

## CO225: Software Construction

### Lab 01 : Conditional Execution

**Tasks :**

- A. Download the code from FEeLS for Lab 01 Part A. Your task is to complete the function which would print the grade according to the score **using the switch statements**. **(15 marks)**

| Marks    | Grade |
|----------|-------|
| 80 - 100 | A     |
| 65 - 79  | B     |
| 55 - 64  | C     |
| 50 - 54  | D     |
| 0 - 49   | F     |

- B. Download the code from FEeLS for Lab 01 Part B.
- Print whether the given number is even or odd by completing the function. **(10 marks)**
  - Enhance the above code to perform the following:
    - Pass the number as a command line input and read from there.
    - If the given number is an even number, print the next 5 even numbers.
    - If the given number is an odd number, print the next 3 odd numbers using a for loop. **(15 marks)**
- C. Download the code from FEeLS for Lab 01 Part C. An int named “monthValue” whose value represents a month. (example : monthValue = 1 ; month = JANUARY).
- Complete code to display the value of the month, based on the name of month, **without using switch statements**. (Use complete month names with upper case : JANUARY , FEBRUARY , ...) **(10 marks)**

- b. Develop the above code to pass the month name as a command line input and print upcoming months of the year according to the given month using a while loop. Examples : if the given month is APRIL, the application should print MARCH to DECEMBER. If the given month is DECEMBER it should not print any month. **(15 marks)**
- D. A botanical garden in Sri Lanka needs a program for its admission booths. When visitors come up to the booth to purchase their tickets, the worker uses this program to figure out how much to charge them. There is one ticket price of Rs. 200. Senior citizens from all the countries (age  $\geq 65$ ) are given a 50% discount and children under 5 years are free. If the visitors are foreigners from SAARC countries they will be charged extra 35% from their final ticket price. If the visitors are foreigners but not from SAARC countries, they will be charged 65% from their final ticket price.
- a. Download the code from FEeLS for Lab 01 Part D and complete the code to calculate age, ticket price and display the ticket price according to above conditions. Use the following integer country codes in the program accordingly. **(30 marks)**
- b. Enhance the code to read birth date and country code from command line arguments. **(5 marks)**

| Country    | Country Code |
|------------|--------------|
| Bangladesh | 1            |
| Bhutan     | 2            |
| India      | 3            |
| Maldives   | 4            |
| Nepal      | 5            |
| Pakistan   | 6            |
| Sri Lanka  | 7            |
| Others     | 8            |