CL1002 – Programming Fundamentals Lab
Exercise # 06

Note:

- Submit a pdf file containing all of your C code with all possible screenshots of every task outputs on Google Classroom.
- Copied task will be awarded **zero** marks.
- Note that these lab task marks could be graded through a viva in lab.
- Please submit your file in this format (roll-no-name) i.e (22P-8743-Zain.pdf).
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Problem: 1

Write a program in c that counts the number of digits in an integer.

For example

if the user enter 789 output should be 3

if the user enter 8743 output should be 4

if the user enter 52462 output should be 5

Note: use while loop

Problem: 2

Write a function that takes two numbers as an argument and return their LCM.

Problem: 3

Write a function that takes two numbers as an argument and return their HCF

(Highest Common Factor) /GCD (Greatest Common Divisor).

Problem: 4

Write a program that performs a survey tally on beverages. The

program should prompt for the next person until a sentinel value of −1 is entered to

terminate the program. Each person participating in the survey should choose their favorite beverage from the following list:

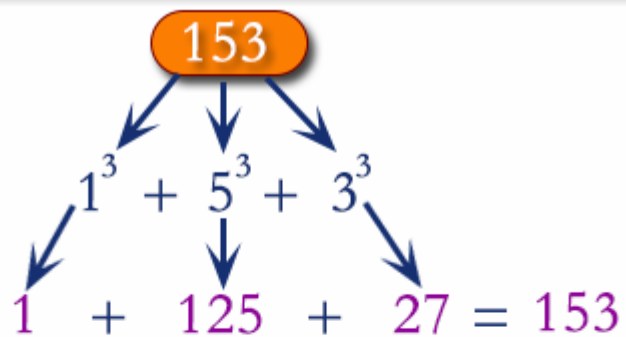| 1. Coffee	2. Tea	3. Coke	4. Orange Juice

Sample Output

```
Choose your favorite beverage from the following list
1.Coffee    2.Tea    3.Coke    4.Orange Juice
Please input the favorite beverage of person #1  Choose 1,2,3,or 4 from the above menu or -1 to exit the program
4
Please input the favorite beverage of person #2  Choose 1,2,3,or 4 from the above menu or -1 to exit the program
4
Please input the favorite beverage of person #3  Choose 1,2,3,or 4 from the above menu or -1 to exit the program
1
Please input the favorite beverage of person #4  Choose 1,2,3,or 4 from the above menu or -1 to exit the program
1
Please input the favorite beverage of person #5  Choose 1,2,3,or 4 from the above menu or -1 to exit the program
4
Please input the favorite beverage of person #6  Choose 1,2,3,or 4 from the above menu or -1 to exit the program
2
Please input the favorite beverage of person #7  Choose 1,2,3,or 4 from the above menu or -1 to exit the program
-1
Beverage        Number of Votes
*********************************
Coffee          2
Tea             1
Coke            0
Juice           3
```

Additional Task (Ungraded)

Problem: 5

Write a program in C to check Armstrong and perfect numbers using the function.

153

$1^3 + 5^3 + 3^3$

$1 + 125 + 27 = 153$

153 = 153

An Armstrong number

Perfect Number :

Divisor of 28 : 1, 2, 4, 7, 14, 28
Sum of 1 + 2 + 4 + 7 + 14 = 28
Sum = Original Number

28 is *Perfect number*

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