**public** **class** NumUtil {

**static** **double** getPower(**double** x,**int** n) {

**double** result=1;

**for**(**int** i=n;i>=1;i--) {

result\*=x;

}

**return** result;

}

**static** **long** getFactorial(**int** num) {

**long** resf=1;

**if**(num<=2) {

resf= num;

}

**else** {

**int** i=num;

**while**(i>=1) {

resf\*=i;

i--;

}

}

**return** resf;

}

**static** **boolean** isPrime(**int** num) {

**boolean** resP=**true**;

//int res=1;

**for**(**int** j=2;j<num;j++) {

**if**(num%j==0) {

resP=**false**;

**break**;

}

**else** {

**continue**;

}

}

**return** resP;

}

**static** **boolean** isEven(**int** num) {

**boolean** resE=**true**;

**if**(num%2!=0) {

resE=**false**;

}

**return** resE;

}

**static** **boolean** isOdd(**int** num) {

**boolean** resO=**true**;

**if**(num%2==0) {

resO=**false**;

}

**return** resO;

}

}

**import** java.util.Scanner;

**public** **class** TestNumUtil {

**public** **static** **void** main(String[] args) {

Scanner sc = **new** Scanner(System.***in***);

**int** flag = 1;

**while** (flag != 0) {

System.***out***.println("1. For get power of number : ");

System.***out***.println("2. For get Factorial of number : ");

System.***out***.println("3. To check number Prime or Nonprime : ");

System.***out***.println("4. To check number is even or not ");

System.***out***.println("5. To check number odd or not : ");

System.***out***.println("Please Enter a Choice for Perticular Calculation :");

**int** choice = sc.nextInt();

**switch** (choice) {

**case** 1:

System.***out***.println("Enter a number and then its power : ");

**double** x = sc.nextDouble();

**int** n = sc.nextInt();

**double** res1 = NumUtil.*getPower*(x, n);

System.***out***.println("Power of " + x + ":" + res1);

**break**;

**case** 2:

System.***out***.println("Enter a number to get factorial : ");

**int** num = sc.nextInt();

**long** res2 = NumUtil.*getFactorial*(num);

System.***out***.println("Factorial of " + num + ":" + res2);

**break**;

**case** 3:

System.***out***.println("Enter a number to check whether is prime or not: ");

**int** num1 = sc.nextInt();

**boolean** res3 = NumUtil.*isPrime*(num1);

**if** (res3 == **true**) {

System.***out***.println("Number is prime");

} **else** {

System.***out***.println("Number is Not prime");

}

**break**;

**case** 4:

System.***out***.println("Enter a number to check Even o not : ");

**int** num2 = sc.nextInt();

**boolean** res4 = NumUtil.*isEven*(num2);

**if** (res4 == **true**) {

System.***out***.println("Number is Even");

} **else** {

System.***out***.println("Number is Not Even");

}

**break**;

**case** 5:

System.***out***.println("Enter a number to check Odd o not : ");

**int** num3 = sc.nextInt();

**boolean** res5 = NumUtil.*isOdd*(num3);

**if** (res5 == **true**) {

System.***out***.println("Number is Odd");

} **else** {

System.***out***.println("Number is Not Odd");

}

**break**;

**default**:

flag = 0;

System.***out***.println("Wrong input for calculation..ThankYou");

}

}

sc.close();

}

}