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# JAVA PROGRAMS WITH OUTPUT



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## Program no 1

1) WAP using nested switch case which covers the following operators with expressions :

- (a) Mathematical
  - (b) Logical
  - (c) Relational

## **PROGRAMME:- A**

```
public class Switch{
```

```
public static void main(String []args){
```

```
System.out.println("1.ARITHMATIC  
OPERATORS\n2.LOGICAL OPERATORS\n3.RELATIONAL  
OPERATORS\n\t\t(Choice=1)\n"); //Main menu
```

```
int choice=1;
```

```
int a=10,b=5,c;
```

```
switch(choice) //Main switch case
```

{

case 1: //arithmatic operators

```
System.out.println("1.Addition\n2.Subtraction\n3.Multiplication\n4.Division\nVALUES OF a AND b ARE 10 AND 5  
RESPECTIVELY\n\t\t(Choice=3)\n");
```

```
int aChoice=3;
```

```
switch(aChoice) //Nested switch case
```

{

case 1: //addition

c=a+b;

```
System.out.println("Addtion of a and b is "+ c+"\n");
```

break;

## case 2: //subtraction

$$c=a-b;$$

```
    System.out.println("Subtraction of a and b is "+  
c+"\n");
```

break;

```
case 3: //Multiplication  
c=a*b;  
  
System.out.println("Multiplication of a and b is "+  
c+"\n");  
  
break;  
  
case 4: //division  
  
c=a/b;  
  
System.out.println("Divisiom of a and b is "+ c+"\n");  
  
break;  
  
default:  
  
System.out.println("Please enter right choice");  
}  
  
break;  
  
case 2 : //logical operator  
  
System.out.println("1.Logical AND\n2.Logical OR\n3.NOT  
Operator\n");
```

```
int lchoice=1;  
switch(lchoice)  
{  
    case 1: // AND operator  
        int age=25;  
        if(age>18 && age<50)  
            System.out.println("(AGE=25)\nYou are eligible for  
this job.\n");  
        break;  
  
    case 2: //or operator  
        int salary=3000;  
        if(salary<5000 || salary>2000)  
            System.out.println("(SALARY=3000)\n The job is  
offordable.\n");  
        break;  
  
    case 3: //not operator  
        int Age=20;
```

```
if(Age!=18 || Age>18)
    System.out.println("(Age=20)\nYou are not eligible
for voting\n");
```

```
break;
```

```
default:
```

```
System.out.println("Please enter right choice");
```

```
}
```

```
break;
```

```
case 3: //Relational operator
```

```
    System.out.println("1.Greater than operator\n2.Less
than operator\n3.Greater than or equal operator\n4.Less
than or equal operator\n");
```

```
int lChoice=4;
```

```
switch(lChoice)
```

```
{
```

```
case 1: //greater than operator
```

```
int aage=20;  
if(aage > 18)  
    System.out.println("(Age=20) You are eligible for  
having a driving licens");  
break;
```

case 2: //less than operator

```
int A=10;  
if(A < 18)  
    System.out.println("(Age=10) You are not eligible for  
having a driving licens");  
break;
```

case 3: //greater than equal to

```
int p=18;  
if(p >= 18)  
    System.out.println("(Age=18) You are eligible for  
having a driving licens");  
break;
```

```
case 4: //less than or equal to  
int q=13;  
if(q <= 18)  
    System.out.println("(Age=13) You are not eligible for  
having a driving licens");  
break;  
  
default:  
    System.out.println("Please enter right choice");  
}  
break;  
  
default:  
    System.out.println("Please enter right choice");  
}  
}  
}
```

## OUTPUT:

```
Result
$javac Switch.java
$java -Xmx128M -Xms16M Switch
1.ARITHMATIC OPERATORS
2.LOGICAL OPERATORS
3.RELATIONAL OPERATORS
(Choice=1)

1.Addition
2.Subtraction
3.Multiplication
4.Division
VALUES OF a AND b ARE 10 AND 5 RESPECTIVELY
(Choice=3)

Multiplication of a and b is 50
```

## PROGRAM : 2

WAP to print following patterns :

(a)            \* \* \* \* \*  
                  \* \* \* \*  
                  \* \* \*  
                  \* \*  
                  \*

(b)            \*  
                  \*\*  
                  \*\*\*  
                  \*\*\*\*  
                  \*\*\*\*\*  
                  \*\*\*\*  
                  \*\*\*  
                  \*\*  
                  \*

### Programme:-

```
public class Pattern{
```

```
    public static void main(String []args){
```

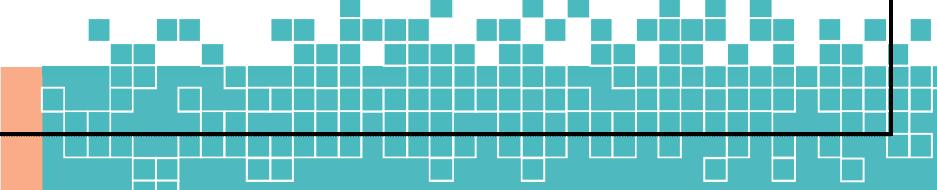
```
        System.out.println("PATTERN NO: 1");
```

```
        for (int i= 5; i>= 1; i--)
```

```
{  
for (int j=5; j>i;j--)  
{  
System.out.print(" ");  
}  
for (int k=1;k<=i;k++)  
{  
System.out.print("*");  
}  
System.out.println("");  
}
```

```
System.out.println("\n\nPATTERN NO: 2");
```

```
for (int i = 1; i <= 5; i++)  
{  
    for (int j = 5; j > i; j--)  
    {
```



```
System.out.print(" ");
}

for (int k = 1; k <= i; k++)
{
    System.out.print("*");
}

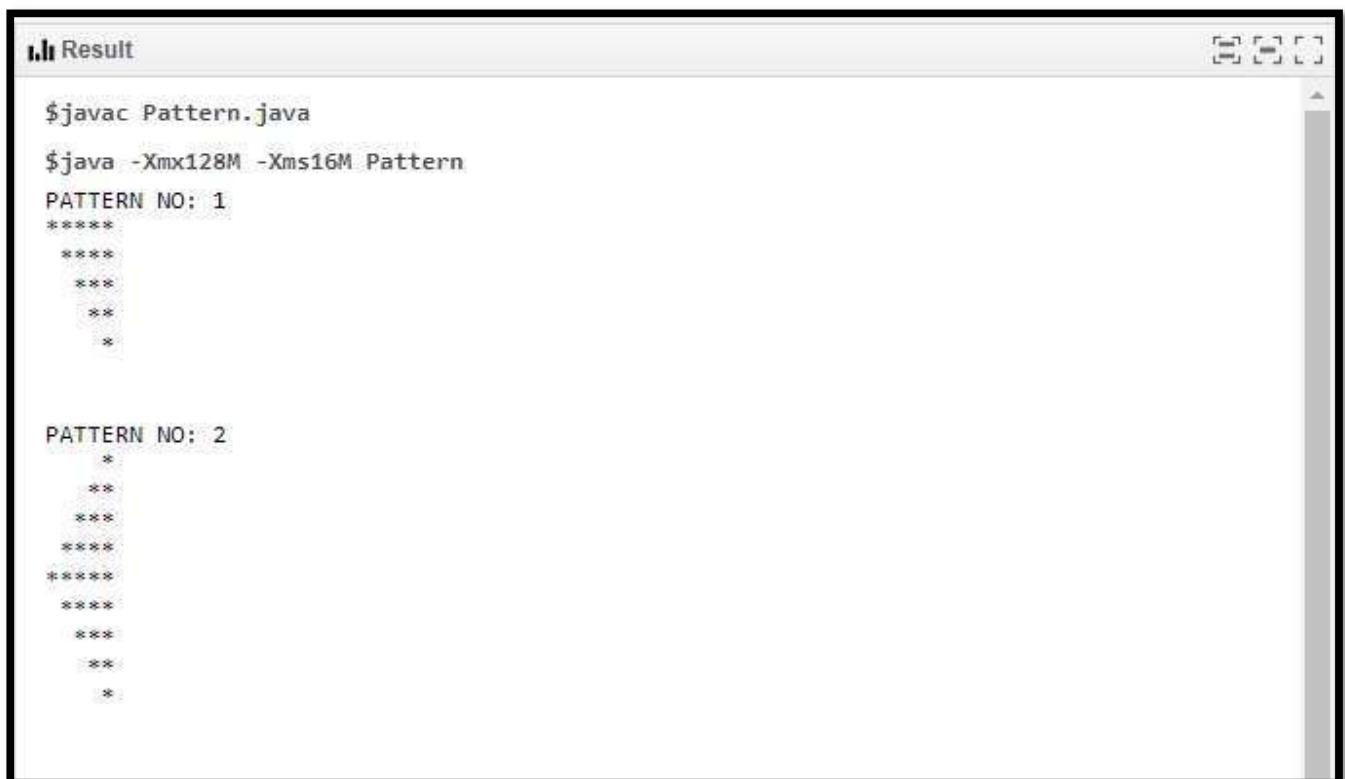
System.out.println();
}

for (int i = 1; i <= 5-1; i++)
{
    for (int j = 1; j <= i; j++)
    {
        System.out.print(" ");
    }

    for (int k = 5-1; k >= i; k--)
    {
        System.out.print("*");
    }
}
```

```
        System.out.println();  
    }  
}  
}
```

## **OUTPUT:**



The screenshot shows a terminal window titled "Result" displaying the execution of a Java program named "Pattern.java". The command "\$javac Pattern.java" is run first, followed by "\$java -Xmx128M -Xms16M Pattern". The output consists of two parts: "PATTERN NO: 1" followed by a diamond-shaped pattern of asterisks, and "PATTERN NO: 2" followed by a similar diamond-shaped pattern.

```
$javac Pattern.java  
$java -Xmx128M -Xms16M Pattern  
PATTERN NO: 1  
*****  
****  
***  
**  
*  
  
PATTERN NO: 2  
*  
**  
***  
****  
*****  
****  
***  
**  
*
```

### Program : 3

- 3) WAP to find  
(a) palindrome  
(b) fibonacci series  
(c) leap year  
(d) even/odd number

#### Programmer:

(a) palindrome :

```
public class Palindrome{
```

```
    public static void main(String []args){
```

```
        System.out.println("-----Palindrome -----\\n");
```

```
        int r,sum=0,temp;
```

```
        int n=345;
```

```
        temp=n;
```

```
        while(n>0){
```

```
            r=n%10;
```

```
sum=(sum*10)+r;  
n=n/10;  
}  
if(temp==sum)  
    System.out.println("palindrome number ");  
else  
    System.out.println("not palindrome");  
}  
}
```

## **OUTPUT :**



```
$javac Palindrome.java  
$java -Xmx128M -Xms16M Palindrome  
-----Palindrome-----  
not palindrome
```

## (b) fibonacci series

```
public class Fibonacci{  
  
    public static void main(String []args){  
  
        System.out.println("-----  
Fibonacci series----- \n");  
        int n1=0,n2=1,n3, ,count=10;  
        System.out.print(n1+" "+n2);  
  
        for(i=2;i<count;++i)  
        {  
            n3=n1+n2;  
            System.out.print(" "+n3);  
            n1=n2;  
            n2=n3;  
        }  
    }  
}
```

OUTPUT:

Result

```
$javac Fibonacci.java
$java -Xmx128M -Xms16M Fibonacci
-----
Fibonacci series-----
0 1 1 2 3 5 8 13 21 34
```

c) leap year

```
public class LeapYear{
```

```
    public static void main(String []args){
```

```
        System.out.println("\n-----Leap year-----\n(year=2020));
```

```
        int year=2020;
```

```
        if ((year % 4 == 0) && (year % 100!= 0))
```

```
            System.out.println("Entered year is a leap year");
```

```
        else if(year%400 == 0)
```

```
            System.out.println("Entered year is leap year");
```

```
        else
```

```
            System.out.println("Entered year is year is not a leap  
year");
```

```
}
```

```
}
```

OUTPUT:

```
Result
$javac LeapYear.java
$java -Xmx128M -Xms16M LeapYear
-----
Leap year-----
(year=2020)
Entered year is a leap year
```

#### (d) even/odd number

```
public class EvenOdd{
```

```
    public static void main(String []args){
```

```
        System.out.println("\n-----Even/Odd number-----\n(num=10)");
```

```
        int num=10;
```

```
        if(num % 2 == 0)
```

```
            System.out.println(num + " is even");
```

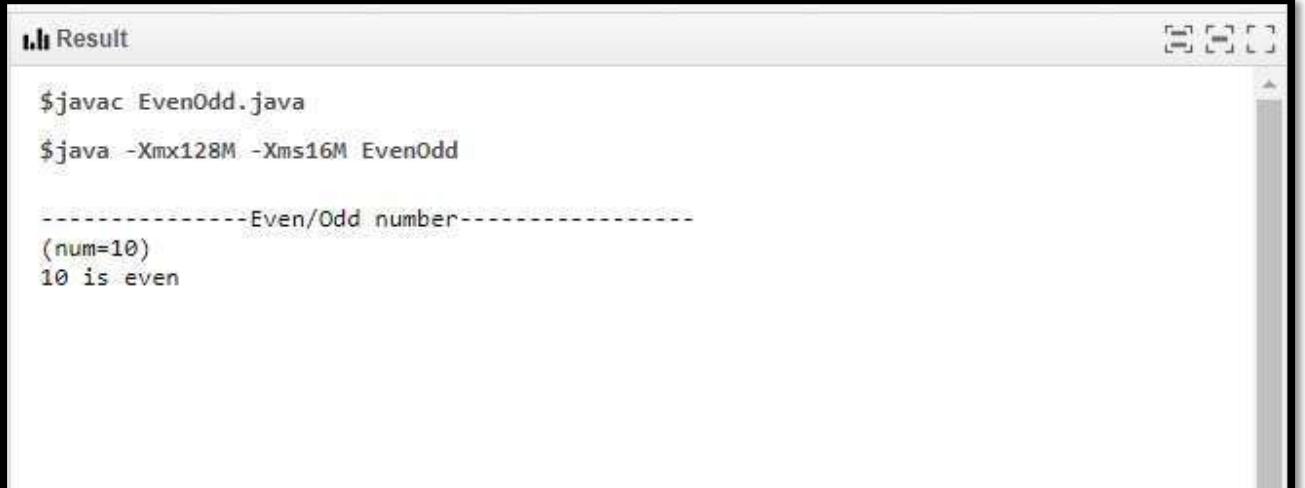
```
        else
```

```
            System.out.println(num + " is odd");
```

```
}
```

```
}
```

## OUTPUT:



```
Result
```

```
$javac EvenOdd.java
$java -Xmx128M -Xms16M EvenOdd

-----Even/Odd number-----
(num=10)
10 is even
```

## PROGRAM : 4

- 4) WAP to perform following matrix operations :
- (a) addition
  - (b) transpose
  - (c) multiplication

//PROGRAM NO: 4

```
public class Matrix{
```

```
    public static void main(String []args){          //main
        function
        int mat1[][]={{ {1,2},{3,8} }, { {3,8},{6,9} }};
        //function call
        add(mat1,mat2);
        multiply(mat1,mat2);
        trans(mat1);
    }
```

```
public static void add(int arr1[][],int arr2[][]){  
//function for matrix addition  
  
    System.out.println("-----MTRIX ADDITION-----  
\n");  
    int result[][] = new int[2][2];  
    int i,j;  
    for(i=0;i<2;i++){  
        for(j=0;j<2;j++){  
            result[i][j]=arr1[i][j]+arr2[i][j];  
            System.out.println(result[i][j] );  
        }  
        System.out.println();  
    }  
}  
  
public static void multiply(int ary1[][],int ary2[][]){  
//function for matrix multiplication
```

```
System.out.println("-----MTRIX Multiplication-----\n");
int c[][]=new int[2][2];
for(int i=0;i<2;i++){
    for(int j=0;j<2;j++){
        c[i][j]=0;
        for(int k=0;k<2;k++){
            c[i][j]+=ary1[i][k]*ary2[k][j];
        }
        System.out.print(c[i][j]+" ");
    }
    System.out.println();
}

public static void trans(int mat1[][]){      //function for
transpose of matrix}
```

```
System.out.println("-----Matrix Transpose-----\n");
int result[][]=new int[2][2];
for(int i=0;i<2;i++){
    for(int j=0;j<2;j++){
        result[i][j]=mat1[j][i];
        System.out.println(result[i][j]);
    }
    System.out.println();
}
}
```

OUTPUT:

Result

```
$javac Matrix.java
$java -Xmx128M -Xms16M Matrix
-----MATRIX ADDITION-----
4
10

9
17

-----MATRIX Multiplication-----
15 26
57 96
-----Matrix Transpose-----
1
3

2
8
```

# Practical No-1

- **Program 1:** Java Program to Design Login Window Using AWT Controls

CODE:

```
import java.applet.Applet; import  
java.awt.*;  
  
import java.awt.event.ActionEvent;  
import java.awt.event.ActionListener;  
  
public class login extends Applet  
{  
  
    Label title = new Label("Login Page");  
  
    Label username = new Label("Username");  
  
    Label password = new Label("Password");  
  
    TextField tusername = new TextField(20);  
  
    TextField tpassword = new TextField(10);  
  
    Button loginn = new Button("Login");  
  
    Button reset = new Button("Reset");
```

```
TextField er = new TextField();
public void init() {

    setSze(500, 500);    setLayout(null);

    //Setting Bounds
    title.setBounds(150, 50, 200, 100);
    username.setBounds(20, 150, 150, 100);
    password.setBounds(20, 240, 150, 100);
    tusername.setBounds(180, 180, 250, 40);
    tpassword.setBounds(180, 270, 250, 40);
    loginn.setBounds(100, 350, 100, 40);
    reset.setBounds(250, 350, 100, 40);   er.setBounds(180,
400, 250, 40);

    //Setting Fonts
    title.setFont(new Font("Lucida",Font.PLAIN,34));
    username.setFont(new Font("Lucida",Font.PLAIN,24));
    tusername.setFont(new Font("Lucida",Font.PLAIN,24));
    username.setFont(new Font("Lucida",Font.PLAIN,24));
    tpassword.setFont(new Font("Lucida",Font.PLAIN,24));
    tpassword.setEchoChar('*');    add(username);
    add(title);
```

```
        add(password);

        add(tusername);

        add(tpassword);

        add(loginn);

        add(reset);

        add(er);

        setVisible(true);

    }

}

/*

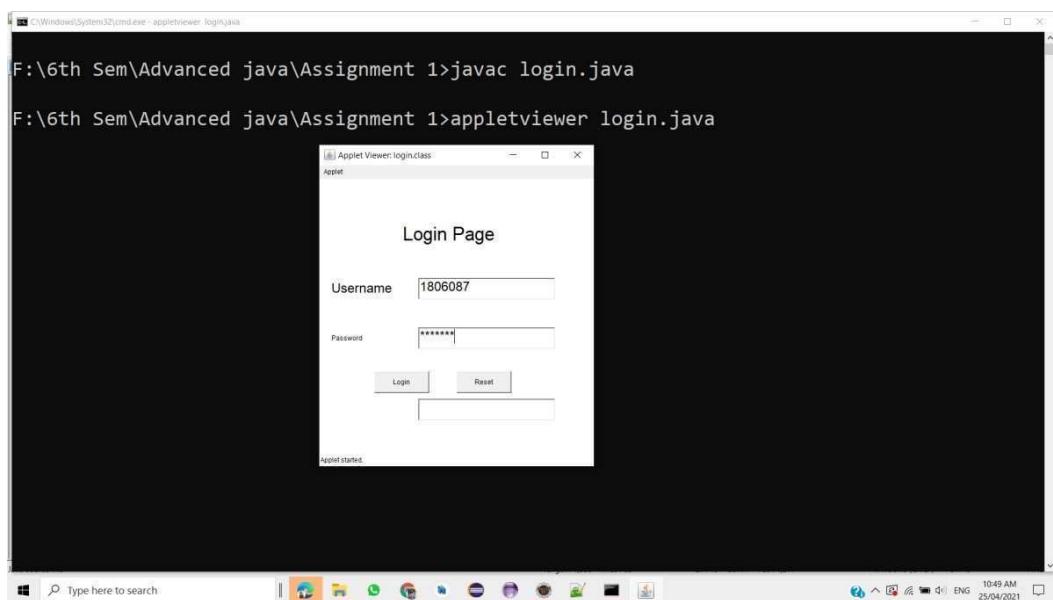


<APPLET CODE= login.class WIDTH=500 HEIGHT=500>

</APPLET>

*/
```

## OUTPUT:



- **Program 2:** Java Program to Design Registration Form Using AWT Controls with ActionListener

### CODE:

```
import java.applet.Applet; import  
java.awt.*;  
import java.awt.event.ActionEvent;  
import java.awt.event.ActionListener;  
  
public class Registration extends Applet implements  
ActionListener  
{  
    Label title = new Label(" Registration Page");  
    Label username = new Label("Username");  
    Label password = new Label("Password");  
    TextField tusername = new TextField(20);  
    TextField tpassword = new TextField(10);  
    Button Registration = new Button(" Registration");  
    Button reset = new Button("Reset");  TextField  
er = new TextField();  
    public void init()  
    {  
        setSize(500, 500);  
        setLayout(null);  
  
        //Setting Bounds
```

```
title.setBounds(150, 50, 200, 100);
username.setBounds(20, 150, 150, 100);
password.setBounds(20, 240, 150, 100);
tusername.setBounds(180, 180, 250, 40);
tpassword.setBounds(180, 270, 250, 40);
Registration.setBounds(100, 350, 100, 40);
reset.setBounds(250, 350, 100, 40); er.setBounds(180,
400, 250, 40);

//Setting Fonts
title.setFont(new Font("Lucida",Font.PLAIN,34));
username.setFont(new Font("Lucida",Font.PLAIN,24));
tusername.setFont(new Font("Lucida",Font.PLAIN,24));
username.setFont(new Font("Lucida",Font.PLAIN,24));
password.setFont(new Font("Lucida",Font.PLAIN,24));
tpassword.setFont(new Font("Lucida",Font.PLAIN,24));

tpassword.setEchoChar('*');

add(username); add(title);
add(password);
add(tusername);
add(tpassword); add(
Registration); add(reset);
add(er); setVisible(true);

Registration.addActionListener(this);
reset.addActionListener(this);

}

public void actionPerformed(ActionEvent e) {
    // TODO Auto-generated method stub
```

```
String user = tusername.getText();
String pass = tpassword.getText();
if(e.getSource() == Registration)
{
    if(user.equals("1806087") &&
pass.equals("1806087"))
    {

Frame f1=new Frame("REGISTRATION FORM ");
f1.setVisible(true);
f1.setSize(700,700);
//Labels
Label name = new Label("Full Name :");
Label email = new Label("Email :");
Label addr = new Label("Address :");
Label gender = new Label("Gender :");
Label Dept = new Label("Department :");
Label Hobbies = new Label("Hobbies :");
TextField tname = new TextField(30);
TextField temail = new TextField(20);
Checkbox crick = new Checkbox("Cricket");
Checkbox footb = new Checkbox("Football");
Checkbox tenn = new Checkbox("Tennies");
Checkbox read = new Checkbox("Reading");

TextArea taddr = new TextArea();
CheckboxGroup gen = new CheckboxGroup();
Checkbox male = new Checkbox("Male",gen,false);
```

```
        Checkbox female = new  
Checkbox("Female",gen,false);  
        Choice department= new Choice();  
department.add("Computer Engineering");  
department.add("Electrical Engineering");  
department.add("Mechanical Engineering");  
department.add("EntC Engineering");  
department.add("Civil Engineering");  
department.add("Information Technology");  
        department.select("Computer Engineering");  
  
        f1.setLayout(null);  
        //Bounds  
        name.setBounds(30,50,140,25);  
tname.setBounds(170,50,360,30);  
email.setBounds(30,100,100,25);  
temail.setBounds(170,100,290,30);  
addr.setBounds(30,160,120,25);  
taddr.setBounds(170,160,260,70);  
gender.setBounds(30,240,120,25);  
male.setBounds(170,240,80,25);  
female.setBounds(290,240,100,25);  
        Dept.setBounds(30,300,140,25);  
department.setBounds(190,300,280,250);  
Hobbies.setBounds(30,360,140,25);  
crick.setBounds(190,360,100,25);  
footb.setBounds(190,390,150,25);  
tenn.setBounds(190,420,150,25);
```

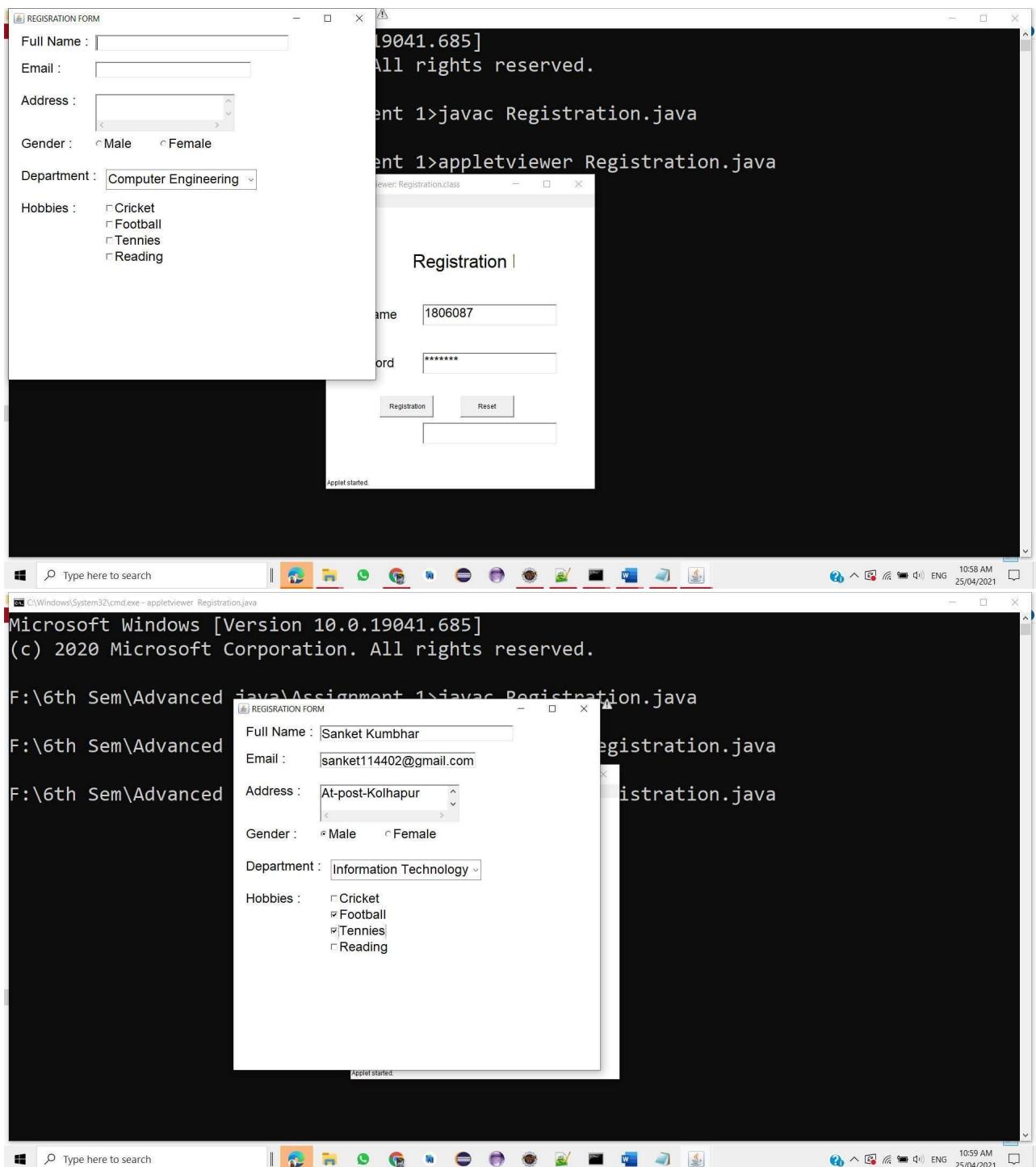
```
read.setBounds(190,450,150,25);
//Changing Fonts           name.setFont(new
Font("Lucida",Font.PLAIN,24));
                           tname.setFont(new
Font("Lucida",Font.PLAIN,24));
                           email.setFont(new
Font("Lucida",Font.PLAIN,24));
                           temail.setFont(new
Font("Lucida",Font.PLAIN,24));
                           addr.setFont(new
Font("Lucida",Font.PLAIN,24));
                           taddr.setFont(new
Font("Lucida",Font.PLAIN,24));
                           gender.setFont(new
Font("Lucida",Font.PLAIN,24));
                           male.setFont(new Font("Lucida",Font.PLAIN,24));
                           female.setFont(new
Font("Lucida",Font.PLAIN,24));
Dept.setFont(new
Font("Lucida",Font.PLAIN,24));
                           department.setFont(new
Font("Lucida",Font.PLAIN,24));
Hobbies.setFont(new
Font("Lucida",Font.PLAIN,24));
                           crick.setFont(new
Font("Lucida",Font.PLAIN,24));
                           footb.setFont(new
Font("Lucida",Font.PLAIN,24));
```

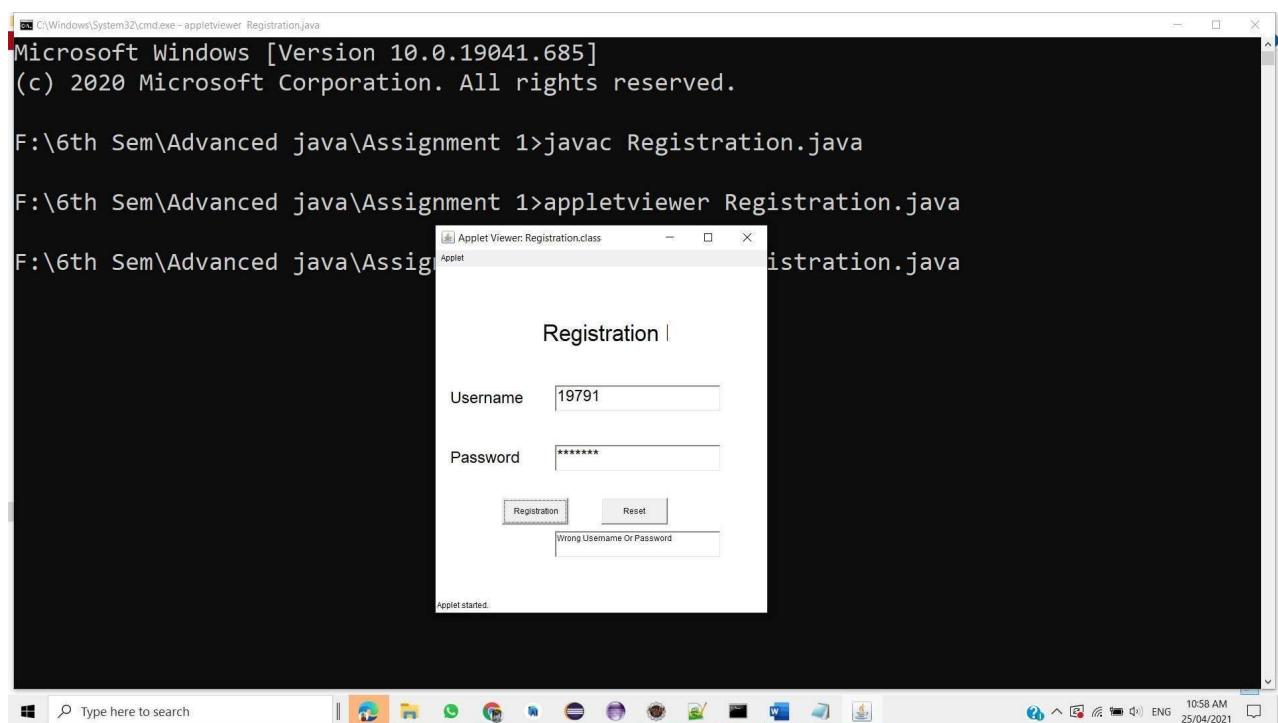
```
    tenn.setFont(new Font("Lucida",Font.PLAIN,24));
    read.setFont(new
Font("Lucida",Font.PLAIN,24));
//adding elements

        f1.add(name);
f1.add(tname);           f1.add(email);
        f1.add(temail);
f1.add(addr);           f1.add(taddr);
        f1.add(gender);
f1.add(male);
f1.add(female);         f1.add(Dept);
        f1.add(department);
f1.add(Hobbies);        f1.add(crick);
        f1.add(footb);
f1.add(tenn);           f1.add(read);
        }
else
{
    er.setText("Wrong Username Or
Password");
}
}
else if(e.getSource()==reset)
{
    tusername.setText("");
    tpassword.setText("");
}
}
```

```
    }
}
/*
<APPLET CODE= Registration.class WIDTH=500 HEIGHT=500>
</APPLET>
*/
```

## OUTPUT:





- 

## **Program 3: Java Program to Design Calculator**

**Using AWT Controls with ActionListener**

**CODE:**

```
import java.applet.Applet; import  
java.awt.*; import  
java.awt.event.ActionEvent; import  
java.awt.event.ActionListener; import  
java.util.*;  
  
public class Calculator extends Applet implements ActionListener  
{  
    TextField disp1,disp2,disp3;  
    Button plus,minus,divide,multiply,equalto,clear;  
    String num1,num2,results,Operator;  
    Double n,n2,result;  
    public void  
    init()  
    {  
        setSize(320,350);  
        disp1 = new TextField("0"); disp2
```

```
= new TextField("0"); disp3 = new  
TextField("Result here"); plus =  
new Button("+");  
  
minus = new Button("-"); divide = new  
Button("/"); multiply = new Button("*");  
  
equalto = new Button("="); clear = new  
Button("clear"); setLayout(null);  
  
disp1.setFont(new Font("Lucida",Font.PLAIN,20));  
disp2.setFont(new Font("Lucida",Font.PLAIN,20));  
disp3.setFont(new Font("Lucida",Font.PLAIN,20));  
  
disp1.setBounds(5,5,300,50);  
disp2.setBounds(5,55,300,50);  
disp3.setBounds(5,110,300,50);  
  
plus.setBounds(10,190,70,70);  
minus.setBounds(90,190,70,70);  
divide.setBounds(10,270,70,70);  
multiply.setBounds(90,270,70,70);  
  
equalto.setBounds(190,180,70,80);  
  
clear.setBounds(190,270,70,80); add(disp1); add(disp2);  
add(disp3); add(plus); add(minus);
```

```
add(divide);      add(multiply);      add(equalto);
    add(clear);      plus.addActionListener(this);
minus.addActionListener(this);
divide.addActionListener(this);
multiply.addActionListener(this);
equalto.addActionListener(this);
clear.addActionListener(this);

}

@Override public void
actionPerformed(ActionEvent e) {
    // TODO Auto-generated method stub
    if(e.getSource()== plus)
    {
        num1 = disp1.getText().toString();
        Operator="+";
        n =
Double.parseDouble(num1);

        num2 = disp2.getText().toString();
        n2 = Double.parseDouble(num2);
        result = n + n2 ;
    }
}
```

```
else if(e.getSource()== minus)

{
    num1 = disp1.getText().toString();
    Operator="-";
    n =
    Double.parseDouble(num1);

    num2 = disp2.getText().toString();
    n2 = Double.parseDouble(num2);
    result = n - n2 ;

}

else if(e.getSource()== divide)

{
    num1 = disp1.getText().toString();
    Operator("/");
    n =
    Double.parseDouble(num1);

    num2 = disp2.getText().toString();
    n2 = Double.parseDouble(num2);
    result = n / n2 ;

}

else if(e.getSource()== multiply)

{
```

```
        num1 = disp1.getText().toString();

        Operator="*";           n =

Double.parseDouble(num1);

        num2 = disp2.getText().toString();

        n2 =Double.parseDouble(num2);

        result = n * n2 ;

    }

    else if(e.getSource()== equalto)

    {

        results = String.valueOf(result);

        disp3.setText(num1+Operator+num2+"="+resul

ts);

    }

    else if(e.getSource()==clear)

    {

        disp1.setText("0");

        disp2.setText("0");

        disp3.setText(" Result here");

    }

}
```

```
}
```

```
/*
```

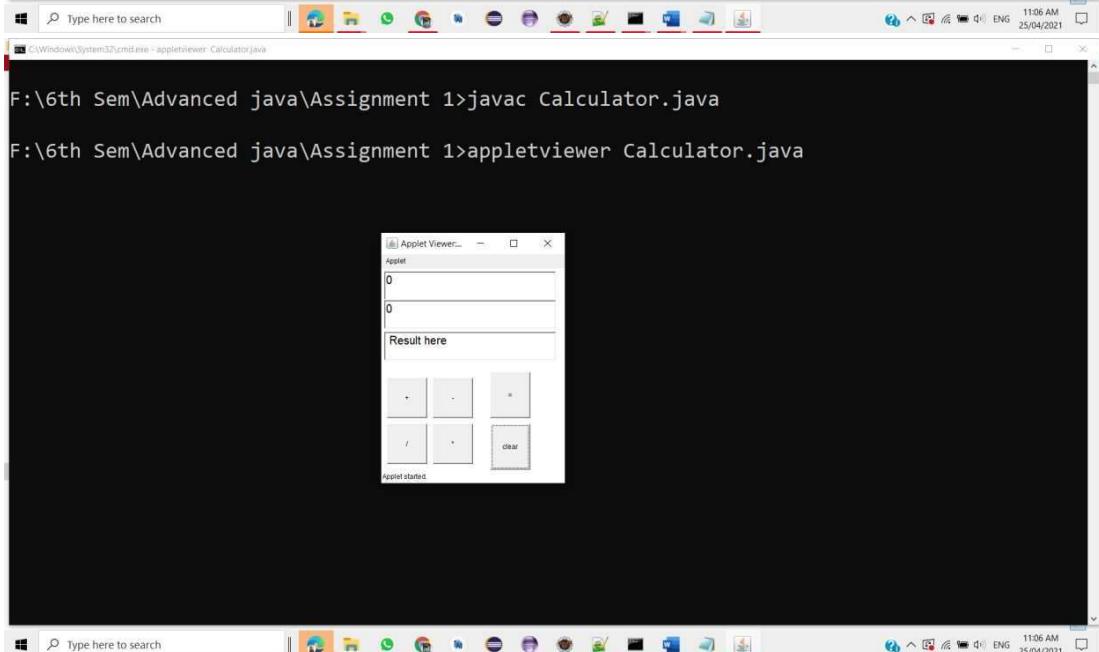
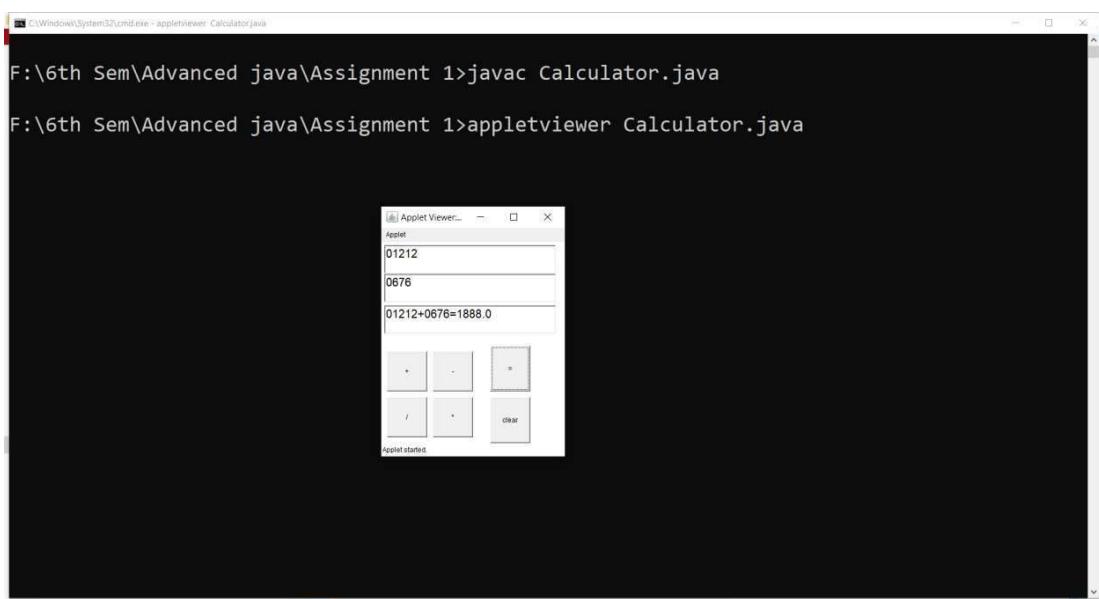
```
<applet code = "Calculator.class" width="320"
```

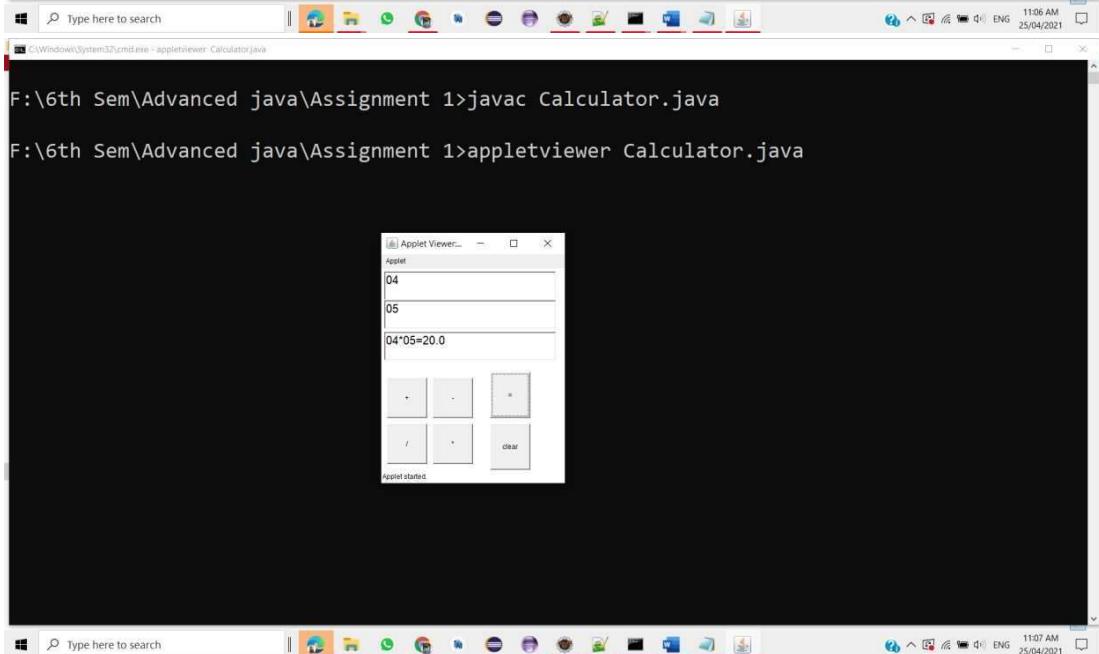
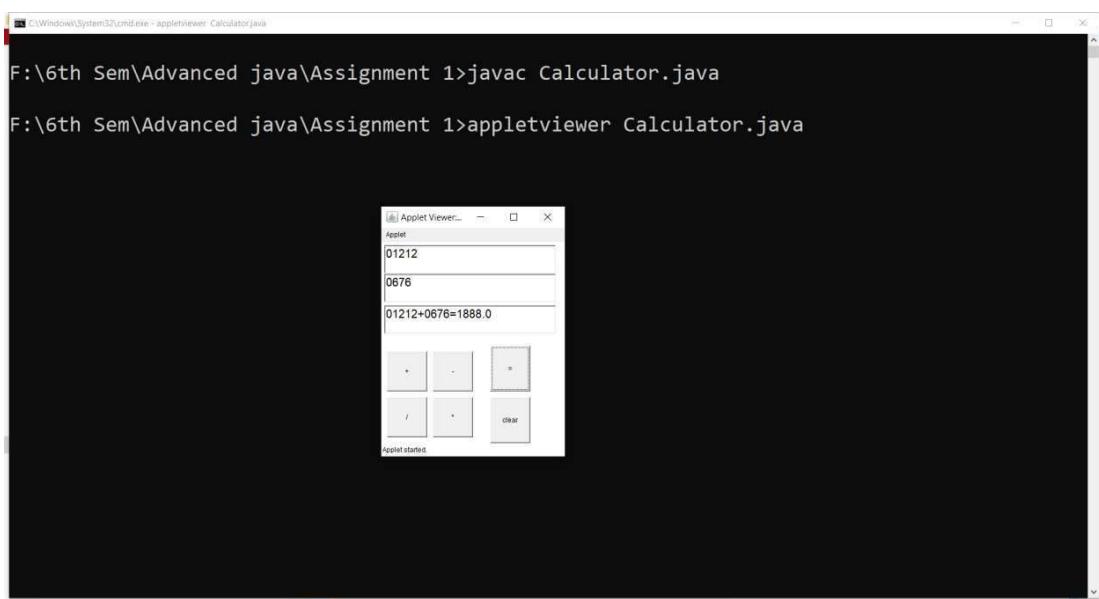
```
height="350">
```

```
</applet>
```

```
*/
```

**OUTPUT:**





- **Program 4:** Write a code on following output  
(Modifying the program to move a ball in response to up/down/left/right buttons, as well as the 4 arrow keys)

CODE:

```
import java.applet.Applet; import
java.awt.*; import
java.awt.event.ActionEvent; import
java.awt.event.ActionListener; import
java.awt.event.KeyEvent; import
java.awt.event.KeyListener;

public class Movetheball extends Applet implements
ActionListener,KeyListener {      int x,y;
Button up,down,left,right;
public void init() {
this.addKeyListener(this);
setSize(400,400);
```

```
setBackground(Color.green); x=150;  
y=100;  
    up = new Button("UP");  
    down= new Button("DOWN");  
    left = new Button("LEFT");  
    right = new Button("RIGHT");  
  
    setLayout(null);  
    up.addKeyListner(this);  
    up.setBounds(150,250,70,25);  
    down.setBounds(150,350,70,25);  
    left.setBounds(100,300,70,25);  
    right.setBounds(200,300,70,25);  
  
    up.addActionListener(this);  
    down.addActionListener(this);  
    left.addActionListener(this);  
    right.addActionListener(this); add(up);  
add(down); add(left);  
    add(right);
```

```
}
```

```
@Override
```

```
public void actionPerformed(ActionEvent e) {
```

```
// TODO Auto-generated method stub
```

```
if(e.getSource()==up)
```

```
{
```

```
y=y-20;
```

```
repaint();
```

```
}
```

```
else if(e.getSource()== down)
```

```
{
```

```
y=y+20;
```

```
repaint();
```

```
}
```

```
else if(e.getSource()==left)
```

```
{  
    x=x-20;  
    repaint();  
}  
  
else if(e.getSource()==right)  
{  
    x=x+20;  
    repaint();  
}  
  
}  
  
@Override public void  
keyTyped(KeyEvent e) {  
    // TODO Auto-generated method stub  
}
```

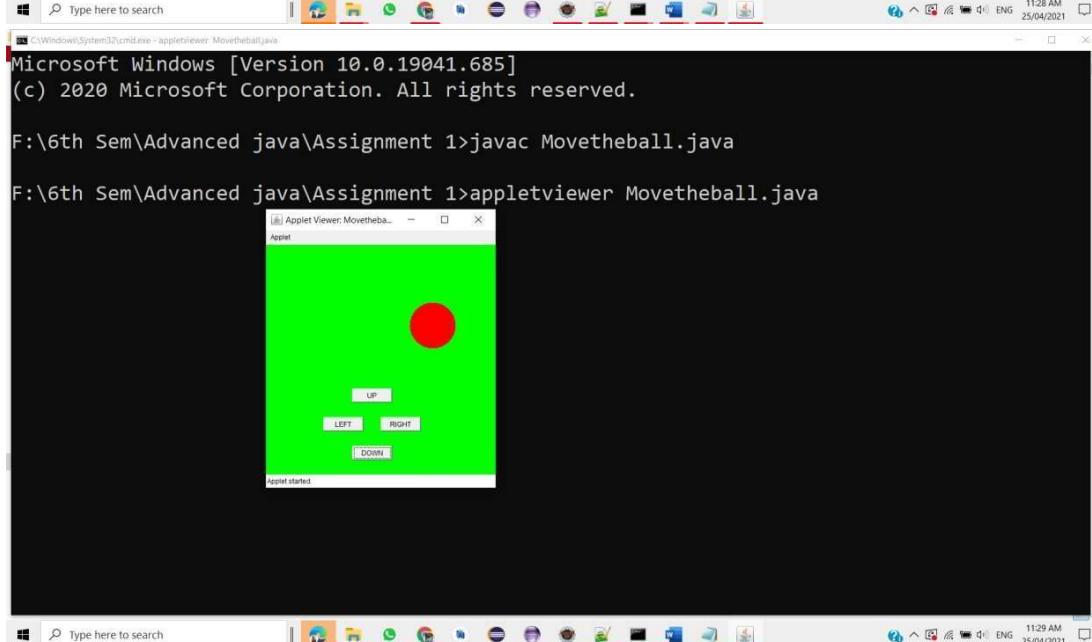
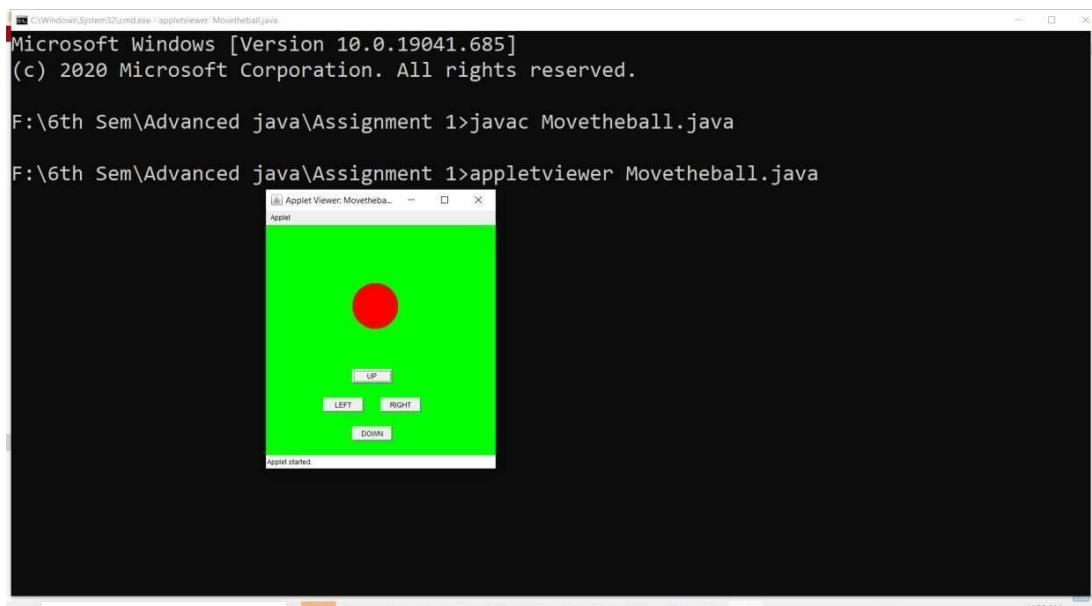
```
@Override  
public void keyPressed(KeyEvent e) {  
  
    int KeyCode = e.getKeyCode();  
    switch(KeyCode)  
    {  
        case KeyEvent.VK_UP:  
            y=y-20;  
            repaint();           break;  
        case KeyEvent.VK_DOWN:  
            y=y+20;  
            repaint();  
            break;  
        case KeyEvent.VK_LEFT:  
            x=x-20;  
            repaint();  
            break;      case  
        KeyEvent.VK_RIGHT:
```

```
x=x+20;  
repaint();  
break;  
}  
}  
  
@Override  
public void keyReleased(KeyEvent e) {  
    // TODO Auto-generated method stub  
  
}  
public void paint(Graphics g)  
{  
    g.setColor(Color.red);  
    g.fillOval(x, y, 80, 80);  
}  
}  
/*  
<applet code = "Movetheball.class" width="400" height="400">
```

```
</applet>
```

```
*/
```

## OUTPUT:



- **Program 5:** Write a code on following output(To click on the button change the colour of the ball )

### CODE:

```
import java.applet.Applet; import  
java.awt.Button; import  
java.awt.Color; import  
java.awt.Graphics; import  
java.awt.event.ActionEvent; import  
java.awt.event.ActionListener;  
  
public class ChangeColor extends Applet implements  
ActionListener {  
  
    Button change_color;  
  
    int i=1;    public void  
init()  
{  
    setSize(400,400);    setBackground(Color.BLACK);
```

```
change_color = new Button("CHANGE COLOR");
setLayout(null);
change_color.setBounds(150,330,120,50);
change_color.addActionListener(this);
add(change_color);
}

public void paint(Graphics g)
{
if(i==1)
{
    g.setColor(Color.WHITE);
}
else if(i==2)
{
    g.setColor(Color.RED);
}
else if(i==3)
{
    g.setColor(Color.GREEN);
}
else if(i==4)
```

```
{  
    g.setColor(Color.ORANGE);  
}  
else if(i==5) {  
    g.setColor(Color.PINK);  
    i=1;  
}  
g.fillOval(100, 100, 200,200);  
}  
  
@Override  
public void actionPerformed(ActionEvent e) {  
    if(e.getSource()==change_color)  
    {  
        i=i+1;  
        repaint();  
    }  
}  
}  
/*  
<applet code = "ChangeColor.class" width="400" height="400">  
</applet>
```

```
*/
```

## OUTPUT:

