This is individual coursework. You are not allowed to use functions, arrays, math.h unless mentioned.

For each question you have to write:

1. **Pseudocode**
2. **Programming solution**

Q1. Write a program that calculates the squares and cubes of the numbers from 0 to 10000

a). the numbers only multiple of 4.50 (only here you may include <math.h>) [marks: 2 + 8]

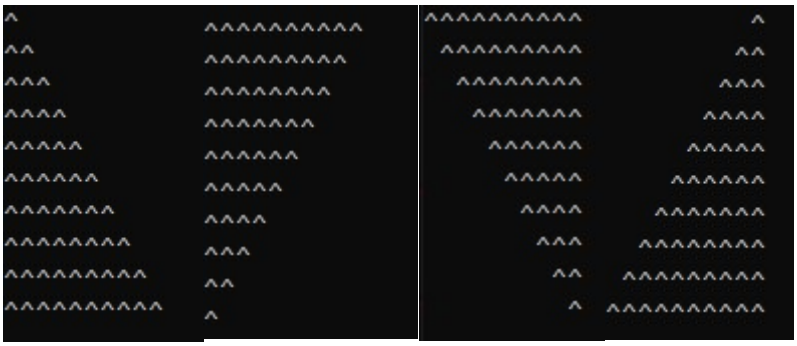
b) the number only multiple of 5. [marks: 2 + 8]

Uses tabs to print, for example:

```
  number          square          cube
4.500000        20.250000       91.125000

9.000000        81.000000       729.000000
```

Q2. Write a program that prints the following patterns separately, one below the other. Use for loops to generate the patterns. All asterisks (^) should be printed by a single printf statement for one pattern in a loop.



[marks: 2 + 8]

Q3. In a company the hierarchy of workers is; manager, daily workers, hourly workers, commission workers, labour at products packing. The salaries are as follows;

(1). Manager: fixed Monthly salary (2) Daily worker: can work 6 days in week and in case on overtime for extra day is 2/3 of daily wages. (3) Hourly worker: can work 50 hours in a week and half of hourly wage for overtime. (4) Commission worker: weekly wages $230 + 5.9% for total sale in a week. (5) labour at product packing: 0.05% of total sum of total item packed in a week.

Write a program to compute each employee's monthly pay. You do not know the number of employees in advance. Each type of employee has a code infront of his designation for example manager has 1. Your program should display all the employees code, ask for their salary based on their

designations and calculate the salary based on their designated jobs. It should prompt for all the necessary facts to be included to calculate the salary against each designation. Your program should not miscalculate the salary especially for daily workers, commission workers, hourly workers, and labour. The accuracy limit is set to 2 decimal places for each salary. The number of employees is unknow so the program should not stop.

[marks: 4 + 16]

Evaluation will be based on:

Correctness/structure of your program
Comments -including your name, question number
Input/Output
Submit in one text file

And a ZIP folder which includes

1. **all your codes and output files with names: Q1 , Q2 ...**
2. **StudentID_code.txt** (replace student id with your own student id number, your codes should be separated with question no.).
3. **StudentID_pseudocode.txt** (replace student id with your own student id number, your text should be separated with question no.).

You have 24 Hours to submit on moodle:
Release time: 17:00 27-Oct-2022
Submission time: 16:59 28-Oct-2022