**EXPERIMENT NO : 1**

import java.util.Scanner;

public class Exp1 {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

Program program = new Program();

do {

System.out.println("1.Prime Number");

System.out.println("2.Factorial");

System.out.println("3.Palindrome Number");

System.out.println("4.Fibonacci Series");

System.out.println("0.Exit");

int ch = sc.nextInt();

switch(ch) {

case 1: program.PrimeNumber();

break;

case 2: program.Factorial();

break;

case 3: program.Palindrome();

break;

case 4: program.Fibonacci();

break;

}

System.out.println();

if(ch==0) {

break;

}

}

while(true);

}

}

package EXP1;

import java.util.Scanner;

public class Program {

public void PrimeNumber() {

Scanner sc = new Scanner(System.in);

boolean flag = true;

System.out.println("Enter any number : ");

int n = sc.nextInt();

for(int i=3 ; i<=n ; i++) {

if(n%i==0) {

flag = false;

break;

}

}

if (flag) {

System.out.println(n+" is not a prime number");

}

else {

System.out.println(n+" is a prime number");

}

}

public void Factorial() {

Scanner sc = new Scanner(System.in);

System.out.println("Enter the number : ");

int n1 = sc.nextInt();

int fact=1;

for(int j=1;j<=n1;j++) {

fact = fact \* j;

}

System.out.println("Factorial : "+fact);

}

public void Palindrome() {

Scanner sc = new Scanner(System.in);

boolean flag = true;

System.out.println("Enter the number : ");

int n2 = sc.nextInt();

int n3 = 0;

int temp = n2;

while(temp>0) {

n3=n3 \* 10 + temp % 10;

temp = temp/10;

}

if(n2 == n3) {

System.out.println(n2+" is a palindrome number");

}

else {

System.out.println(n2+" is not a palindrome number");

}

}

public void Fibonacci() {

Scanner sc = new Scanner(System.in);

int n4=0,n5=1,temp1=0;

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

int count = sc.nextInt();

System.out.print("Fibonacci series : "+n4+" "+n5);

for (int k=2;k<=count;k++) {

temp1 = n4+n5;

System.out.print(" "+temp1);

n4=n5;

n5=temp1;

}

}

}

Output

1.Prime Number

2.Factorial

3.Palindrome Number

4.Fibonacci Series

0.Exit

1

Enter any number :

3

3 is a prime number

1.Prime Number

2.Factorial

3.Palindrome Number

4.Fibonacci Series

0.Exit

2

Enter the number :

5

Factorial : 120

1.Prime Number

2.Factorial

3.Palindrome Number

4.Fibonacci Series

0.Exit

3

Enter the number :

1221

1221 is a palindrome number

1.Prime Number

2.Factorial

3.Palindrome Number

4.Fibonacci Series

0.Exit

4

Enter number :

6

Fibonacci series : 0 1 1 2 3 5 8