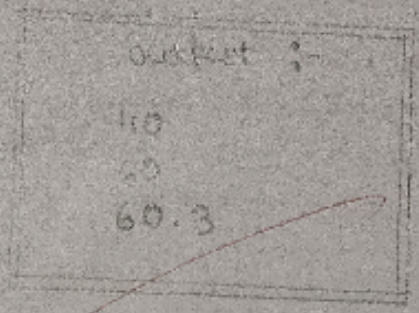

output :-
10
20
60.3

Date 31-05-2013

Expt. No. 02

Page No. 02

2> programe to perform mathmatical operation create a class called addsub with method to add and substract create another class called multdiv that extents from addsub class to be ose the member data of the super class. multdiv should have method to multiply devied a main function.

```
class addsub
{
  int a, b;
  addsub ( int x, int y)
  {
    a = x;
    b = y;
  }
    int add()
  {
    return(a+b);
  }
    int sub()
  {
    return (a-b);
  }
class multdiv extends addsub
  {
    multdiv (int x, int y)
    {
      super(x,y);
    }
```

Teacher's Signature :

Expt. No. ..... Date .....

Page No. 03

```
int mul()
{
 return (a*b);
}
int div()
{
 return (a/b))
 }
}
Class mathfunction
{
 public static void main(String args[])
{
 muldiv m = new muldiv(20,8);
 int a, s, p, d;
 a= m. add();
 s = m. sub();
 p = m. mul();
 d = m. div();
System.out.println(" mathmatical function");
System.out. println(" Addition = "+a);
System.out. println(" subtraction = "+s);
System. out. print ln(" multipulecation = "+p);
System. out .println(" Division = "+d);
}
}
```

Teacher's Signature :

output :-

Mathematical Function :- a=40 b=8

addition =48

Subtraction = 32

multiplication = 320

division = 5

3) program with class variable that is available for all instance of a class use static variable declaration. observe the change that occer in the objects member variable value

```
class variabledemo
{
    int a=0;
    static int count=0;
    public void increment()
    {
        a++;  count++;
    System.out.println("variable a:"+a);
    System.out.println("static variable count:"
                        + count);
    }
    public static void main (String args[])
    {
        variabledemo v1= new variabledemo();
        variabledemo v2= new variabledemo();

        v1.increment();
        v2.increment();
    }
}
```

Teacher's Signature :

output :-

variable : 1

static variable count : 1

variable : 2

static variable count : 2

Expt. No. 04 Date 07-06-2023

Page No. 05

4) programe to create a Student class with following attributes; Enter rollno, name, marks, total of the three marks must be calculated only when the student pass in all three subject the pass marks for each subject is 50. if a candidate fails in any one of the subject the total marks must be declared as zero using condition and display.

```
import java.io.*;
class student
{
    int rollno;
    String name;
    int s1, s2, s3;
    int total;
    String result;

public void getDetails() throws IOException
{
BufferedReader br = new BufferedReader
(new InputStreamReader (System.in));
System.out.println("Enter RollNo");
rollno = Integer.parseInt (br.readline());
System.out.println("Enter name");
name = br.readLine()
System.out.println("Enter 3 subject marks");
```

Teacher's Signature

Date .....

Expt. No. .....

Page No. 06

```
    s1 = Integer.parseInt(br.readLine());
    s2 = Integer.parseInt(br.readLine());
    s3 = Integer.parseInt(br.readLine());
}
public void calculatMarks()
{
  if(s1>=50 && s2>=50 && s3>=50)
  {
    total = s1+s2+s3;
    result = "PASS";
  }
  else
  {
    total = 0;
    result = "FAIL";
  }
}
public void displayResult()
{
  System.out.println("details of student");
  System.out.println("name:"+name);
  System.out.println("RollNo:"+rollno);
  System.out.println("subject of 1 marks:"+s1);
  System.out.println("subject of 2 marks:"+s2);
  System.out.println("subject of 3 marks:"+s3);
  System.out.println("Result:"+result);
}
}
```

Teacher's Signature : _____

```
class StudentDemo
{
public static void main (String args[])
                throws IOException.
{
int nostud;
Student S[];
BufferedReader br = new BufferedReader
    (new InputStreamReader (System.in));
System.out.println ("Enter How many student:");
nostud = Integer.parseInt(br.readLine());
S = new Student [nostud];
for (int i=0 ; i<nostud ; i++)
{
S[i] = new student();
System.out.println ("Enter student "+(i+1)+" details
                    ");
S[i].getDetails();
}
for (int i=0; i<nostud ; i++)
{
  S[i].calculatemarks();
}
for (int i=0 ; i<nostud ; i++)
{
    S[i].displayResult();
}
}
}
```

Teacher's Signature :

output :-

```
Enter How many students :
2
Enter student 1 Details :
Enter Rool no
1
Enter Name
Santosh
Enter 3 subject marks :
70
50
80
Enter student 2 Details :
Enter Rool no
2
Enter Name
Sachin
Enter 3 subject marks :
70
60
80
Details of students :-
Name          :- Santosh
Subject 1 marks :- 70
Subject 2 marks :- 50
Subject 3 marks :- 80
Result        :- PASS
```

Name :- Sachin

Subject 1 marks :- 50

Subject 2 marks :- 70

Subject 3 marks :- 90

Result :- PASS

Expt. No. 05 Date 07-06-2023

Page No. 08

5> In a college First year class are having the following attributes name of the class (BCA, BSc, Bcom) name of the staff no of the student in a class, array of student in the class Define a class first year with above attributes and define a suitable constructor Also write a method called best student[] which process a first year object and return the student with the highest mark.

```
import java.io.*;
class student
{
    String name;
    String regno;
    int score;
    String course;
    String staff;
    int year;

void readdata() throws IOException
{
    BufferedReader br = new BufferedReader
        (new InputStreamReader(System.in));
    System.out.println("Enter student Details");
    System.out.println("Enter student name, Regno,
            course[BCA,Bcom,BSc], Total score");
    name = br.readLine();
```

Teacher's Signature :

```
        regno = br.readLine();
        course = br.readLine();
        score = Integer.parseInt(br.readLine());
    }
}
Public class BestStudent
{
    static int maxscore;
    static string beststudentname;
    static string course;
    static void beststudent(student[] stud)
    {
        for(int i=0; i<stud.length; i++)
        if(stud[i].score > maxscore)
        {
            maxscore = stud[i].score;
            beststudentname = stud[i].name;
            course = stud[i].course;
        }
}

    public static void main(string args[])
    (new InputStreamReader(System.in));

    System.out.println("Enter number of student:");
    int n = Integer.parseInt(br.readline));
    student stud[] = new student[n];
    for(int i=0; i<stud.length; i++)
    {
```

```
        stud[i] = new student();
        stud[i].readdata();
    }
    bestStudent(stud);

System.out.println("Details of Best student:");
System.out.println("Name:"+beststudentname);
System.out.println("Course:"+course);
System.out.println("Score:"+maxscore);

    }
}
```

Output :-

Enter number of student : 3
Enter student Details :-
Enter student name, regno, course [BCA, BSc, BCom]
Total score

Santosh
01
BCA
500

Enter student Details :-
Enter student name, regno, course [BCA, BSc, Bcom]
Total score :

Sachin
13
BCA
512

Enter student Details :-
Enter student name, regno, course [BCA, BSc, Bcom]
Total score :

Sunil
44
BCA
490

Detail of Best student :-

name : Sachin

course : BCA

Score :- 512

Date 08-05-2023

Expt. No. 06 Page No. 11

6) Programe to define a class called employee with the name and date of appointment create 10 employee object as an array and sort this as per their date of appointment i.e print them as per their seniority.

```
import java.io.*;
import java.util.Date;

class employee
{
    String name;
    Date appdate;
  public employee (String n, Date apdt)
  {
    name = n;
    appdate = apdt;
  }
    public void display()
    {
    System.out.println("Employee name :" + name+"
          Appointment date :" + appdate.getDate()+"/"
          +appdate.getMonth()+1+"/"+appdate.getYe
          ar());
    }
  }
    class EmployeeDemo2
  {
```

Teacher's Signature :

```
public static void main (String args[])
{
employee emp[] = new employee[6];
emp[0] = new employee ("Santosh", new Date(1999,05,21));
emp[1] = new employee("Sachin", new Date(2000,01,12));
emp[2] = new employee("Naveen", new Date(2005,02,19));
emp[3] = new employee("Harish", new Date(2004,04,25));
emp[4] = new employee("Chetan", new Date(2018,06,12));

System.out.println("List of employee");
for(int i=0; i<emp.length; i++)
 emp[i].display();
for(int i=0; i<emp.length; i++)
{
  for(int j=0; j<emp.length; j++)
  {
   if(emp[j].appdate.after(emp[i].appdate))
   {
     employee t = emp[i];
     emp[i] = emp[j];
     emp[j] = t;
   }
  }
}
System.out.println("List of employee seniority
                    wise");
for(int i=0; i<emp.length; i++)
 emp[i].display();
}
```

Teacher's Signature :

Output

List of employees

Employee name :- Santosh Appointment Date : 22/05/1999

Employee name :- Sahin Appointment Date : 12/01/2000

Employee name :- naveen Appointment Date : 19/02/2005

Employee name :- harsh Appointment Date : 25/04/2009

Employee name :- chetan Appointment Date : 12/06/2018

List of employee seniority wise :-

Employee name :- Santosh Appointment Date : 22/05/1999

Employee name :- Sachin Appointment Date : 12/01/2000

Employee name :- naveen Appointment Date : 19/02/2005

Employee name :- harsh Appointment Date : 25/04/2009

Employee name :- chetan Appointment Date : 12/06/2018

PART - B

1) program to catch negative arraysize exception this exception is caused when the array is initialized to negative value.

```
public class negativesize
{
public static void main (String args[])
{
 try
 {
  int[] array = new int[-5];
 }
catch ( negativeArraySizeException e)
 {
  System.out.println("Exception:" +e);
 }
}
}
```

Teacher's Signature :

Output :

Exception in thread "main" java.lang.NegativeArraySizeException [-5]

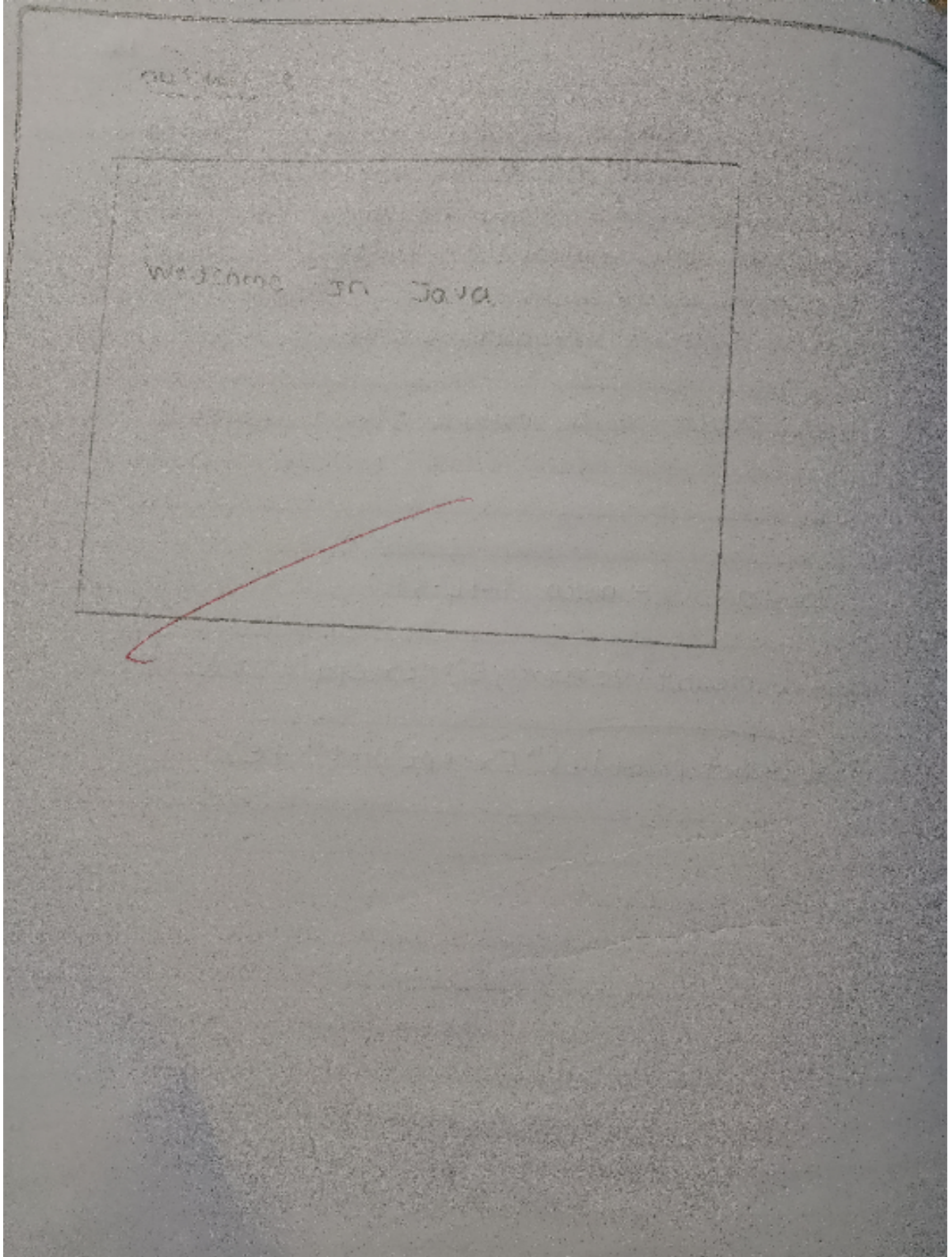
Date 14-6-23

Expt. No. 2 Page No. 14

>> Program which create and display message on the window

```
import java.awt.*;
import java.applet.Applet;
public class app extends Applet
{
  public void paint(Graphics g)
{
  setBackground(color.blue);
  setforeground(color.yellow);
  g.setFont(new Font("Combria", Font.BOLD, 30));
  g.drawString("Welcome In Java", 100, 100);
}
}

/* <applet code="app.class" width=600 hight=
    600>
  </applet>
*/
```

Teacher's Signature :



Date 21-6-23

Expt. No. 3 Page No. 15

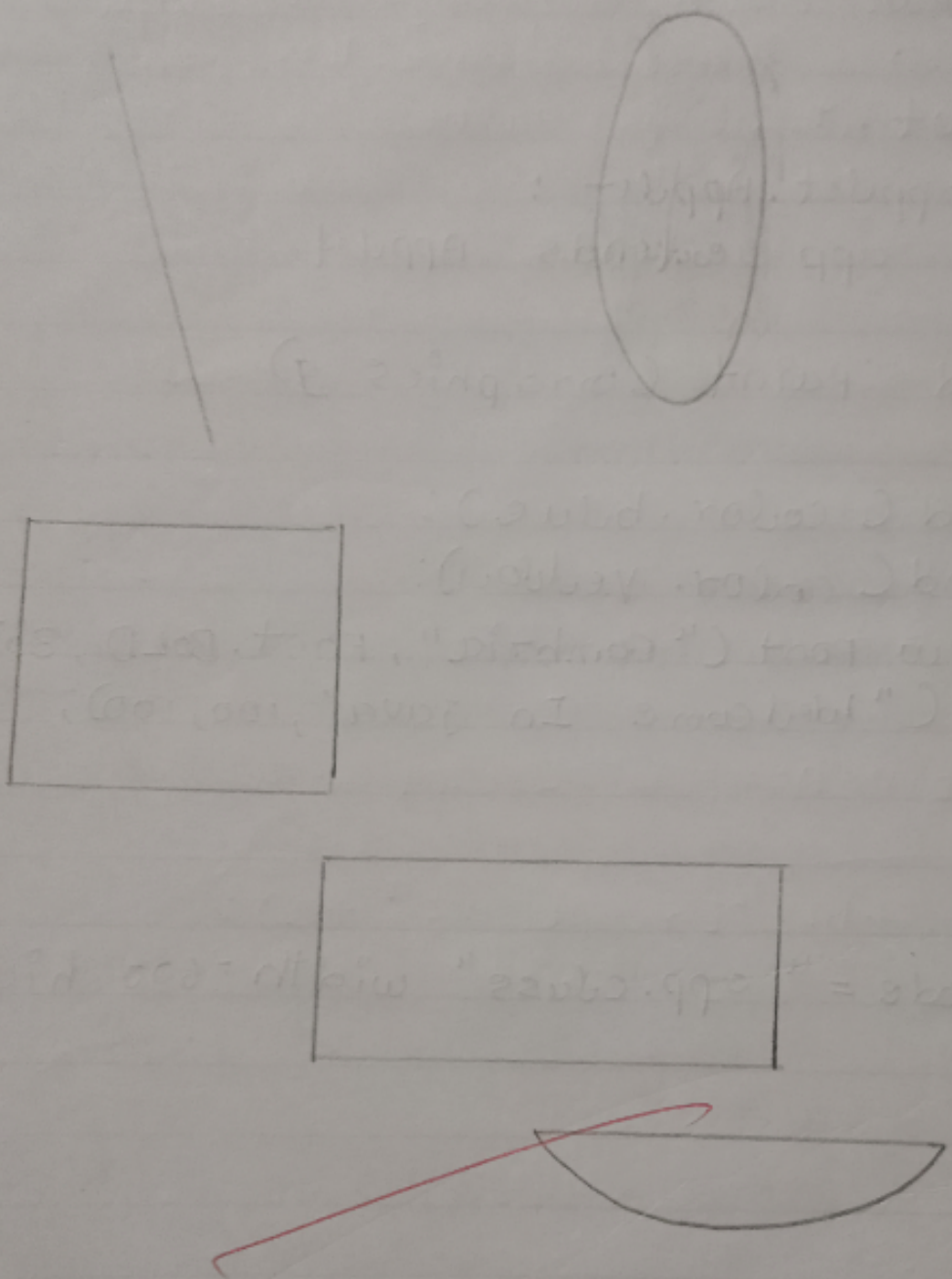
3) program to draw reversal shapes in the created window.

```
import java.awt.*;
import java.applet.Applet;

public class shape extends Applet
{
  public void paint (Graphics g)
{
  g.setFont (new Font ("combria", Font.BOLD, 15));
  g.drawString ("Different shapes", 15, 15);
  g.drawLine (10, 20, 50, 60);
  g.drawRect (10, 70, 40, 40);
  g.setColor (Color.RED);
  g.fillOval (60, 20, 30, 90);
  g.fillArc (60, 135, 80, 40, 186, 180);
  g.fillRoundRect (20, 20, 60, 30, 5, 5);
  }
}

/* <applet code = "shape.class" width=400 height
                =400>

   </applet>
*/
```

Teacher's Signature :

output :

Different shapes



Date 21-6-23

Expt. No. 4 Page No. 16

x) programe to which create a frame with two buttons father & mother. when we click the father button the name of the father, his age & designation must appear when we click mother, similar details of mother also appears.

```
import java.awt.*;
import java.event.*;
import javax.swing.*;

public class ButtonDemo extends JFrame
{
  JButton Father, mother, close;
  JLabel jb1, jb11, jb12;
  ButtonDemo()
  {
  Father = new JButton ("Father");
  mother = new JButton ("mother");
  close = new JButton ("close");
  jb1 = new JLabel ("");
  jb11 = new JLabel ("");
  jb12 = new JLabel ("");
  setLayout (new GridLayout (4,1));
  setSize (400,200);
  add (Father);
  add (mother);
  add (close);
```

```
add(lb1);
add(lb11);
add(lb12);
setVisible(true);
ButtonHandler bh = new ButtonHandler();
Father.addActionListener(bh);
Mother.addActionListener(bh);
}
Class ButtonHandler implements ActionListener
{
  Public void actionperformed(ActionEvent ae)
{
 if(ae.getSource() == Father)
{
  lb1.setText("Father is Vdaya");
  lb11.setText("Father age is 50");
  lb12.setText("Designation : worker");
}
 if(ae.getsource() == Mother)
{
  lb1.setText("mother is Radha");
  lb11.setText("mother age is 45");
  lb12.setText("Designation : House wife");
}

if(ae.getSource() == Close)
{
  System exit(0);
}
```

Teacher's Signature :

```
    }
  }
public static void main (String args[])
{
  new ButtonDemo();
  }
}
```

Teacher's Signature :

output :

Father	mother
close	

Father	mother
close	
father age is 50	Father is Udaya Designation : worker

Father	mother
close	
mother age is 45	mother is Radha Designation : House wife

Expt. No. 5 Date 28-6-23

Page No. 19

5) program to move only one shape according to the arrow key pressed

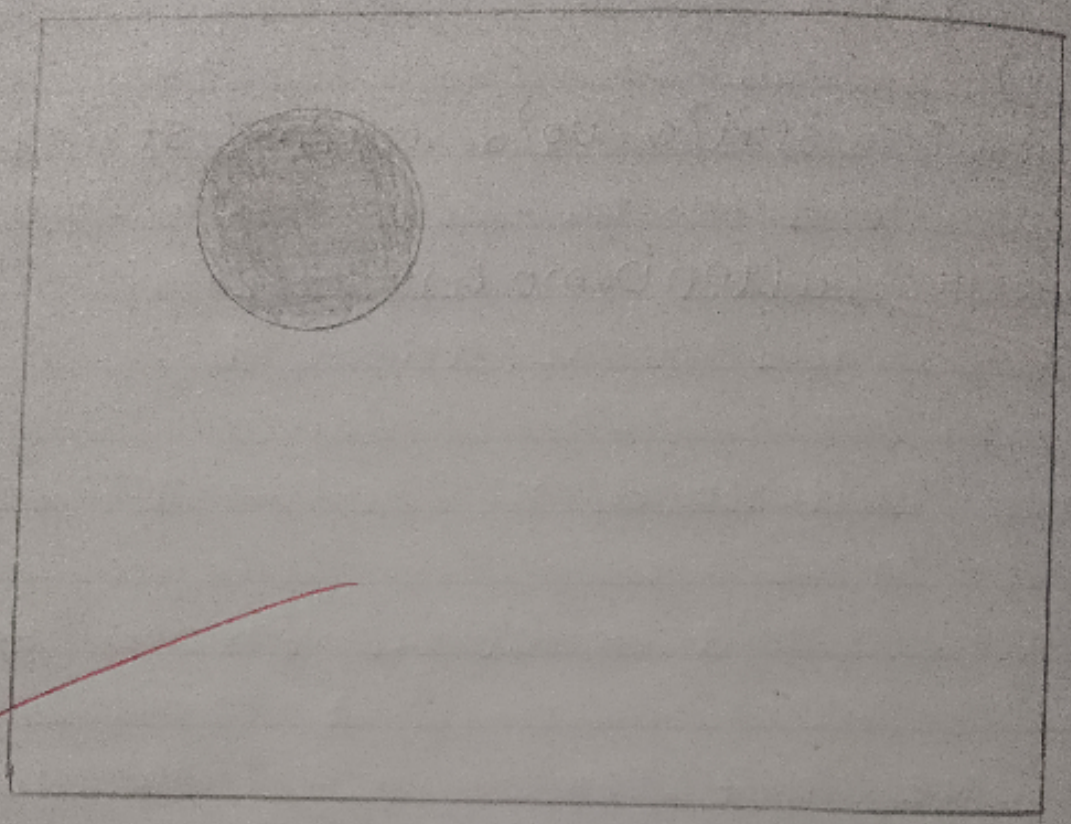
```
import java.awt.*;
import java.applet.Applet;
import java.awt.event.*;

public class movingshape extends Applet
{
  int x=50, y=50;
  double width, height;

  public void start()
  {
    width =450;
    heigh = 250;
system.out.println("w:"+width+"h:"+theight);
this.addkeyListener(new keyAdapter()
  {
  public void keypressed(key Event ke)
  {
    switch(ke.get keyCode())
    {
      case keyEvent.VK_LEFT:
      if(x>0)
      x-=10;
      break;
    case keyEvent.VK_RIGHT:
```

Teacher's Signature :

```
if(x < width)
x+=10;
break;

case keyEvent.VK_DOWN:
if (y<hiegt)
y+ =10;
break;

case keyEvent.VK_UP:
if (y>0)
y-=10;
break;
}
repaint();
}
});
}
Public void paint (Graphics g)
{
    g.fillOval (x,y,50,50);
}
}

1* <applet code = " MovingShape : class " width=400
    height=400)
  </applet>
*/
```

Teacher's Signature :

Output :



Expt. No. 6 Date 28.6.23

Page No. 21

6) Program to create a window when we press M or m the window displays Good morning, the A or a The window displays Good Afternon the E ove displays Good evening, N or n the window display Good night.

```
import java.awt.*;
import java.applet.Applet;
Import Java.awt.event.*;

Public class wishingApplet extends Applet
{
   string msg = " ";
   Pubic void start()
{
   this.addkeyListener(new keyAdapter()
{
   Public void keypressed(KeyEvent ke)
{
   switch(ke.getkeychar())
{
   Case 'm':
   Case 'M': msg = " Good Moring";
   break;

   Case 'a':
   Case 'A': msg = "Good Afternoon";
   break;
```

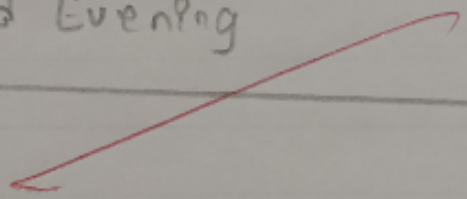
Teacher's Signature :

```
case 'e' :
case 'E' : msg = " Good Evening ";
break;

case 'n' :
case 'N' : msg = " Good Night ";
break;

default : msg = " ";
}
repaint();
}
}
};
}
public void paint (Graphics g)
{
g.setFont (new Font ("Arial", Font.BOLD, 20));
g.drawString("Enter Following keys (m/M, a/A,
e/E, n/N)", 10, 80);
g.drawString (msg, 50, 200);
}
}

/* <applet code = "wishingApplet.class" width
= 200 hight = 200>
</applet>
*/
```

Teacher's Signature : .....

Output :

```
Enter Following Keys (m|M, a|A, e|E, n|N)
    N
Good night
    a
Good Afternoon
    M
Good Morning
    e
Good Evening
```



Date 5.7.23

Expt. No. 4 Page No. 23

7) Demonstrate the various mouse handling event using suitable example.

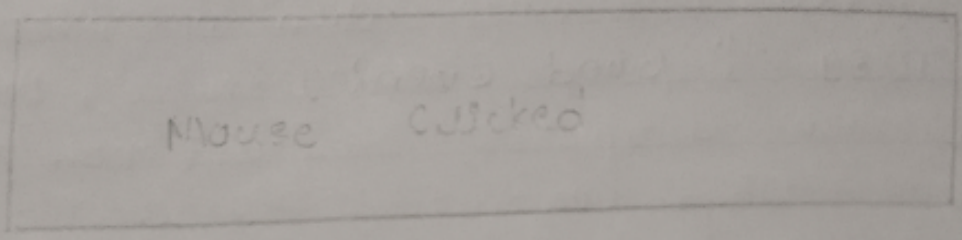
```
import java.awt.*;
import java.event.*;

public class mouseListenerExample extends Fr
ame implements mouseListener
{
    Label l;
mouseListenerExample()
{
    addmouseListener(this);
    l = new Label();
    l.setBounds(90, 50, 100, 20);
    add(l);
    setSize(300, 300);
    setLayout(null);
    setVisible(true);
}
public void mouseClicked(MouseEvent e)
{
    l.setText("mouse clicked");
}
public void mouseEntered(MouseEvent e)
{
    l.setText("mouse entered");
}
```

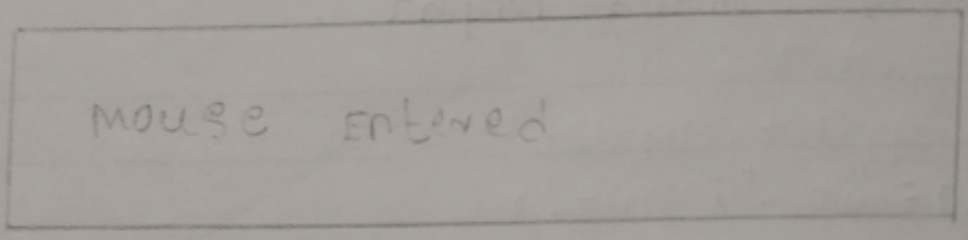
Teacher's Signature :

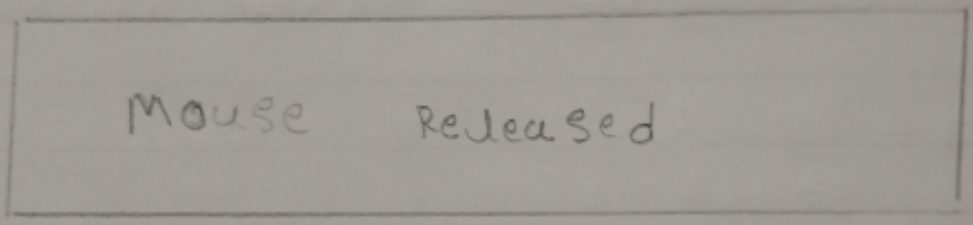
```
public void mouseExited (MouseEvent e)
{
 d.setText ("mouse Exited");
}
public void mousepressed (MouseEvent e)
{
 d.setText ("Mouse pressed");
}
public void mouseReleased (MouseEvent e)
{
 d.setText ("mouse Released");
}
public static void main (String args[])
{
 new me.MouseListenerExample();
 }
}
```

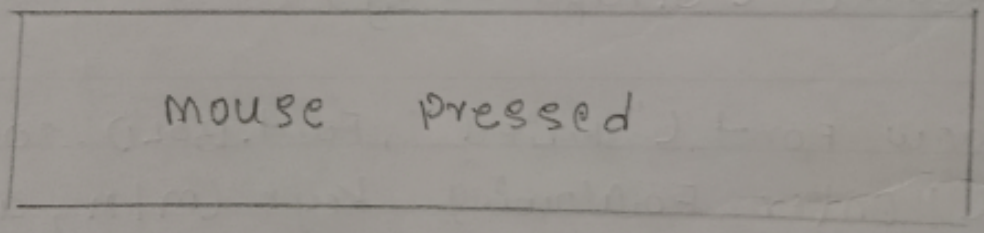
Teacher's Signature : .....

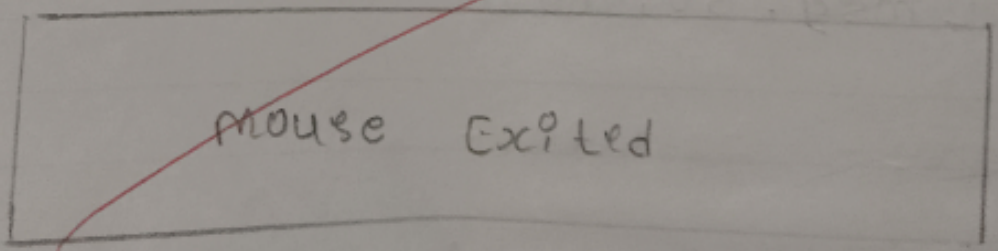
output :


Mouse Clicked


Mouse Entered


Mouse Released


Mouse Pressed


Mouse Exited

Date 19-4-23

Expt. No. 8

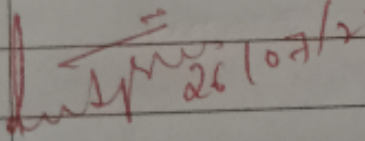
Page No. 25

8) Program to create menu bar and pull-down menus.

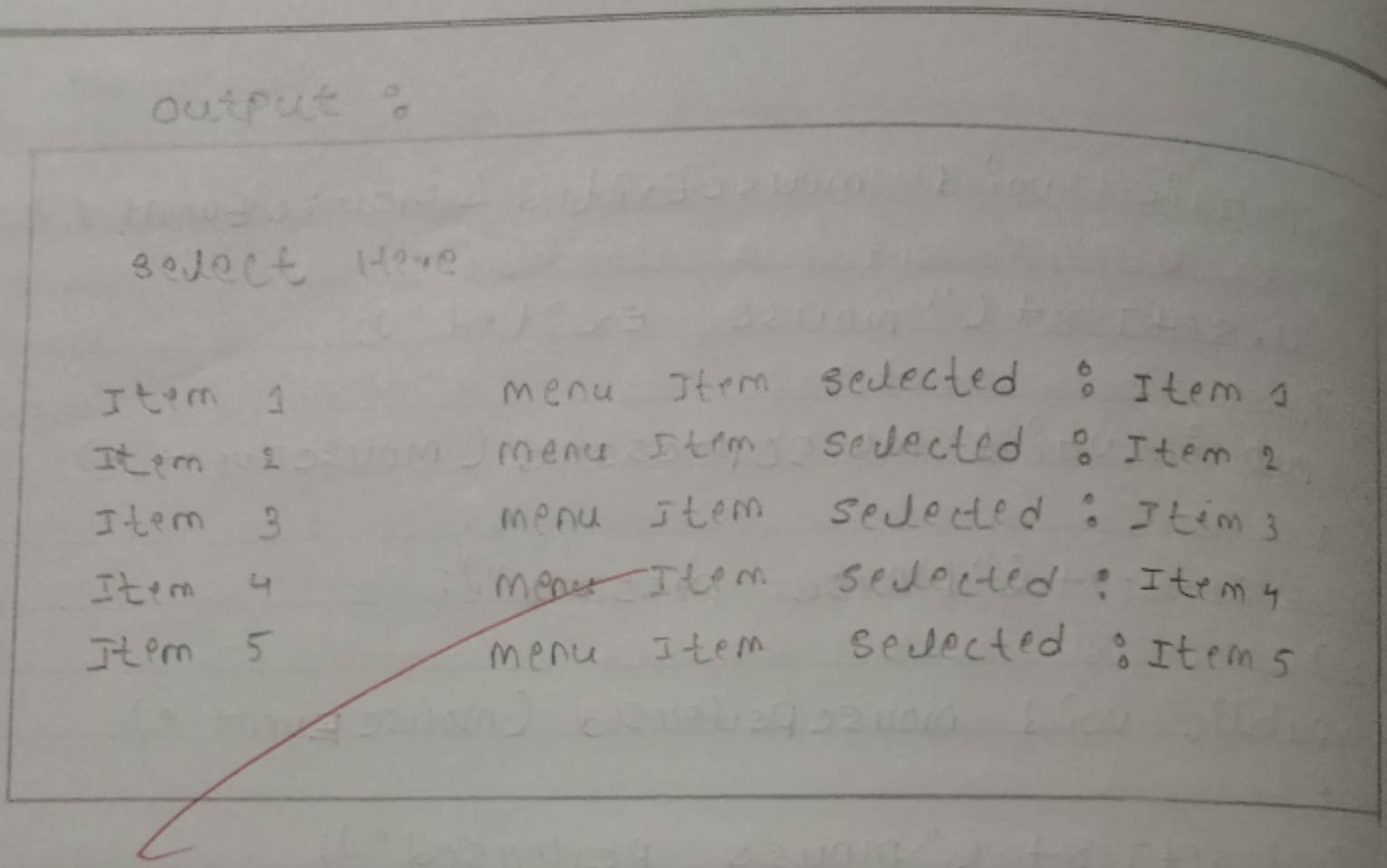
```
import javax.swing.*;
import java.awt.*;
import java.awt.event.*;

class MenuDemo implement ActionListener
{
  static JLabel text;
  public static void main (String args[])
{
  JFrame frame = new JFrame ("menu");
  frame.setSize (500, 500);
  frame.setDefaultCloseOperation (JFrame.EXIT
                  _ON_CLOSE);
  frame.setLayout (new FlowLayout ());
  MenuDemo obj = new MenuDemo ();
  JMenu menu = new JMenu ("Select Here");
  JMenuItem item = new JMenuItem [5];

  for (int i=0; i<5; i++)
  {
    item[i] = new JMenuItem ("Item" + (i+1));
    item[i].addActionListener (obj);
    menu.add (item[i]);
  }
```

Teacher's Signature :

```
JmenuBar mb = new JmenuBar();
mb.add(menu);
frame.setMenuBar(mb);
text = new JLabel();
frame.add(text);
frame.setVisible(true);
}
Public void actionperformed(ActionEvent e)
{
  text.setText("menu Item selected:"+e.
  getAction command());
}
}
```



output :


select Here
Item 1
Item 2
Item 3
Item 4
Item 5
menu Item selected : Item 1
menu Item selected : Item 2
menu Item selected : Item 3
menu Item selected : Item 4
menu Item selected : Item 5