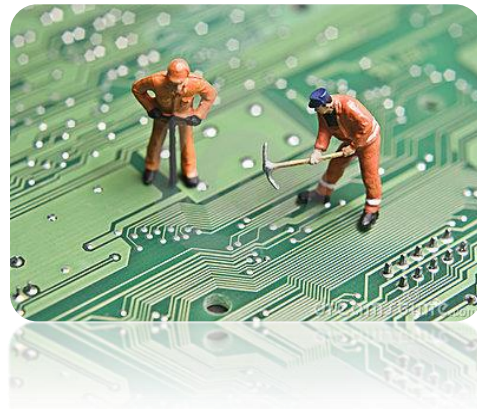


Computational **Problem** **Solving** (CS100)

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Lab 8 Objectives:

- String Manipulation
- Loops and sentinel statements

Lab Guidelines

1. Make sure you get your work graded before the lab time ends.
2. You put all your work onto the LMS folder designated for the lab (i.e. "Lab08") before the time the lab ends.
3. Talking to each other is NOT permitted. If you have a question, ask the lab assistants.
4. If you are a hot-shot C++ expert, you are still not allowed to use any feature of C++ that has not been covered in class or in the lab.
5. The object is not simply to get the job done, but to get it done in the way that is asked for in the lab.

Task 1: Arithmetic Console

Write a program where the user enters two numbers, A and B. The program should then ask the user what to do with the numbers through a menu.

The menu should look something like this:

```
Press 1 for A*B
Press 2 for A+b
Press 3 for A-b
Press 4 for A%b
Press 5 to re-enter the numbers
```

Output the answer to the user and continue asking for two numbers until the generated answer is zero in which case the program should exit.

CHECKPOINT 1

STOP

Show your program and results to the TA.

Task 2: Palindrome Tester

A palindrome is a word, phrase, number, or other sequence of characters which reads the same backward or forward, such as madam, racecar or kayak. Write a program that takes a word as an input and checks whether or not it is a palindrome. Your program should execute something like this

```
Please Enter Word:
maham
maham is a palindrome
Please Enter Word:
Umbrella
Umbrella is not a palindrome
```

Caution: Use lowercase inputs.

CHECKPOINT 2
STOP

Show your program and results to the TA.

Task 3: Name Formatter

Write a program that takes a full name as input, first name and last name separated by spaces. Your program should then create a new string that contains the full name using some rules. The rules are as follows:

The name should be in the format (Last Name, First Name)

Mc, O, Bin and any two or three letter word between the first and the last name is part of the last name.

A sample execution has been attached for your help

Input Name:

Umair ul Shahzad

Formatted name is: ul Shahzad, Umair

Input Name:

Abd ur Rafay

Formatted name is: ur Rafay, Abd

Input Name:

Haseeb ibne Asim

Formatted name is: ibne Asim, Haseeb

Reminder:

If we want to get a complete line as input, we need to use the `getline` function as shown below

```
> string s;  
> getline(cin, s);
```

CHECKPOINT 3

STOP

Show your program and result to the TA.

Zip your tasks into one folder with format:
example "**18100012-Lab8**" and upload on LMS before the tab is
closed. You will not be given extra time