Tutorial 6

IT1010 – Introduction to Programming   **Semester 1, 2020**

Question 1

Draw a flowchart to input an integer from the keyboard and display whether the number is positive, negative or zero. If the number is > 0 display "number is positive". If number is zero display " Number is zero". Otherwise display "Number is negative".

Convert the flowchart to a C program.

Question 2

Draw a flow chart to enter a number from the keyboard and print whether it is an even number or an odd number.

Convert the flowchart to a C program.

Question 3

A palindrome is a number or a text phrase that reads the same backward as forward. For example 12321, 45554. Write a C program that reads a five-digit integer and determines whether it is a palindrome or not.

Question 4

Write a C program to input the grade from the keyboard and print the respective messages. (Use if-else statements and upper and lower case both should be allowed when entering the grade)

Grade	Message
A	Excellent
B	Good
C	Satisfactory
F	Needs Improvement

Question 5

Re-write the answer for question 4 using switch statements.

Question 6
Convert the following switch statement to an equivalent if-else statement.

```
switch ( grade ) {
```

```
        case 'A' :
                printf( "Excellent \n");
                break;
        case 'B' :
                printf( "Good \n");
                break;
        case 'c' :
        case 'C' :
                printf( "OK \n");
                break;
        default  :
                printf( "Needs Improvement\n");
        }
```

Question 7

A company calculates the bonus given to their employees based on the employee category.
Write a C program to input the employee category and basic salary and calculate the bonus
amount.

Employee category   Bonus percentage
1   5%
2   10%
3   15%

Bonus = Basic_Salary * Bonus_Rate