DSA

**Roman Number to Integer**

<https://www.geeksforgeeks.org/problems/roman-number-to-integer3201/1>

Given a string in roman no format (s)  your task is to convert it to an integer . Various symbols and their values are given below.  
I 1  
V 5  
X 10  
L 50  
C 100  
D 500  
M 1000

**Example 1:**

**Input:**

s = V

**Output:** 5

**Example 2:**

**Input:**

s = III

**Output:** 3

Approach:

* The main approach would be how you are treating 4 and 9 because it will be mentioned as Iv and IX calculate two value all the time s1 will calculate current value and s2 will calculate i+1 value of string if s2 is graeter than s1 I will do s2-s1 to to the result because it will give me extact result
* Rest is everthing is s1 greater add that value to the result

Int to Roman:

<https://www.geeksforgeeks.org/problems/convert-to-roman-no/1>

Given an integer n, your task is to complete the function **convertToRoman** which prints the corresponding roman number of n. Various symbols and their values are given below  
Note:- There are a few exceptions for some numbers like 4 in roman is IV,9 in roman is IX, similarly, 40 is XL while 90 is XC. Similarly, 400 is CD while 900 is CM

I 1  
V 5  
X 10  
L 50  
C 100  
D 500  
M 1000

**Example 1:**

**Input:**

n = 5

**Output:** V

**Example 2:**

**Input:**

n = 3

**Output:** III

Approach:

* The idea is to create 4 array’s to store thousand, hundred,tens,units
* Using the array just get the value.
* Note to store this

string m[]={"","M","MM","MMM"};

string c[]={"","C","CC","CCC","CD","D","DC","DCC","DCCC","CM"};

string l[]={"","X","XX","XXX","XL","L","LX","LXX","LXXX","XC"};

string i[]={"","I","II","III","IV","V","VI","VII","VIII","IX"};

closest string:

<https://www.geeksforgeeks.org/problems/closest-strings0611/1>

Given a list of words followed by two words, the task to find the minimum distance between the given two words in the list of words

**Example 1:**

**Input:**

S = { "the", "quick", "brown", "fox",

"quick"}

word1 = "the"

word2 = "fox"

**Output:** 3

**Explanation:** Minimum distance between the

words "the" and "fox" is 3

**Example 2:**

**Input:**

S = {"geeks", "for", "geeks", "contribute",

"practice"}

word1 = "geeks"

word2 = "practice"

**Output:** 2

**Explanation:** Minimum distance between the

words "geeks" and "practice" is 2

Approach:

* The idea is to start the loop from start and compare each element using two if one for word1 and another for word2
* If the condition becomes true sore that index
* At last see which has minimum value ans or d1-d2. Using abs with d1-d2 because if we get – value also it makes positive.