

Assignments on Classes and Objects – 1

Exercise 1: Create a class with a method which can calculate the sum of first n natural numbers which are divisible by 3 or 5.

Method Description	To calculate sum
Argument	int num
Return Type	int-sum
Logic	Calculate the sum of first n natural numbers which are divisible by 3 or 5.

Exercise 2: 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 num
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 3: 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

Exercise 4: Create a method to check if a number is a power of two or not

Method Name	checkNumber
Method Description	Checks if the entered number is a power of two or not
Argument	int num
Return Type	boolean
Logic	Check if the input is a power of two. Ex: 8 is a power of 2

Example 5: Create a method which accepts an integer array, reverse the numbers in the array

Method Name	reverseElements
Method Description	Reverses the numbers
Argument	int []
Return Type	void
Logic	<p>Accept and integer array, reverse the numbers in the array.</p> <p>Ex: {12,23,96,45}</p> <p>Resultant array : Reverse numbers {21,32,69,54}</p>