SWT11022: Practical for Fundamentals of Programming

Department of Information & Communication Technology
Faculty of Technology
South Eastern University of Sri Lanka

Time: - 08.30 am - 10.30 am Lab Sheet 05

Title: Introduction to the Control Structure in C Programming**.**

Objective:

- Understand and practice the basic if statement.
- Understand and practice the if-else statement.
- Understand and practice the if-else if-else statement.

Practical 1: Basic if Statement

Steps:

1. **if Statement:**
   - Declare a variable temperature and assign it a value.
   - Use an if statement to check if the temperature is above 25 degrees Celsius.
   - Display a message if the condition is true.

```
int temperature = 30; if (temperature > 25) {
    printf("It's a warm day.");
}
```

Practical 2: if-else Statement

Steps:

1. **if-else Statement:**
   - Declare a variable marks and assign it a value.
   - Use an if-else statement to check if the marks are above the passing threshold (e.g. 50).
   - Display different messages based on the result.

```
int marks = 42;
if (marks >= 50) {
printf("You passed the exam.");
} else {
printf("You failed the exam.");
}
```

Practical 3: if-else if-else Statement

Steps:

1. **if-else if-else Statement:**
    - Declare a variable number and assign it a value.
    - Use an if-else if-else statement to categorize the number as positive, negative, or zero.
    - Display the appropriate message.

```
int number = -7; if (number > 0) {
printf("The number is positive.");
} else if (number < 0) {
printf("The number is negative.");
} else {
printf("The number is zero.");
}
```

Tasks:

Task 1: Even or Odd Number Check

- Declare an integer variable and assign a value.
- Use an `if-else` statement to check whether the number is even or odd.
- Print the appropriate message.

```
Enter a number: 7

The number is odd.
```

Task 2: Grade Classification

- Declare a variable `marks` and take user input.
- Use an `if-else if-else` statement to classify the marks into grades:
  - 90 and above: "Excellent"
  - 75 - 89: "Very Good"
  - 50 - 74: "Good"
  - Below 50: "Fail"
- Display the corresponding grade message

```
Enter marks: 85

Grade: Very Good
```

Task 3: Voting Eligibility Checker

- Declare a variable age and take user input.
- Use an if statement to check if the age is 18 or above.
- Display "Eligible to vote" if the condition is met; otherwise, display "Not eligible to vote".

```
Enter age: 16
Not eligible to vote
```

Task 4: Largest of Three Numbers

- Declare three integer variables and take user input for each.
- Use an `if-else if-else` statement to determine the largest number among the three.
- Display the largest number.

```
Enter three numbers: 12 25 8
The largest number is 25.
```

Task 5: Positive, Negative, or Zero Checker

- Declare an integer variable and take user input.
- Use an `if-else if-else` statement to check whether the number is:
    - Positive (`> 0`)
    - Negative (`< 0`)
    - Zero (`== 0`)
- Display the appropriate message.

```
Enter a number: -5

The number is negative.
```

Report Submission Guidelines

- Submit the Report by 10/03/2025.
- Late submissions will not be accepted.
    - Report Structure Practical No
    - Date of Submission
    - Title
    - Objective of the practical.
    - Exercise
    - Challenges
    - Conclusion
    - References