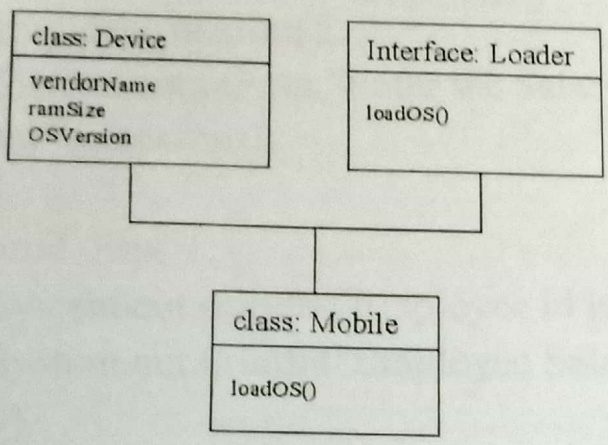
JAVA PRACTICAL QUESTIONS(22412)CO4I-B

1. WRITE A PROGRAM TO MAKE USE OF TERNARY OPERTOR.
2. Write a program to display pyramids of stars.

```
1 1 1 1 1
2 2 2 2
3 3 3
4 4
5
```

3. Develop a program to show the use of implicit type casting.
4. WAP to insert different elements in the vector and display them.
5. Write different ways to create objects of the any primitive datatypes.
6. Demostrate the use of overriding method display() using super and sub classes.
7.



8. Write a program to create package Maths_s having two classes addition and subtraction.Use suitable methods in each class to perform basic operation.
9. Write a program to display two threads even and odd numbers respectively with delay of 500ms.after each number.
10. Create three threads and run these threads according to set priority.
11. Develop a program to accept a password from the user and throw "Authentication Faliure" exception if password is incorrect.
12. Design a applet to pass username and password as a parameters to check password contains more than 8 charecters.
13. WAP to design a applet showing three cocentric circles filled with three different colors.
14. WAP to copy the content of one file to another.
15. Write a program to define class Employee with members as id and salary. Accept data for three employees and display details of employees

ANSWERS:-

16. Write a program to define class Employee with members as id and salary. Accept data for three employees and display details of employees

Ans:-

```
import java.util.*;
class emp
{
int empid,sal;
Scanner sc=new Scanner(System.in);
void getdata()
{
System.out.println("Enter the id of the emp :");
empid=sc.nextInt();
System.out.println("Enter the Salary of the emp :");
sal=sc.nextInt();
}
void disp(){
System.out.println("Employee id is :"+empid);
System.out.println("Employee Salary is :"+sal);
}}
class empdemo
{
public static void main(String args[])
{
emp[] e1;
e1=new emp[3];
for(int i=0;i<3;i++)    {
        e1[i]=new emp();
        e1[i].getdata();    }
 System.out.println("\n Records");
 for(int i=0;i<3;i++)
 {
         e1[i].disp();
 }}}
```

---

15. Write a program to find largest between two numbers using '?:' operator.

Ans:-

```
import java.util.*;
class Ternary {
  public static void main(String[] args) {

    int num1,num2;

    int result;
    Scanner sc=new Scanner(System.in);
        System.out.println("Enter Number 1 and Number 2 :");
        num1=sc.nextInt();
        num2=sc.nextInt();
     result = (num1>num2) ? num1 : num2;
     System.out.println("Largest :" + result);
   }
}
```

14.WAP to copy the content of one file to another.

Ans:-

```
import java.io.FileReader;
import java.io.FileWriter;
public class filecopy  {
public static void main(String args[]) throws Exception   {
        FileReader frt=new FileReader("file1.txt");
        FileWriter fr=new FileWriter("file2.txt");
        int i;
        while((i=frt.read())!=-1)     {
                fr.write((char)i);      }
        System.out.println("Data is copied from file 1 to file 2");
        frt.close();
        fr.close();
}}
```

3.WAP to design a applet showing three cocentric circles filled with three different colors.

Ans:-
```
import java.applet.*;
import java.awt.*;
public class conc extends Applet
{
public void paint(Graphics g)
{
g.setColor(Color.red);
g.drawOval(50,50,150,150);
g.setColor(Color.blue);
g.drawOval(75,75,100,100);
g.setColor(Color.green);
g.drawOval(100,100,50,50);
}
}
/*<applet code="concs.java" width=500 height=500></applet>*/
```

---

12. Design a applet to pass username and password as a parameters to check password contains more than 8 charecters.*/

```
import java.applet.*;
import java.awt.*;
public class AppletParameter extends Applet {
String user,pass;
int size;
public void init(){
        user   = getParameter("username");
      pass = getParameter("password");
         size = pass.length();}
  public void paint(Graphics g) {
   if(size<=8){
     g.drawString("user" +user, 20, 20);
         g.drawString("pass" +pass, 40, 60);}
         else
                g.drawString("Invalid Password", 80, 100);  }}
```

```
<APPLET CODE="AppletParameter.java" WIDTH="400" HEIGHT="50">
<PARAM NAME="username"    VALUE="Harshala">
<PARAM NAME="password"    VALUE="Patetrxfxtgh">

</APPLET> */
```

---

11 Develop a program to accept a password from the user and throw "Authentication Faliure" exception if password is incorrect.

```
import java.util.*;
class AuthenticationFaliure extends Exception
{
      AuthenticationFaliure(String msg)
      {
            super(msg);
      }}
class Autentdemo  {
      public static void main(String args[]) {
            String pass="harshala";
            Scanner sc=new Scanner(System.in);
            System.out.println("Enter the password :");
            String name=sc.next();

            try
            {
                  if(pass.equals(name))
                        throw new AuthenticationFaliure("valid password");
                  else
                        System.out.println("InValid password");
            }
            catch(AuthenticationFaliure b)
            {
                  System.out.println(b.getMessage());
            }
      }
}
```

QUESTIO... OF TERNARY OP...

8.Create three threads and run these threads according to set priority.

Ans:-

```
class TestMul extends Thread{
    public void run(){
      System.out.println("running thread name
 is:"+Thread.currentThread().getName());
       System.out.println("running thread priority
 is:"+Thread.currentThread().getPriority());

      }
      public static void main(String args[]){
       TestMul m1=new TestMul();
       TestMul m2=new TestMul();
       m1.setPriority(Thread.MIN_PRIORITY);
       m2.setPriority(Thread.MAX_PRIORITY);
       m1.start();
       m2.start();

    }
   }
```

----------**********----------

9.Write a program to display two threads even and odd numbers respectively with delay of 500ms.after each number.

Ans:-

```
class even extends Thread
{
      int i;
  public void run()
  {
      for( i=1;i<=10;i++)
      {
            if(i%2==0)
            {
                  System.out.println("Even Thread i=" +i);
            }
       try
       {
            Thread.sleep(500);
```

```
        }
        catch(Exception e){}
        }
    }
}
class odd extends Thread
{
        public void run()
        {
                int i;
                        for( i=1;i<=10;i++)
                        {
                                if(i%2!=0)
                                {
                                        System.out.println("Odd Thread i="+i);
                                }
                                try
        {
                Thread.sleep(500);
        }
        catch(Exception e){}
                        }
        }
}
class evenoddDemo
{
public static void main( String args[])
{
even e1 = new even();
e1.start();
odd o1=new odd();
o1.start();
}
}
```

****

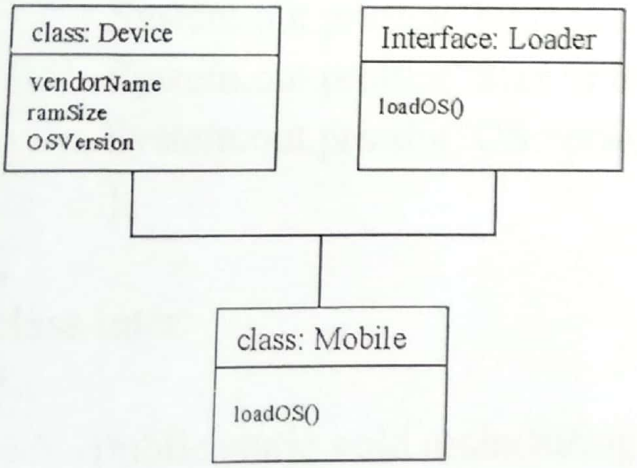
Write a program to create package Maths_s having two classes addition and subtraction.Use suitable methods in each class to perform basic operation.

```
package Math_s;
import java.util.*;
public class addition
{
        Scanner sc=new Scanner(System.in);
        int a,b,c;
        public void accept1()
        {
        System.out.println("Enter the value of a:");
        a=sc.nextInt();
        System.out.println("Enter the value of b:");
        b=sc.nextInt();
        }
        public void display1()
        {
                c=a+b;
                System.out.println("addition is="+c);
        }
}
```

```
package Math_s;
import java.util.*;

public class subtraction
{
      Scanner sc=new Scanner(System.in);
      int a,b,c;
      public void accept()
      {
      System.out.println("Enter the value of a:");
      a=sc.nextInt();
      System.out.println("Enter the value of b:");
      b=sc.nextInt();
      }
       public void display()
       {
```

```
            c=a-b;
            System.out.println("Subtraction is="+c);
        }
}

import Math_s.*;
class demo123
{
 public static void main(String args[])
 {
        addition a=new addition();
        a.accept1();
        a.display1();

    subtraction s=new subtraction();
    s.accept();
    s.display();
}
}
```

7.




```
import java.util.*;
class Device
{
String vendor_name;
int ram_size;
int os_version;
```

...h members as id and salary. Accept data for

```
id put()
{
Scanner sc=new Scanner(System.in);
System.out.println("Enter the Vendor name :");
vendor_name=sc.nextLine();
System.out.println("Enter the ram size of Device :");
ram_size=sc.nextInt();
System.out.println("Enter the OS version of Device ");
os_version=sc.nextInt();
}
}
interface Loader
{
    public void loadOS();
}
class Mobile extends Device implements Loader
{
    public void loadOS()
    {
    System.out.println("Nmae of the Vendor is :"+vendor_name);
    System.out.println("Size of the ram is :"+ram_size);
    System.out.println("OS version of he Device is "+os_version);
    }
}
class inter
{
    public static void main(String args[])
    {
Mobile m=new Mobile();
m.put();
m.loadOS();
    }
}
```

WAP to insert different elements in the vector and display them.

```
import java.util.*;

class prg4
{
public static void main(String args[])
 {
 Vector v=new Vector();
 v.addElement(new Integer(10));
 v.addElement(new Float(10.5f));
 v.addElement(new Character('H'));
 v.addElement(new String("JAVA"));
 System.out.println("Elements to be displayed :"+v);
 }
 }
```

.3..Write a program to display pyramids of stars.

```
1  1  1  1  1
2  2  2  2
3  3  3
4  4
5
```

Ans:-

```
import java.util.*;
class star2
{
public static void main(String args[])
        {
        int a;
        System.out.println("Enter a number");
        Scanner sc=new Scanner(System.in);
        a=sc.nextInt();
```

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

ORAL QUESTIONS

1. Give syntax and example of following math functions.
   i)sqrt () ii)pow ()
2. Enlist access specifiers in Java.
3. the use of static keyword
4. Enlist any 4 keywords used for exception handling in Java
5. Give syntax of <param> tag to pass parameters to an Applet.
6. Give any two methods from File class with their usage.
7. Describe life cycle of thread with suitable diagram.
8. State need of interface with suitable examples.
9. Give usage of following methods :
   i)drawOval()
   ii)getFont()
   iii)drawArc()
   iv)getFamily()
10. Enlist types of stream classes and describe methods for reading and writing data for each type.
11. Describe types of variables in Java with their scope.
12. Write a program to initialize object of a class student using parameterized constructor.
13. Differentiate between Java Application and Java Applet (any 4 points

14. Describe types of Errors and Exceptions in details.

15. Difference between array and vector
16. Describe any four features of Java.
17. Describe Applet life cycle with diagram.
18. Differentiate between String and StringBuffer class (Any 4 Points).