Font.PLAIN, 18));
l11.setBounds(200, 60, 400, 20);
p1.add(l11);
 this.add(p1);
Panel p2 = new Panel();
p2.setLayout(null);
```

```
p2.setBackground(Color.PINK);
p2.setBounds(0, 180, 800, 50);
Label l12 = new Label("Salary Bill Receipt");
l12.setFont(new Font("Arial", Font.BOLD, 22));
l12.setBounds(270, 10, 300, 30);
p2.add(l12);
this.add(p2);
Label l1 = new Label("Employee ID:");
l1.setBounds(50, 230, 150, 25);
add(l1);
t1 = new TextField(20);
t1.setBounds(220, 230, 200, 25);
add(t1);
Label l2 = new Label("Employee Name:");
l2.setBounds(50, 260, 150, 25);
add(l2);
t2 = new TextField(20);
t2.setBounds(220, 260, 200, 25);
add(t2);
Label l3 = new Label("Basic Salary:");
l3.setBounds(50, 290, 150, 25);
add(l3);
t3 = new TextField(20);
t3.setBounds(220, 290, 200, 25);
add(t3);
Button b = new Button("SUBMIT");
b.setBounds(220, 330, 100, 30);
b.setBackground(Color.PINK);
b.addActionListener(this);
add(b);
t4 = addField("Bonus (20%)", 380);
```

```
t5 = addField("Increment (10%)", 410);
t6 = addField("Overtime (5%)", 440);
t7 = addField("Grand Total", 470);
t8 = addField("LIC (2%)", 510);
t9 = addField("HRA (3%)", 540);
t10 = addField("Net Salary", 570);
addWindowListener(new WindowAdapter() {
public void windowClosing(WindowEvent we) {
dispose();
}
});
}
 private TextField addField(String label, int y) {
Label l = new Label(label + ":");
l.setBounds(50, y, 150, 25);
add(l);
TextField tf = new TextField(20);
tf.setBounds(220, y, 200, 25);
add(tf);
tf.setEditable(false);
return tf;
}
 public void actionPerformed(ActionEvent ae) {
try {
int salary = Integer.parseInt(t3.getText());
int bonus = salary * 20 / 100;
int increment = salary * 10 / 100;
int overtime = salary * 5 / 100;
 int grandTotal = salary + bonus + increment + overtime;
 int lic = salary * 2 / 100;
int hra = salary * 3 / 100;
```

```
int netTotal = grandTotal - lic - hra;
t4.setText(String.valueOf(bonus));
t5.setText(String.valueOf(increment));
t6.setText(String.valueOf(overtime));
t7.setText(String.valueOf(grandTotal));
t8.setText(String.valueOf(lic));
t9.setText(String.valueOf(hra));
t10.setText(String.valueOf(netTotal));
}
catch (NumberFormatException e) {
t10.setText("Invalid salary input!");
} }
}
```

Output:



PART-IV

APPLET WEB APPS

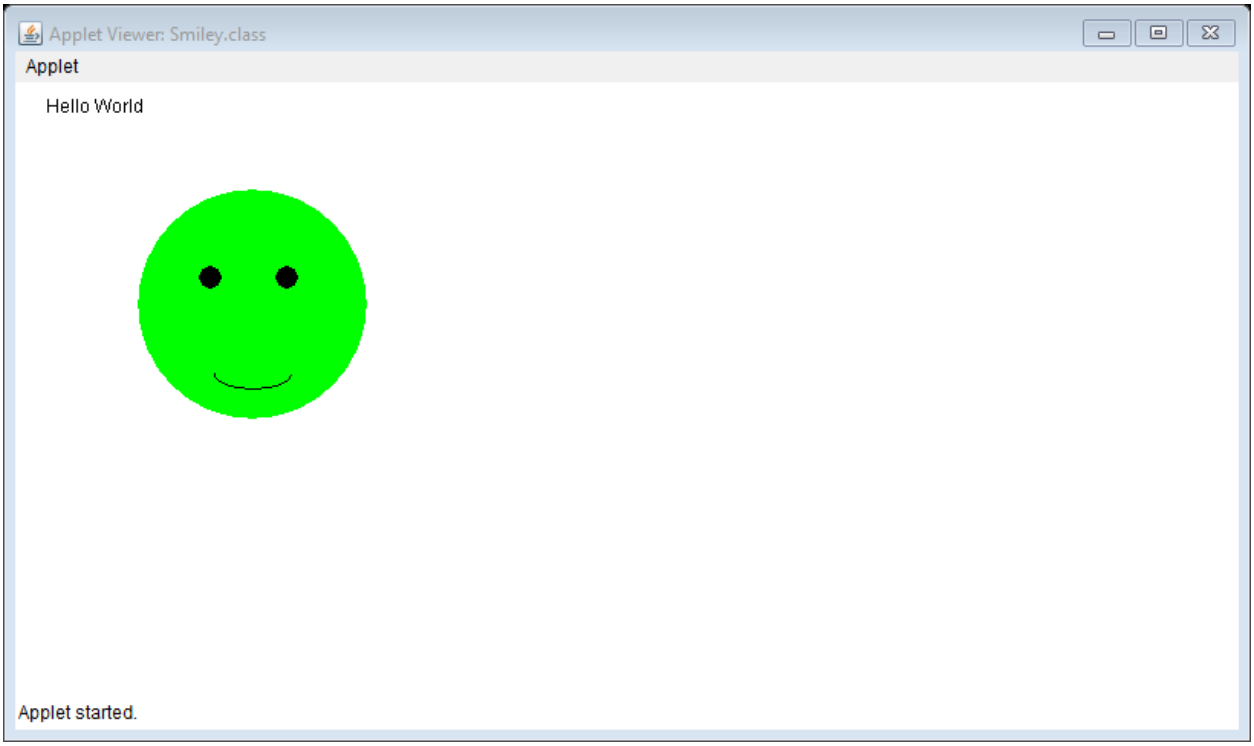
Applet Using Java Programming

Ex. No.:		
Date :		

Program Code: Smiley Animation

```
import java.applet.*;
import java.awt.*;
// <applet code="Smiley.class" width="800" height="400">
//</applet>
public class Smiley extends Applet
{
   public void paint(Graphics g)
   {
    for(int i=1; i<=10;i++)
    {
     try {
           g.drawString("Hello World", 20, 20);
           g.setColor(Color.GREEN);
           g.fillOval(80, 70, 150, 150);
           g.setColor(Color.BLACK);
           g.fillOval(120, 120, 15, 15);
           g.fillOval(170, 120, 15, 15);
            g.drawArc(130, 180, 50, 20, 180, 180);
           Thread.sleep(1000);
           g.drawString("Hello World", 20, 20);
           g.setColor(Color.YELLOW);
           g.fillOval(80, 70, 150, 150);
           g.setColor(Color.BLACK);
           g.fillOval(120, 120, 15, 15);
            g.fillOval(170, 120, 15, 15);
            g.drawArc(130, 180, 50, 20, 180, 180);
           Thread.sleep(1000);
     }catch(Exception e){}
     }
   }}
```

Output:


Applet Viewer: Smiley.class
Applet
Hello World
Applet started.

Ex. No.:		
Date :		

Program Code: Text Animation

```
import java.applet.*;
import java.awt.*;
// <applet code="TextAnimation.class" width="800" height="400">
//</applet>
public class TextAnimation extends Applet
{
   public void paint(Graphics g)
   {
    for(int i=1; i<=20;i++)
    {
     try {
                    g.setColor(Color.BLACK);
                    g.fillRect(0,0,800,400);
                    g.setColor(Color.WHITE);
                    g.setFont(new Font("arial",Font.BOLD,41));
                    g.drawString("MCA 2024-2027", 250, 150);
                    g.setColor(Color.YELLOW);
                    g.setFont(new Font("arial",Font.BOLD,24));
                    g.drawString("JAVA APPLICATION DEVELOPMENT", i*10, 200);
                    Thread.sleep(100);
     }catch(Exception e){}
     }
   }
}
```

Output:


Applet Viewer: TextAnimation.class
Applet
MCA 2024-2027
JAVA APPLICATION DEVELOPMENT
Applet started.

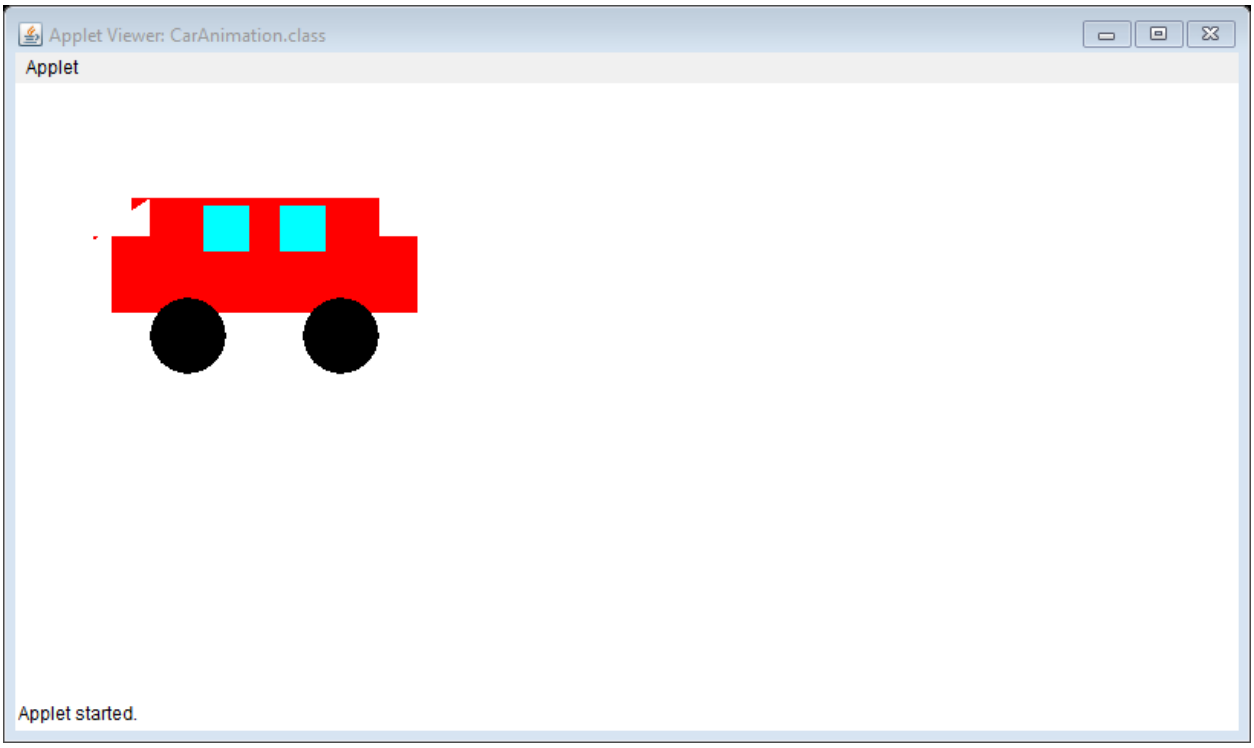
.

Ex. No.:		
Date :		

Program Code: CarAnimation

```
import java.applet.*;
import java.awt.*;
// <applet code="CarAnimation.class" width="800" height="400">
//</applet>
public class CarAnimation extends Applet
{
   public void paint(Graphics g)
   {
    for(int i=1; i<=50;i++)
    {
     try {
                    g.setColor(Color.WHITE);
                    g.fillOval(0,0,800,400);
                    g.setColor(Color.RED);
                    g.fillRect(i+50, 100, 200, 50);
                    g.fillRect(i+75, 75, 150, 50);
                    g.setColor(Color.CYAN);
                    g.fillRect(i+110, 80, 30, 30);
                    g.fillRect(i+160, 80, 30, 30);
                    g.setColor(Color.BLACK);
                    g.fillOval(i+75, 140, 50, 50);
                    g.fillOval(i+175, 140, 50, 50);
                    Thread.sleep(100);
     }catch(Exception e){}
     }
   }
}
```

Output:



PART-V

NETWORKING PROGRAM

Using Java Programming

Ex. No.:		
Date :		

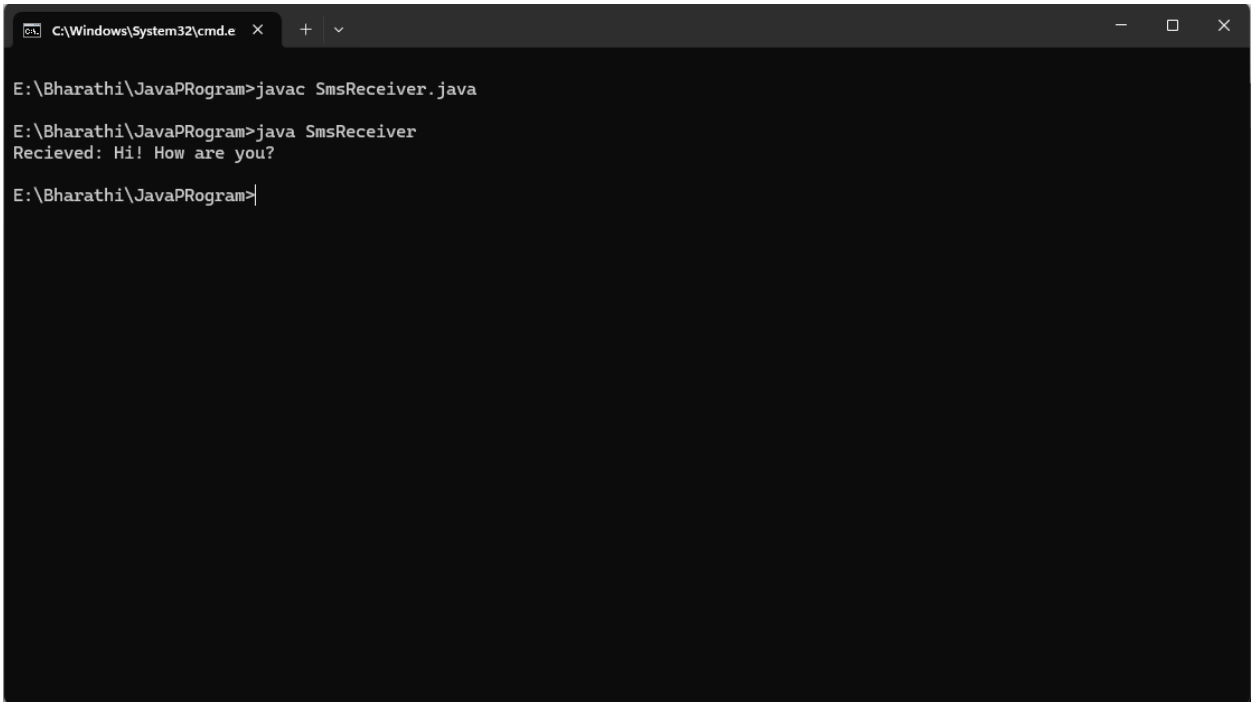
Receiver Program:

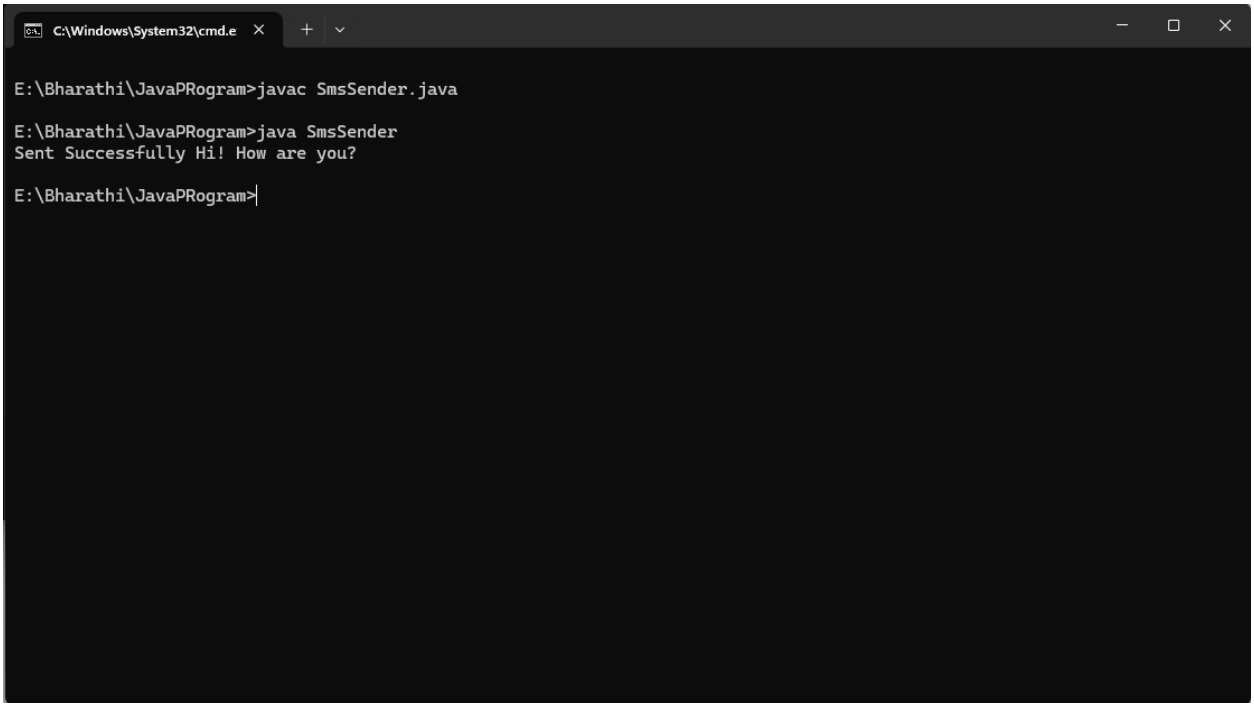
```
import java.net.*;
public class SmsReceiver
{
    public static void main(String[] args)
   {
        try {
           DatagramSocket ds = new DatagramSocket(2000);
           byte b[] = new byte[1024];
           DatagramPacket dp = new DatagramPacket(b, b.length);
           ds.receive(dp);
           b = dp.getData();
           String s=new String(b);
           System.out.println("Recieved: "+s);
        }
        catch(Exception e){}
    }
}
```

Sender Program:

```
import java.net.*;
public class SmsSender
{
   public static void main(String[] args)
  {
       try {
          DatagramSocket ds = new DatagramSocket();
          String s="Hi! How are you?";
          byte b[] = new byte[1024];
                    b=s.getBytes();
                    InetAddress ia=InetAddress.getLocalHost();
                    DatagramPacket dp = new DatagramPacket(b, b.length, ia, 2000);
                    ds.send(dp);
                    System.out.println("Sent Successfully "+s);
       }
       catch(Exception e){}
   }
}
```

Output:


C:\Windows\System32\cmd.e
E:\Bharathi\JavaPRogram>javac SmsReceiver.java
E:\Bharathi\JavaPRogram>java SmsReceiver
Recieved: Hi! How are you?
E:\Bharathi\JavaPRogram>


C:\Windows\System32\cmd.e
E:\Bharathi\JavaPRogram>javac SmsSender.java
E:\Bharathi\JavaPRogram>java SmsSender
Sent Successfully Hi! How are you?
E:\Bharathi\JavaPRogram>

PART-VI

JAVA DATABASE CONNECTIVITY

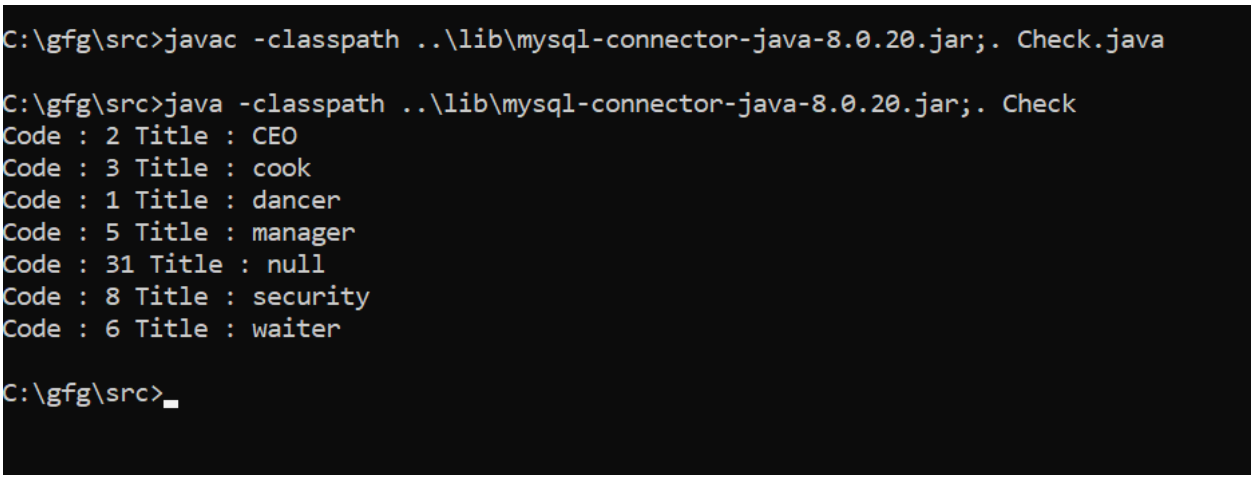
JDBC – MySQL Using Java Programming

Ex. No.:		
Date :		

Program:

```
import java.sql.*;
public class GFG {
public static void main(String arg[])
{
try {
Class.forName("com.mysql.cj.jdbc.Driver");
Connection con = DriverManager.getConnection("jdbc:mysql://localhost/mydb", "root", "");
Statement st= connection.createStatement();
ResultSet rs = statement.executeQuery("select * from designation");
while (resultSet.next())
{
            code = resultSet.getInt("code");
            title = resultSet.getString("title");
            System.out.println("Code: " + code);
             System.out.println(" Title: " + title);
}
st.close();
con.close();
}
catch (Exception exception)
{
        System.out.println(exception);
}
}
}
```

Output:


C:\gfg\src>javac -classpath ..\lib\mysql-connector-java-8.0.20.jar;. Check.java
C:\gfg\src>java -classpath ..\lib\mysql-connector-java-8.0.20.jar;. Check
Code : 2 Title : CEO
Code : 3 Title : cook
Code : 1 Title : dancer
Code : 5 Title : manager
Code : 31 Title : null
Code : 8 Title : security
Code : 6 Title : waiter
C:\gfg\src>

TECHNICAL INFORMATION FOR STUDENT

Enrollment Number	
Name of the Student	
Gmail ID	
LinkedIn ID	
GitHub ID	
Google Sites Address	
Score in codechef.com	
Website Address	

Signature of Course Incharge

Mr. R. BHARATHIDASAN MCA., M.Phil., (Ph.D.)

Assistant Professor/Computer Science

School of Computer Science