LAB MANUAL
FOR
WEB DEVELOPMENT AND CORE JAVA LAB

PROGRAM 1

WRITE A SIMPLE PROGRAM IN JAVA

```
class manoj
	{
	public static void main(String args[])
	{
		System.out.println("hello ");
		System.out.println("welcome to java world ");
		System.out.println("a very good morning ");
		manoj obj=new manoj();
		obj.add(2,7);
	}
		int result;

		void add(int x,int y)
		{
		result=x+y;
		System.out.println("result is "+result);
		}
	}
```

OUTPUT

```
C:\>CD SUN

C:\Sun>cd appserver

C:\Sun\AppServer>cd jdk

C:\Sun\AppServer\jdk>cd bin

C:\Sun\AppServer\jdk\bin>javac manoj.java

C:\Sun\AppServer\jdk\bin> java manoj
hello
welcome to java world
a very good morning
result is 9

C:\Sun\AppServer\jdk\bin>
```

PROGRAM 2
WRITE A PROGRAM TO FIND LARGEST OF THREE NUMBERS

```
class greater
        {
    public static void main(String args[])
{
            int a=98,b=87,c=99;
            if(a>b)
        {
                        if(a>c)
                          {
                            System.out.println(" a is greater ");
                          }
                       else
                          {
                            System.out.println(" c is greater ");
                          }
                    }
                  else
                    {
                      if(b>c)
                        {
                          System.out.println(" b is greater ");
                        }
                      else
                        {
                          System.out.println(" c is greater ");
                        }
                    }
            }
         }
```

OUTPUT

```
C:\Sun\AppServer\jdk\bin>javac greater.java

C:\Sun\AppServer\jdk\bin>java greater
 c is greater

C:\Sun\AppServer\jdk\bin>
```

PROGRAM 3
WRITE A PROGRAM TO PRINT FIBONACII SERIES USING LOOP

```
class fab
{
	public static void main(String args[])
	{
		int i=1;
		int j=1;
		int k=0;
		System.out.println("fibbonacci series");
		while(i<=10)
		{
		System.out.println(+j);
			j=j+k;
			k=j-k;
			i++;
		}
	}
}
```

OUTPUT

```
C:\Sun\AppServer\jdk\bin>javac fab.java

C:\Sun\AppServer\jdk\bin>java fab
fibbonacci series
1
1
2
3
5
8
13
21
34
55

C:\Sun\AppServer\jdk\bin>
```

PROGRAM 4
WRITE A PROGRAM USING CLASSES AND OBJECT IN JAVA

```
public class data
{
	String id;
	String name;
	String age;

	public data()
	{
		id="8043";
		name="MANOJ";
		age="22";
	}
	public void displaydata()
	{
		System.out.println("my id is="+id);
		System.out.println("my name is="+name);
		System.out.println("my age is="+age);
	}
	public static void main(String args[])
	{
	data obj=new data();
	obj.displaydata();
	}
}
```

OUTPUT

```
C:\Sun\AppServer\jdk\bin>javac data.java

C:\Sun\AppServer\jdk\bin>java data
my id is=8043
my name is=MANOJ
my age is=22

C:\Sun\AppServer\jdk\bin>
```

PROGRAM 5
WRITE A PROGRAM TO IMPLEMENT INHERITANCE

```
class room
{
int l;
int b;
room(int x, int y)
        {
                l=x;
                b=y;
        }
        int area()
        {
                return(l*b);
        }
        }
class bedroom extends room
        {
                int h;
        bedroom(int x,int y, int z)
        {
        super(x,y);
        h=z;
}
int volume()
{
        return(l*b*h);
}
}
class inheritance
{
public static void main(String args[])
{
bedroom room1=new bedroom(10,20,30);
int area1=room1.area();
int volume1=room1.volume();
System.out.println("area1="+area1);
System.out.println("volume1="+volume1);
}
}
```

OUTPUT

```
C:\Sun\AppServer\jdk\bin>javac inheritance.java

C:\Sun\AppServer\jdk\bin>java inheritance
area1=200
volume1=6000

C:\Sun\AppServer\jdk\bin>
```

PROGRAM 6
WRITE A PROGRAM TO IMPLEMENT MULTITHREADING

```
class A extends Thread
        {
            public void run()
              {
                 for(int i=1;i<=5;i++)
                   {
                      System.out.println("from thread A :i= "+i);
                   }
              }
        }
      class B extends Thread
        {
            public void run()
              {
                 for(int i=1;i<=5;i++)
                   {
                     System.out.println("from thread B :i= "+i);
                   }
              }
        }
        class C extends Thread
            {
              public void run()
                {
                  for(int i=1;i<=5;i++)
                    {
                      System.out.println("from thread C :i= "+i);
                    }
                }
            }
        class threadtest
            {
               public static void main(String args[])
                 {
                    new A().start();
                   new B().start();


                     new C().start();
```

```
                }
        }
```

OUTPUT

```
C:\Sun\AppServer\jdk\bin>javac threadtest.java

C:\Sun\AppServer\jdk\bin>java threadtest
from thread A :i= 1
from thread A :i= 2
from thread A :i= 3
from thread A :i= 4
from thread A :i= 5
from thread B :i= 1
from thread B :i= 2
from thread B :i= 3
from thread B :i= 4
from thread B :i= 5
from thread C :i= 1
from thread C :i= 2
from thread C :i= 3
from thread C :i= 4
from thread C :i= 5

C:\Sun\AppServer\jdk\bin>
```

PROGRAM 7

WRITE A PROGRAM TO IMPLEMENT METHOD OVERRIDING

```
class sup
        {
            int x;
            sup(int x)
                {
                   this.x=x;
                }
              void display()
                {
                     System.out.println("x= "+x);
                }
        }

    class sub extends sup
            {
               int y;
               sub(int x,int y)
                 {
                     super(x);
                     this.y=y;
                 }
                void display()
                   {
                     System.out.println("x= "+x);
                     System.out.println("y= "+y);
                   }
            }

     class overloading
          {
             public static void main(String args[])
                {
                   sub s=new sub(10,20);
                   s.display();
                }
           }
```

OUTPUT

```
C:\Sun\AppServer\jdk\bin>javac overloading.java

C:\Sun\AppServer\jdk\bin>java overloading
x= 10
y= 20

C:\Sun\AppServer\jdk\bin>
```

PROGRAM 8

WRITE A PROGRAM TO IMPLEMENT METHOD OVERLOADING

```
class funcload
{
	public static void main(String args[])
	{
		funcload obj=new funcload();
		obj.add(15,24);
		obj.add(2.3f,0.8f);
		obj.add(56,76.76f);
	}
	int x,y;
	float p,q,result;
		void add(int a,int b)
		{
		x=a;
		y=b;
		result=x+y;
		System.out.println("the result is:" + result);
		}
		void add(float a,float  b)
		{
		p=a;
		q=b;
		result=p+q;
		System.out.println("the result is:" + result);
		}
		void add(int a,float b)
		{
		x=a;
		p=b;
		result=x+p;
		System.out.println("the result is:" + result);

		}
}
```

OUTPUT

```
C:\Sun\AppServer\jdk\bin>javac funcload.java

C:\Sun\AppServer\jdk\bin>java funcload
the result is:39.0
the result is:3.1
the result is:132.76001

C:\Sun\AppServer\jdk\bin>
```

PROGRAM 9

WRITE A PROGRAM TO IMPLEMENT PACKAGE

Creation of package

```
package pack;
public class rev
  {
        public static void inita()
          {
            char str[]={'m','a','n','o','j'};
            int i=0;
           for(i=str.length-1;i>=0;i--)
             {
                 System.out.print(str[i]);
              }
         }
 }
```

Implementation of package

```
import pack.*;
class demo12
    {
        public static void main(String args[])
        {
              rev ob=new rev();
              ob.inita();
        }
    }
```

OUTPUT

```
 C:\monu>md pack
C:\ monu>cd pack
C:\ monu \pack>edit rev.java
C:\ monu \pack>javac rev.java
C:\ monu \pack>cd..
C:\ monu \edit demo12.java
C:\ monu >javac demo12.java
C:\ monu >java demo12
 jonam
C:\ monu>
```

PROGRAM 10

WRITE A PROGRAM TO IMPLEMENT INTERFACE

```
interface area
                    {
                       final float p=3.14f;
                       float compute(float x,float y);
                    }
                  class rectangle implements area
                    {
                        public float compute(float x,float y)
                          {
                            return(x*y);
                          }
                     }
                     class circle implements area
                         {
                              public float compute(float x,float y)
                                   {
                                     return(p*x*x);
                                   }
                         }
                     class inter
                         {
                              public static void main(String args[])
                                   {
                                     rectangle r=new rectangle();
                                     circle c=new circle();
                                     area a;
                                     a=r;
                                    System.out.println("\nArea of rectangle=
"+a.compute(10,20));
                                    a=c;
                                    System.out.println("\nArea of circle= "+a.compute(10,0));
                                   }
                         }
```

OUTPUT

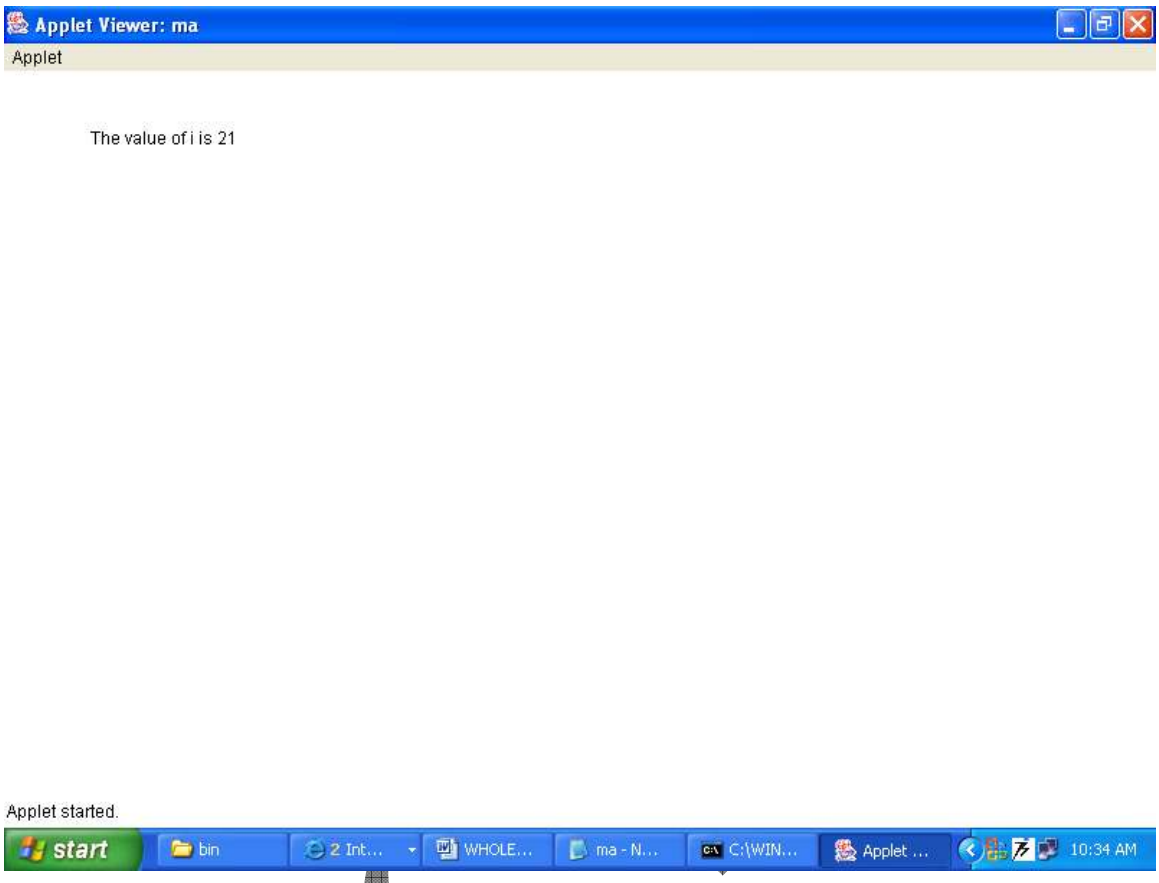
```
C:\Sun\AppServer\jdk\bin>javac inter.java

C:\Sun\AppServer\jdk\bin>java inter

Area of rectangle= 200.0

Area of circle= 314.0

C:\Sun\AppServer\jdk\bin>
```

PROGRAM 11
WRITE A PROGRAM TO IMPLEMENT APPLETS IN JAVA

```
import java.awt.*;
import java.applet.*;
//<applet code="ma" height=750 width=350> </applet>
public class ma extends Applet implements Runnable
{

int i;
Thread t;
public void init()
{
try
  {
          t= new Thread(this);
          t.start();}
          catch(Exception e){}
  }

public void run()
  {

        for(i=1;i<=20;i++){
         try
           {
             repaint();
             Thread.sleep(2000);}
             catch(Exception e)
       {}
```

```
        }
    }
    public void paint(Graphics s)
    {
        try
         {
            s.drawString("The value of i is "+i,60,50);}
            catch(Exception e){}
         }
    public static void main(String ar[])
      {

        ma ob;

      }
}
```

OUTPUT


Applet Viewer: ma
Applet
The value of i is 21
Applet started.
start
bin
2 Int...
WHOLE...
ma - N...
C:\WIN...
Applet ...
10:34 AM

PROGRAM 12
WRITE A PROGRAM TO IMPLEMENT EXCEPTION HANDLING IN JAVA

```
class handle
{
public static void main(String args[])
{
int a=10;
int b=5;
int c=5;
int x;
int y;
try
{
x=a/(b-c);
}
catch(ArithmeticException e)
{
System.out.println("Division by zero");
}
y=a/(b+c);
System.out.println("y="+y);
}
}
```

OUTPUT

```
C:\Sun\AppServer\jdk\bin>javac handle.java

C:\Sun\AppServer\jdk\bin>java handle
Division by zero
y=1

C:\Sun\AppServer\jdk\bin>
```