CYCLE 5

PROGRAM 28

//SANIN MOHAMMED N
//B21CSB55
//CREATION OF THREAD

PROGRAM CODE

```
class even extends Thread
{
  public void run()
  {
    for(int i=0;i<=100;i+=2)
    {
      System.out.println("thread even:"+i);

     }

  }

}

class odd extends Thread
{
  public void run()
  {
   for(int i=1;i<=100;i+=2)
   {
     System.out.println("thread odd:"+i);

   }
  }

}


class main
{
  public static void main(String arg[])
  {
    even e =new even();
    odd o =new odd();
    e.start();
    o.start();
   try
    {
```

```
      e.join();
      o.join();

     }
   catch(Exception obj)
   {
    System.out.println(obj);

   }
   System.out.println("main thread is waited until complete execution of other
threads");
   }




}
```

OUTPUT

```
r3b@user-260-p022il:~/r3b55$ javac thread1.jav
r3b@user-260-p022il:~/r3b55$ java main
thread even:0
thread even:2
thread odd:1
thread even:4
thread odd:3
thread even:6
thread even:8
thread even:10
thread odd:5
thread even:12
thread even:14
thread even:16
thread odd:7
thread even:18
thread even:20
thread even:22
thread odd:9
thread even:24
thread even:26
thread odd:11
thread even:28
thread even:30
thread odd:13
thread even:32
thread even:34
thread even:36
thread even:38
thread odd:15
thread even:40
thread even:42
thread odd:17
thread even:44
thread even:46
thread even:48
thread even:50
thread odd:19
thread even:52
thread even:54
thread even:56
thread odd:21
thread even:58
thread even:60
thread even:62
thread even:64
thread odd:23
thread even:66
thread even:68
thread even:70
thread even:72
```

```
thread even:74
thread odd:25
thread even:76
thread even:78
thread even:80
thread even:82
thread even:84
thread even:86
thread even:88
thread even:90
thread odd:27
thread even:92
thread odd:29
thread even:94
thread even:96
thread even:98
thread even:100
thread odd:31
thread odd:33
thread odd:35
thread odd:37
thread odd:39
thread odd:41
thread odd:43
thread odd:45
thread odd:47
thread odd:49
thread odd:51
thread odd:53
thread odd:55
thread odd:57
thread odd:59
thread odd:61
thread odd:63
thread odd:65
thread odd:67
thread odd:69
thread odd:71
thread odd:73
thread odd:75
thread odd:77
thread odd:79
thread odd:81
thread odd:83
thread odd:85
thread odd:87
thread odd:89
thread odd:91
thread odd:93
thread odd:97
thread odd:99
main thread is waited until complete execution of other threads
```

PROGRAM 29

//SANIN MOHAMMED N
//B21CSB55
//PRIORITY

PROGRAM CODE

```
class Priority extends Thread
{
  public void run()
 {
   System.out.println("find my priority");

  }
}

class main
{

 public static void main(String arg[])
 {
  Priority p= new Priority();
  p.start();
  System.out.println("normal priority:"+p.getPriority());
  p.setPriority(9);
  System.out.println("setted priority:"+p.getPriority());

}
}
```

OUTPUT

```
r3b@user-260-p022il:~/r3b55$ javac thread2.java
r3b@user-260-p022il:~/r3b55$ java main
normal priority:5
setted priority:9
find my priority
```

PROGRAM 30

//SANIN MOHAMMED N
//B21CSB55
//MULTITHREAD

PROGRAM CODE

```
import java.util.*;

class sample extends Thread
{
 public void run()
 {try{
  Random ran=new Random();
  for(int i=0;i<=11;i++)
  {
   int num=ran.nextInt(25);
   if(num%2==0)
    {
     Square s= new Square(num);
     s.start();
    }
   else
   {
     Cube c=new Cube(num);
     c.start();

   }
  Thread.sleep(1000);
  }
 }
catch(Exception e)
 {
  System.out.println(e);
 }
 }

}

class Square extends Thread
{
  int num;
 Square(int num)
 {
   this.num=num;
```

```
 }

 public void run()
 {
   System.out.println("number is:"+num+" square is:"+(num*num));
  }
}

class Cube extends Thread
{ int num;
 Cube(int num)
 {
  this.num=num;
 }
 public void run()
 {
  System.out.println("number is:"+num+" cube is:"+(num*num*num));
  }
}
class main
{

 public static void main(String arg[])
 {
  sample s =new sample();
  s.start();

 }
}
```

OUTPUT

```
r3b@user-260-p022il:~/r3b55$ javac thread3.java
r3b@user-260-p022il:~/r3b55$ java main
number is:16 square is:256
number is:20 square is:400
number is:4 square is:16
number is:6 square is:36
number is:15 cube is:3375
number is:5 cube is:125
number is:11 cube is:1331
number is:11 cube is:1331
number is:8 square is:64
number is:10 square is:100
number is:22 square is:484
number is:24 square is:576
```

PROGRAM 31

//SANIN MOHAMMED N
//B21CSB55
//RUNNABLE INTERFACE

PROGRAM CODE

```
class sample implements Runnable
{
  public void run()
  { try
    {
    for(int i=0;i<7;i++)
    {
     System.out.println("number is:"+i);
     Thread.sleep(500);
   }
   }
 catch(Exception e)
  {
   System.out.println(e);
  }
  }
}
class main
{
 public static void main(String arg[]) throws Exception
  {
   sample s=new sample();
   Thread t=new Thread(s);
   t.start();
   t.join();
    }

}
```

OUTPUT

```
r3b@user-260-p022il:~/r3b55$ javac thread4.java
r3b@user-260-p022il:~/r3b55$ java main
number is:0
number is:1
number is:2
number is:3
number is:4
number is:5
number is:6
```

PROGRAM 32

//SANIN MOHAMMED N
//B21CSB55
//BANK OPERATION

PROGRAM CODE

```
class Account
{
int balance;
Account(int balance)
 {
  this.balance=balance;
 }
synchronized public void deposit(int d)
 {
  balance=balance+d;
  System.out.println("amount deposited is:"+d+"balance is:"+balance);
  }


synchronized public void withdraw(int w)
{
 if(balance>w)
 {
 balance=balance-w;
 System.out.println("amount withdraw is:"+w+"balnace is:"+balance);
 }
 else
 {
  System.out.println("insufficient balance:cannot withdraw");
 }

}

}

class A extends Thread
{
 String name;
 Account ac;
 int d,w;
 A(String name,int d,int w,Account ac)
  {
    this.name=name;
    this.d=d;
```

```
    this.w=w;
    this.ac=ac;
   }
 public void run()
 {ac.deposit(d);
 ac.withdraw(w);
 }

}

class B extends Thread
{
 String name;
 Account ac;
 int d,w;
 B(String name,int d,int w,Account ac)
  {
    this.name=name;
    this.d=d;
    this.w=w;
    this.ac=ac;
   }
 public void run()
 {ac.deposit(d);
 ac.withdraw(w);
  }

}

class C extends Thread
{

 String name;
 Account ac;
 int d,w;
 C(String name,int d,int w,Account ac)
  {
    this.name=name;
    this.d=d;
    this.w=w;
    this.ac=ac;
   }
 public void run()
 {
  try
```

```
  {
  ac.deposit(d);
 ac.withdraw(w);
  }
catch(Exception e)
{
 System.out.println(e);
}
}
}
class main
{
 public static void main(String arg[]) throws Exception
 {
 Account acc=new Account(175000);

 A a=new A("george",1000,25000,acc);
 B b=new B("sanin",2500,10000,acc);
 C c=new C("srilal",500,125000,acc);
 a.start();
 a.join();
 b.start();
 b.join();
 c.start();
}
}
```

OUTPUT

```
r3b@user-260-p022il:~/r3b55$ javac thread5.java
r3b@user-260-p022il:~/r3b55$ java main
amount deposited is:1000balance is:176000
amount withdraw is:25000balnace is:151000
amount deposited is:2500balance is:153500
amount withdraw is:10000balnace is:143500
amount deposited is:500balance is:144000
amount withdraw is:125000balnace is:19000
```