N.   HARIPRASAD(LAB4)

1Q. Read an Employee data with I'd, name and mobile number (regular expression and compare the mobile number must have only 10 digits name can consists of only alphabets, space character i'd number consists of 5 digits?

```java
package lab.controlstms;

import java.util.*;

import java.util.regex.*;

public class Regular_Exp {

public static void main(String[] args) {

// TO READ THE INPUT FROM SYSTEM

Scanner sc = new Scanner(System.in);

System.out.println("Enter Name consists of 5 charecters");

System.out.println("Enter ID number");

String id= sc.next();

System.out.println("Enter Name");

String name= sc.next();

System.out.println("Enter 10 digit Mobile number");

String mobile= sc.next();

if(Pattern.matches("\\d\\d\\d\\d\\d\\d\\d\\d\\d\\d", mobile))

System.out.println("valid mobile number");

else

System.out.println("Invalid mobile number");
```

}

}

OUTPUT:

Enter Name consists of 5 charecters

Enter ID number

101

Enter Name

Hari@

Enter 10 digit Mobile number

6305530361

valid mobile number

(or)

Enter Name consists of 5 charecters

Enter ID number

101

Enter Name

HARI@

Enter 10 digit Mobile number

63055

Invalid mobile number

2Q.Write a multithreading program, Thread 1; to display all perfect number Thread 2: to display factorial value of numbers from 1 to 10

```java
package lab.controlstms;

import java.lang.*;

import java.util.Scanner;

public class Thred_program extends Thread{

public void run(){

Scanner key=new Scanner(System.in);

int sum=0;

long a;

System.out.println(" enter a number");

a=key.nextInt();

for(int i=1;i<a;i++) {

if(a%i==0) {

sum=sum+i;

}

}if(sum==a) {

System.out.println("perfect number");

}else {

System.out.println(" not a perfect number");

}

}

}
```

```java
public class Sec extends Thread{
public void run() {
int fact=1;
for (int i=1;i<=10;i++)
{
fact=(fact*i);
}
System.out.println("10! is :"+fact);
}
}
public class Threads {
public static void main(String [] args)
{
System.out.println("Start of Main");
Thred_program o1 = new Thred_program();
Sec o2 = new Sec();
o1.start();
o2.start();
System.out.println("End of Main");
}
}
```

OUTPUT:

Start of Main

End of Main

10! is :3628800

enter a number

6

perfect number

   (OR)

Start of Main

End of Main

10! is :3628800

enter a number

67

not a perfect number

3Q.Write a program read the data from fie

package IO_files;

import java.io.*;

public class File_read {

public static void main(String[] sun) **throws** IOException

{

FileReader f=**new** FileReader("C:\\HARI\\hariprasadnn.txt");

```java
BufferedReader b=new BufferedReader(f);

String str=null;

while( true )

{ try

{ str=b.readLine();

if(str.equals(null))

break;

System.out.println(str);

}

catch(NullPointerException e)

{ break; }

}

b.close();

f.close();

}

}
```

OUTPUT:

HI HARIPRASAD

4Q. Write a progam to write content to file in append mode

```java
package IO_files;

import java.io.*;

public class File_witer {

public static void main(String[] args) throws IOException{

DataInputStream dis = new DataInputStream(System.in);

FileWriter fw = new FileWriter("C:\\HARI\\HAR.txt");

BufferedWriter br=new BufferedWriter(fw);

String str=null;

int size;

while( true )

{

str=dis.readLine();

if(str.equals("null"))

break;

size=str.length();

br.write(str,0,size);

br.write("\n");

}

br.close();

fw.close();

}
```

}

OUTPUT:

Hi hari!

How are you