

SWT11022: Practical for Fundamentals of Programming

Department of Information & Communication Technology

Faculty of Technology

South Eastern University of Sri Lanka

Time: - 08.30 am – 09.30 pm

Lab Sheet 06

Title: Control Structures in C Programming Continue.

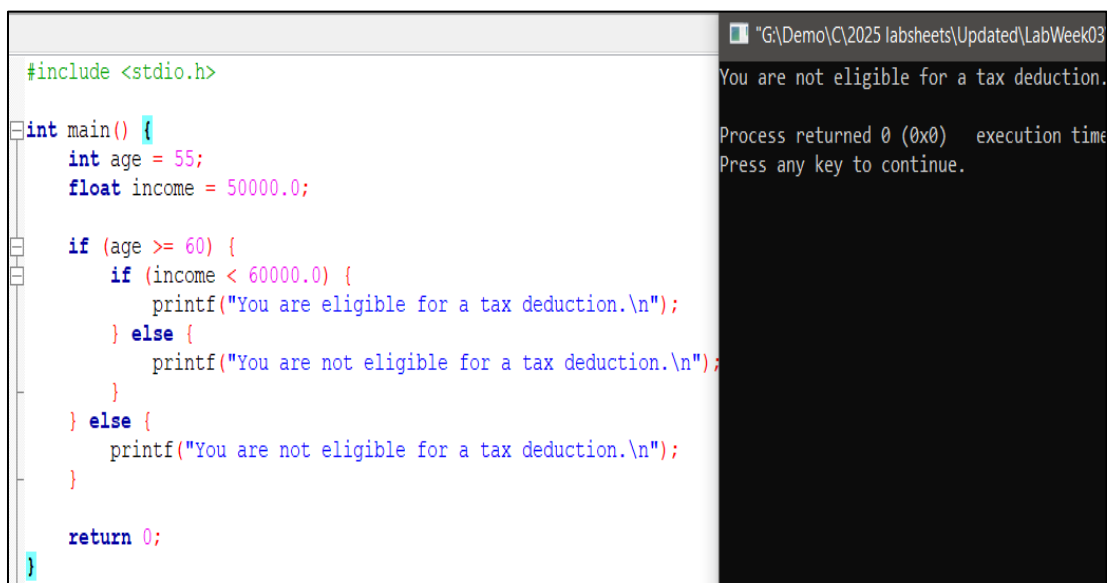
Objective:

- Understand and practice nested if statements.
- Understand and practice the switch statement.

Practical 01: Nested if Statements

Steps:

1. Declare two variables: age and income.
2. Use nested if statements to check eligibility for a tax deduction:
 - If age ≥ 60 and income < 60000 , eligible for a tax deduction.
 - Otherwise, not eligible.



The screenshot shows a C program in a code editor on the left and its execution output in a terminal window on the right. The program uses nested if statements to check eligibility for a tax deduction based on age and income. The variables are initialized as age = 55 and income = 50000.0. The output shows the program printing 'You are not eligible for a tax deduction.' and then returning 0.

```
#include <stdio.h>

int main() {
    int age = 55;
    float income = 50000.0;

    if (age >= 60) {
        if (income < 60000.0) {
            printf("You are eligible for a tax deduction.\n");
        } else {
            printf("You are not eligible for a tax deduction.\n");
        }
    } else {
        printf("You are not eligible for a tax deduction.\n");
    }

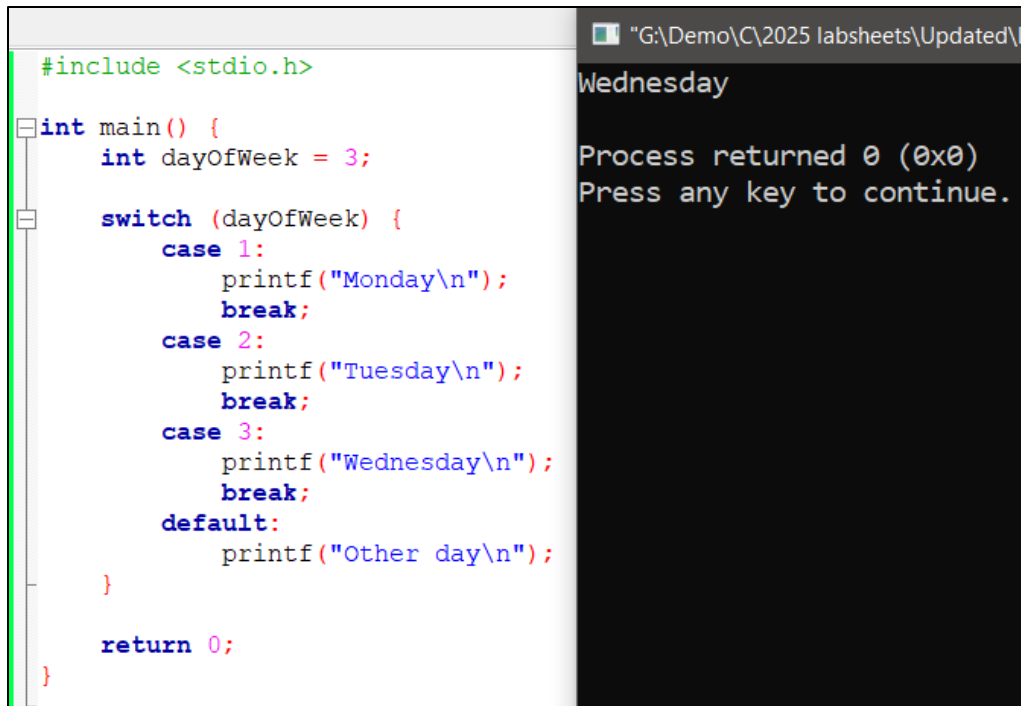
    return 0;
}
```

"G:\Demo\C\2025 labsheets\Updated\LabWeek03
You are not eligible for a tax deduction.
Process returned 0 (0x0) execution time
Press any key to continue.

Practical 02: Switch Statement

Steps:

1. Declare a variable dayOfWeek and assign a value (e.g., 3 for Wednesday).
2. Use a switch statement to print the corresponding day.



```
#include <stdio.h>

int main() {
    int dayOfWeek = 3;

    switch (dayOfWeek) {
        case 1:
            printf("Monday\n");
            break;
        case 2:
            printf("Tuesday\n");
            break;
        case 3:
            printf("Wednesday\n");
            break;
        default:
            printf("Other day\n");
    }

    return 0;
}
```

The screenshot shows a C program in a code editor. The program declares a variable `dayOfWeek` and assigns it the value 3. It then uses a `switch` statement to print the corresponding day of the week. The output window shows "Wednesday" and "Process returned 0 (0x0) Press any key to continue."

Tasks

Task 01: Electricity Bill Calculation

- Write a C program to calculate the total electricity bill according to the given conditions using if-else statements.

Number of Units	Rate (Rs.)
First 50 units	0.50/unit
Next 100 units	0.75/unit
Next 100 units	1.20/unit
Above 250 units	1.50/unit

Task 02: Tax eligibility testing.

Write a program that:

- Declares two variables: age and income, and assigns values.
- Uses nested if statements to determine if a person is eligible for a tax deduction based on age and income.
- Displays the result.

Age	Income	Eligibility
>= 60	< 60000	Eligible for tax deduction
>= 60	>= 60000	Not eligible for tax deduction
< 60	Any	Not eligible for tax deduction

Task 03: Switch Statement

Write a program that:

- Declares a variable dayOfWeek and assigns it a value (e.g., 3 for Wednesday).
- Uses a switch statement to print the name of the day based on dayOfWeek.
- Includes cases for multiple days.

dayOfWeek Value	Output
1	Monday
2	Tuesday
3	Wednesday
Other values	Other day

Report Submission Guidelines

- Submit the Report by 24/03/2025.
- Late submissions will not be accepted.
 - Report Structure Practical No
 - Date of Submission
 - Title
 - Objective of the practical.
 - Exercise
 - Challenges
 - Conclusion
 - References