

# Weekly assignments

## Week-1

- Brush up the fundamentals of your favorite programming language
  - Logical operators
  - Conditional operators
  - Data types
  - Control statements (if..else etc.)
  - Native/Built-in Data structures (Array etc.)
  - Loop
- Watch this video: <https://www.youtube.com/watch?v=w0NN-mJWowo>  
And note down the key points which you think helped Sohag vai and his friends to be successful in life.
- Solve the following problems:
  - Write a code to find 'minimum' value from a list of n numbers, where  $1 \leq n \leq 1000$  and the numbers can be any integers.  
For example, if  $n=5$  and the list is: 1, 6, 8, 10, 999  
The result should be: 1
  - Write a code find the 'longest string' from a list of strings.  
For example if the given strings are: 'I', 'love', 'my country', 'very', 'much'  
The result should be: 'my country'
  - Convert a positive decimal number to it's binary representation.  
For example, if the given decimal number is: 8  
The result should be: 1000
  - Given two numbers x and n, find the value of  $x^n$  (x to the power n)
  - Given a sentence, keep the order of the words same, but reverse the characters of each word.  
For example, if the given sentence is: 'I love programming'  
The result should be: 'I evol gnimmargorp'
  - <https://www.hackerrank.com/challenges/handshake/problem?isFullScreen=true>
  - <https://leetcode.com/problems/palindrome-number/>
  - <https://www.interviewbit.com/problems/reverse-the-string/>
  - <https://leetcode.com/problems/two-sum/>
  - <https://leetcode.com/problems/contains-duplicate/>
  - <https://leetcode.com/problems/max-consecutive-ones/>
  - <https://www.interviewbit.com/problems/fizzbuzz/>

## Week-2

- <https://www.hackerrank.com/challenges/counting-valleys/problem>
- <https://www.hackerrank.com/challenges/strange-advertising/problem>
- <https://leetcode.com/problems/two-sum-ii-input-array-is-sorted/>
- <https://leetcode.com/problems/first-unique-character-in-a-string/>
- <https://leetcode.com/problems/find-all-duplicates-in-an-array/>
- <https://leetcode.com/problems/valid-anagram/>
- <https://leetcode.com/problems/plus-one/>
- <https://leetcode.com/problems/valid-palindrome/>
- <https://www.hackerrank.com/challenges/arrays-ds/problem>
- <https://www.hackerrank.com/challenges/array-left-rotation/problem>
- <https://www.hackerrank.com/challenges/sock-merchant/problem>
- <https://www.hackerrank.com/challenges/drawing-book/problem>

## Week-3

- <https://leetcode.com/problems/roman-to-integer/>
- <https://leetcode.com/problems/majority-element/>
- <https://leetcode.com/problems/contains-duplicate-ii/>
- <https://leetcode.com/problems/missing-number/>
- <https://leetcode.com/problems/happy-number/>
- <https://leetcode.com/problems/merge-similar-items/>
- <https://www.hackerrank.com/challenges/flipping-bits/problem>
- <https://www.hackerrank.com/challenges/mini-max-sum/problem>
- <https://www.hackerrank.com/challenges/time-conversion/problem>
- <https://www.hackerrank.com/challenges/countingsort1/problem?isFullScreen=true>
- <https://www.hackerrank.com/challenges/countingsort2/problem?isFullScreen=true>
- <https://www.hackerrank.com/challenges/find-the-median/problem?isFullScreen=true>