#### **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.

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| --- | --- |
| 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 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.

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| --- | --- |
| 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 3: Create a method to check if a number is an increasing number

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| --- | --- |
| 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 n |
| Return Type | boolean |
| Logic | Check if the input is a power of two. Ex: 8 is a power of 2 |