**1:** Create a method to find the sum of the cubes of the digits of an n digit number

**Exercise 2:** Write a java program that simulates a traffic light. The program lets the user select one of three lights: red, yellow, or green with radio buttons. On entering the choice, an appropriate message with “stop” or “ready” or “go” should appear in the console .Initially there is no message shown.

**Exercise 3:** The Fibonacci sequence is defined by the following rule. The first 2 values in the sequence are 1, 1. Every subsequent value is the sum of the 2 values preceding it. Write a Java program that uses both recursive and non-recursive functions to print the nth value of the Fibonacci sequence?

**Exercise 4:** Write a Java program that prompts the user for an integer and then prints out all the prime numbers up to that Integer?

**Exercise 5:** Create a class with a method which can calculate the sum of first n natural numbers which are divisible by 3 or 5.

|  |  |
| --- | --- |
| Method Name | calculateSum |
| Method Description | Calculate Sum |
| Argument | int n |
| Return Type | int-sum |
| Logic | Calculate the sum of first n natural numbers which are divisible by 3 or 5. |

**Exercise 6:** Create a class with a method to find the difference between the sum of the squares and the square of the sum of the first n natural numbers.

|  |  |
| --- | --- |
| Method Name | calculateDifference |
| Method Description | Calculate the difference |
| Argument | int n |
| Return Type | int - Sum |
| Logic | Find the difference between the sum of the squares of the first n natural numbers and the square of their sum.  For Example if n is 10,you have to find  (1^2+2^2+3^2+….9^2+10^2)-  (1+2+3+4+5…+9+10)^2 |

**Exercise 7:** Create a method to check if a number is an increasing number

|  |  |
| --- | --- |
| Method Name | checkNumber |
| Method Description | Check if a number is an increasing number |
| Argument | int number |
| Return Type | boolean |
| Logic | A number is said to be an increasing number if no digit is exceeded by the digit to its left.  For Example : 134468 is an increasing number |