

2.The following questions are related to C++ Programming

- a. Write a program where you have to take 2 numerical inputs and 1 input for operator {the operator input has to be either '+', '-', '*'). Depending on some comparisons, you need to carry out three operations: addition (+), subtraction (-) and multiplication (*). Each of these operations will be implemented in separate methods.
- If the first number is greater than the second number, do subtraction and print the result.
 - If the third number is less than the second number, do addition and print the result.
 - If the second number is equal to the third number, do multiplication and print the result **[2 Marks]**
- b. Write a program that allows you to erase multiple spaces in a text file. Then re-write the sentence without extra spaces in another text file.

Input:

I love Python Programming

Output:

I love Python Programming.

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Hints:

You can use split function to separate the words into a list. **[3 Marks]**

- c. Again, you have lost your USIS password!! You went to the registrar office and requested for a new password. This time, you need to follow some rules to set your password. Otherwise, they won't change it. The rules are:
- At least one lowercase letter
 - At least one uppercase letter
 - At least one digit (0-9)
 - At least one special character (_ , \$, # , @)
- Your task is to find whether a given password follows all those rules. If it breaks any rule, you have to print **“Lowercase Missing”**, **“Uppercase Missing”**, **“Digit Missing”** or **“Special Missing”** respective to the missing case. For more than one rule break, print all the rules that were broken (order doesn't matter). If the password is ok, print **“OK”**.

[3 Marks]

Sample Input:

- BR@CUspring
- bracuspring
- BR@CU20spring22

Sample Output

- Digit missing
- Uppercase character missing, Digit missing, Special character missing
- OK

- d. A company named Sheba.xyz has recently moved from their old domain to a new domain. However, a lot of the company email addresses are still using the old one (employeeName@kaaj.com). Write a function in C that takes email id of an employee as input and checks whether that email id is updated (I.E. using new domain employeeName@sheba.xyz) or not. **[3 Marks]**

Sample Input:

- fahmid@kaaj.com
- zaki@sheba.xyz

Sample Output:

- Email address is outdated
- Email address is okay

- e. Take a string input from user and find out whether it is a palindrome or not using pointers. **[3 Marks]**

Sample Input:

AAABBAAA
AABBABA
aabcbaa

Sample Output:

Palindrome
Not Palindrome
Palindrome