Bangladesh University of Engineering and Technology
Department of Computer Science and Engineering
CSE 310: Compiler Sessional
B1 Online
21 June 2022

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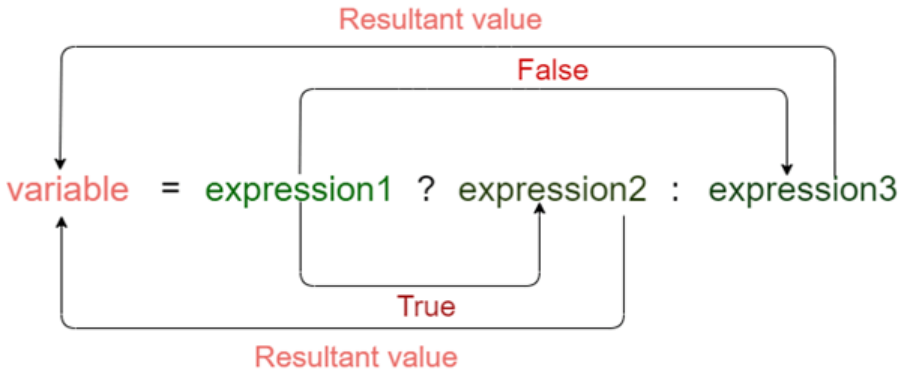
1. Task

The conditional operator is also known as a ternary operator. The conditional statements are the decision-making statements that depend upon the output of the expression. It is represented by two symbols, i.e., '?' and ':'. The pictorial representation of the operator is shown below:



As it's not possible to identify expression through flex, we will try a toned down version of the ternary operator like below:

variable/number/character <RELOP/LOGICOP> variable/number/character ? variable/number/character : variable/number/character

Assigning to a variable after the ternary operation is optional.

For example, some valid statements are -

1. x = a > b ? a : b;
2. x == y ? 1 : 2;
3. a || b ? x : y;

Your task is to capture the pattern of this ternary operator. You need to make sure your solution works for the nested ternary operator as well. For example -

1. x = a > 2 ? 3 : a < 4 ? 4 : 5;
2. x = a < 2 ? b > 3 ? 5 : 4 : a < 4 ? 4 : 5;

For successful detection print **(Ternary operation with LOGICOP/RELOP detected).** In case of errors - a part of the statement missing, you should print **Error Detected**.

You must do it in a new lex file (not rewrite it over a copy of your offline).

A. Mark Distribution

a. Ternary Operator - 6
b. Nested Ternary Operator - 4

B. Submission Guideline

Name the .l file with your student id. Keep this file in a folder named by your student id. Zip the folder and upload it.