1. Read an Employee data with idno, name and mobilenumber (regular expression)
and compare the mobile number must have only 10 digits
name can consists of only alphabets , space character

```
package vinay.test;
import java.util.*;
import java.util.regex.Matcher;
import java.util.regex.Pattern;
public class matcherclass {

	public static void main(String[] args) {
		// TODO Auto-generated method stub

		int idno;
		String name;
		String mobnum;
		Scanner sc=new Scanner(System.in);
		System.out.println("Enter idno");
		idno=sc.nextInt();
		System.out.println("Enter name");
		name=sc.next();
		System.out.println("Enter mobilenum");
		mobnum=sc.next();

if(Pattern.matches("\\d\\d\\d\\d\\d\\d\\d\\d\\d\\d",mobnum))
		System.out.println("Valid mobile num");
	    else
		System.out.println("Invalid mobile");
	}

}
```

Output:

```
Enter idno

2
Enter name
Vinay
Enter mobilenum
7678965456
Valid mobile num

Enter idno

2
Enter name
vinay
Enter mobilenum
656453546546
Invalid mobilenum
```

2. Write a mutithreading program,
thread 1 : to display all perfect numbers,
thread 2 : to display factorial value of numbers from 1 to 10.

```
package vinay.test;
import java.util.*;
public class thread 2{

	public static void main(String[] args) {
		// TODO Auto-generated method stub
		Scanner obj = new Scanner(System.in);
		long num,i,sum=0;
		System.out.println("Enter a number");
		num=obj.nextInt();
		for(i=1;i<num;i++)
		{
			if(num%i==0)
			{
				System.out.println(i);
				sum=sum+i;
			}
			System.out.println("sum="+sum);
			if(sum==num)
			System.out.println(num+"is prefect number");
		       else
			System.out.println(num+"is not a perfect
number");
		}
	}


	}
public class thread {

	public static void main(String[] args) {
		// TODO Auto-generated method stub



				Scanner obj = new Scanner(System.in);
				long num, i, fact=1;
				System.out.println("Enter an integer to
find factorial ");
				num= obj.nextLong();
				for(i=1;i<=num;i++)
					fact*=i;
					System.out.println(num+"!= "+fact);
				}
```

```
}
public class Threads {
public static void main(String [] args)
{
System.out.println("Start of Main");
Thread program o1 = new Thread program();
Sec o2 = new Sec();
o1.start();
o2.start();
System.out.println("End of Main");
}
}
```

Output:

```
Start of main
End of main

Enter a number

3
1
sum=1
3is not a perfect number
sum=1
3is not a perfect number
sum=1
3is not a perfect number


Enter an integer to find factorial
7
7!=5040
```

3. Write a program to read the data from file.

```
package IOexception;
import java.io.*;
public class file {


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

```
                    }
                    {
                      FileReader f=new
FileReader("d:\\vinnu\\vinayy.txt");
                      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 Vinayy
```

4. write a program to write the content to file in append mode.

```
package IOexception;
import java.io.*;
public class file.com {


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

                    BufferedReader reader = new
BufferedReader(new InputStreamReader(System.in));
                    FileWriter fw = new
FileWriter("d:\\vinay\\textfile.txt,"true);
                    BufferedWriter br = new BufferedWriter(fw);
                    String str = null;
                    int size;
                    while (true) {
                        str = reader.readLine();
                        if (str.equals("null"))
                            break;
                        size = str.length();
```

```
                br.write(str, 0, size);
                br.write("\n");
            }
            br.close();
            fw.close();

        }
    }
```

Output:

HI vinay

Hava a nice day