

Phase - 7

Template Programs



1. Badal and Nayan wants to get out from a well located in a village farm. Another person stood outside at a well wants to help them. But near that well, two small pieces of ropes available which just not make any sense. By joining both that ropes, they will be able to get outside. So help that person to perform joining of that two peices of certain length using concept of functional templates in C++.

2. Design a Menu Driven Simple Calculator with a help of Class Templates. User should have a choice of following operations:

- Addition
- Subtraction
- Multiplication
- Division
- Modulus
- Exit

3. Build a class template called “List” which accepts two parameters: Array & Size of that array. Define two List which have different elements of different size. Use both of that array to concate with each other and create another List. Now from that List, perform following operations:

- Average value of that List
- Max and Min value

Provide Menu driven approach to do so.

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4. Disha wants to help a FireBriged team by deciding which of the following route is shorter to reach an incident location:

- Route A: Mumbai to Pune - 120 KM
- Route B: Mumbai to Pune - 136 KM

Help Disha by designing function template to figure out shorter route for FireBriged team.

5. Design an identification system for all letters available from Keyboard.

For example,

- If a user enters "B", then print "alphabet"
- If a user enters "7", then print "digit"
- If a user enters "#", then print "symbol"

To do so, use function/class template in C++.

6. SDJ college is organizing a competition for creating a password strength detection system. Criterias for this system are as following:

- Password must be greater than or equal to 6
- Password must contains at least one alphabetic letter, one digit and one special symbol.

So as a participant, build this type of system using class/function template in C++.

7. Design a "Find & Replace character(s)" mechanism for any given message or string. Use Non-type parameters for template.