ASSIGNMENT # 1
CSC103- PROGRAMMING FUNDAMENTALS

DUE DATE: 11-03-2022 TOTAL MARKS: 30

Instructions:

- Assignment should be hand written/typed on A4 page size, with front page having the following details. **(Note: Failing to attach the front page with the following details will result in deduction of 5 marks)**
  Reg. # :_____
  Name : _____
  Course Title : _____
  Section : _____
  Assignment # : _____
  Submitted to : _____
  Date : _____
  (Font size 16, Times New Roman)
- No marks for late submission.
- Assignment should be well formatted.

Question # 01: **[CLO-1]**

Demonstrate the analysis-design-coding cycle on the following problem. Go through the example named 'Make Change' at the end of Chapter 2 of your text book as a reference. Your assignment solution should contain all the sections given in the example, e.g., analysis, Main algorithm design, complete program, sample program run etc.

Problem Statement:

A milk carton can hold 5.28 liters of milk. Each morning, a dairy farm ships cartons of milk to a local grocery store. The cost of producing one liter of milk is $1.18, and the profit of each carton of milk is $0.95. Illustrate a C++ program that does the following:

a) Displays your registration No., Name, Assignment No. and the course name according to the following format at the start of program.

```
**********************************************************
***        PROGRAMMING FUNDAMENTALS                    ***
***              ASSIGNMENT NO. 1                      ***
***                SP22-BCS-132                        ***
***                AHMAD ALI                           ***
**********************************************************
```

b) Prompts the user to enter the total amount of milk produced in the morning.

c) Outputs the maximum number of milk cartons formed to hold milk.
d) Output the quantity stored in the fridge. If quantity of milk which can't form a complete carton is left (i.e., less than 3.78 liters). Then that milk is stored in the fridge.
e) Outputs the cost of producing milk.
f) Outputs the profit for producing milk.

Instructions:

- Use output manipulators for maintaining spaces in output of your program. Moreover, properly add prompt messages where required.
- Follow program style instructions such as indentation, meaningful variables names, comments etc.
- Test your program by running it five times, using the following data and add the screen shot of each output screen in your assignment.

  36.96
  28.54
  4.16
  66.78
  110.88