Assignment 01 : WAP to check whether a number is perfect number or not

```
import java.util.Scanner;

public class PerfectNum{
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);

System.out.print("Enter a number : ");
int num = sc.nextInt() ;

int sum = 0;
for (int j = 1; j < num; j++) {
if (num % j == 0) {
sum += j;
}
}
if (sum == num) {
System.out.println(num+" is a perfect number!");
}
else{
System.out.println(num+" is not a perfect number!");
}
sc.close();
}
}
```

Assignment 02 : WAP to check whether a number is Strong number or not

```
import java.util.Scanner;

public class StrongNum {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);

System.out.print("Enter a number : ");
int num = sc.nextInt() ;

int sum = 0;
int temp = num;
while (temp != 0) {
int digit = temp % 10;
int factorial = 1;
for (int j = 1; j <= digit; j++) {
factorial *= j;
}
sum += factorial;
temp /= 10;
}
if (sum == num) {
System.out.println(num+" is a strong number!");
}
```

```
else{
System.out.println(num+" is not a strong number!");
}
sc.close();
}

}
```

Assignment 03 : WAP to print fibonacci series upto n terms

```
import java.util.Scanner;

public class FibonacciSeriesUpto{
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);

System.out.print("Enter a number : ");
int num = sc.nextInt() ;

int first = 0;
int second = 1;
System.out.println("* Fibonacci Series *" );
System.out.print(first + " " + second + " ");
for (int i = 3; i <= num; i++) {
int next = first + second;
System.out.print(next + " ");
first = second;
second = next;
}

sc.close();
}
}
```

Assignmetn 04 : WAP to check whether a number is armstrong number or not

```
import java.util.Scanner;
public class ArmstrongNum {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);

System.out.print("Enter a number : ");
int num = sc.nextInt() ;
int sum = 0;
int numberOfDigits = String.valueOf(num).length();
int temp = num;
while (temp != 0) {
int digit = temp % 10;
sum += Math.pow(digit, numberOfDigits);
temp /= 10;
}
if (sum == num) {
System.out.println(num+" is an armstrong number!");
}
else{
System.out.println(num+" is not an armstrong number!");
}
sc.close();
```

```
}

}
```

Assignment 05 : WAP to create a menu driven arithmetic calculator using do-while loop

```
import java.util.Scanner;

public class DoWhileMenuDrivenArithmeticCalculator {

public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
char cho;

do {
System.out.println("Choose an operation:");
System.out.println("1. Addition (+)");
System.out.println("2. Subtraction (-)");
System.out.println("3. Multiplication (*)");
System.out.println("4. Division (/)");
System.out.println("5. Exit");

System.out.print("Enter your choice: ");
cho = sc.next().charAt(0);

switch (cho) {
case '1':
System.out.print("Enter first number: ");
double num1 = sc.nextDouble();
```

```
System.out.print("Enter second number: ");
double num2 = sc.nextDouble();
System.out.println("Result: " + (num1 + num2));
break;
case '2':
System.out.print("Enter first number: ");
num1 = sc.nextDouble();
System.out.print("Enter second number: ");
num2 = sc.nextDouble();
System.out.println("Result: " + (num1 - num2));
break;
case '3':
System.out.print("Enter first number: ");
num1 = sc.nextDouble();
System.out.print("Enter second number: ");
num2 = sc.nextDouble();
System.out.println("Result: " + (num1 * num2));
break;
case '4':
System.out.print("Enter first number: ");
num1 = sc.nextDouble();
System.out.print("Enter second number: ");
num2 = sc.nextDouble();
if (num2 == 0) {
System.out.println("Error: Cannot divide by zero");
} else {
```

```
System.out.println("Result: " + (num1 / num2));
}
break;
case '5':
System.out.println("Exiting...");
break;
default:
System.out.println("Invalid choice! Please enter a valid option.");
}
System.out.println(); // for better readability
} while (cho != '5');

sc.close();
}
}
```