

# Department of Computer Engineering

## University of Peradeniya

CO222 Programming Methodology

Lab 02 – Conditional Statements

November 13, 2023

### 1 Objective

The objectives of Lab - 02 is to learn how to perform Conditional Statements (if-else) using C.

### 2 Introduction

- In this lab, you are expected to write a software in C for a real-world problem. The web page [Click here](#) shows how the Monthly Tax Deductions from Regular Profits from Employment is calculated in Sri Lanka. An online working solution can be found at [Calculator](#).
- The program should take an integer (which is the income) as the input and print the calculated total tax. The output should be a floating-point number that always consist of two decimal places for a correct input. For any wrong input, the program should print -1 as the output.
- You can test your program using the test cases in Hacker Rank.

### 3 During the lab

#### 3.1 Design the solution first

- You should design the solution using the tool <https://www.draw.io> before you start any coding.
- As a group, discuss the problem and design the solution as a flow chart. This is crucial, and the design will earn 30% of the total lab mark. During the lab, you are not expected to write any code (unless you finish the design early). Understand the problem correctly and discuss any doubts with instructors.
- To earn the marks, you should explain the solution to one of the instructors and get it marked. During the submission, submit the source code using Hacker Rank.

### 3.2 Test the program thoroughly

- Use following test cases to test the programme

Input (Monthly regular profits)	Output
100000	Total tax = 0.00 LKR
None integer input	-1
125000	Total tax = 1500.00 LKR
175000	Total tax = 6500.00 LKR
280000	Total tax = 29000.00 LKR

- You can also use the web page [Calculator](#) check all the possible outcomes. Especially focus on the corner cases where input lies in marginally to the conditions.

## 4 Submission

Show the design to an instructor, explain the solution and get it marked.

Submit your work to the given submission link in FEeLS according to the following instructions:

1. Create a folder containing your working codes (one file for each question)
2. Compress your folder to a single ZIP file
3. Rename your folder according to the following pattern, where xxx is your registration number and submit. Folder naming convention: e20xxxlab01.zip

## 5 Important

- We mark the final submission individually, and under no circumstance, you should copy somebody else's code.
- Copying someone else's code (including your group mate's) or showing your source code to anyone else will earn you zero mark for the whole lab exercise.

## 6 Deadline

The deadline for the submission is 19th November 2023 at 11.55 PM.

## 7 References

W3Schools. (n.d.). C Conditions. W3Schools. Available at: [https://www.w3schools.com/c/c\\_conditions.php](https://www.w3schools.com/c/c_conditions.php) (Accessed: [insert the date you accessed the page])

ArticleWorld. (n.d.). If-Else in C - Interview Questions. ArticleWorld. Available at: <https://aticleworld.com/if-else-in-c-questions/> (Accessed: [insert the date you accessed the page]).