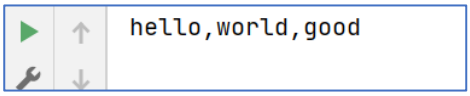
Week 13 Extra Practical

1. Write a function **string_first_three** which takes in a List of Strings and return a String that contains the first 3 items in the List, separated by commas. Assume the List of Strings has at least 3 items.

   Add the following to your code:

   stringlist = ["hello", "world", "good", "day", "all"]

Test Code	Result
result = string_first_three(stringlist) print(result)	

2. Write a function called **multiply_number** accepts two parameters, NumberList which contains a List of numbers, and A, which is a number. The function mulitplies all the numbers in NumberList by A and return the results in a List.

Test Code	Result
print(multiply_number([1, 2, 3], 9))	[9, 18, 27]
print(multiply_number ([20, 21, 22, 2, 0, 7], 2))	[40, 42, 44, 4, 0, 14]

3. Write a function **calc_lib_fines** to calculate and return the total fines for a book overdue according to the table below.

No of days overdue	Fine per day	Example
Less than or equal 7 days	10 cents	4 days overdue, fine = 4 x 0.1 = 0.4
More than 7 days	30 cents	10 days overdue, fine = 10 x 0.3 = 3.0

Test Code	Result
print(calc_lib_fines(10))	3
print(calc_lib_fines(4))	0.4

4. Write the program to get a user to enter the number of days where a library book is overdue. The program then calculates and displays the fine.
   Your program must use the function defined in question 4.
   Samples of the expected program outputs are provided as follows:

```
Enter the number of days overdue: 30
The fine to be paid is 9.0
```

5. Write a function called “add_tutor” that will allow primary school student to practice their addition questions.
   - First it will ask the student on how many questions they want to attempt
   - It will then proceed to randomise 2 number from 1 to 20, ask the student to answer the questions and inform the student if the answer is correct.
     Using the follow to randomly generate a number from 1 to 20:
     random.randint(1,20)

   Samples of the expected program outputs are provided as follows:

```
Welcome to Addition challenge!
Please enter the number of questions you would like to attempt:3
Question 1:
7+9=15
Sorry its wrong!
Question 2:
3+5=8
Correct!
Question 3:
10+13=10
Sorry its wrong!
```

6. Write a function called “sub_tutor” that will allow primary school student to practice their subtraction questions.
   - First it will ask the student on how many questions they want to attempt
   - It will then proceed to randomise 2 number from 1 to 20, ask the student to answer the questions and inform the student if the answer is correct.
     Using the follow to randomly generate a number from 1 to 20:
     random.randint(1,20)

   Samples of the expected program outputs are provided as follows:

```
Welcome to Subtraction challenge!
Please enter the number of questions you would like to attempt:3
Question 1:
15-11=4
Correct!
Question 2:
8-3=4
Sorry its wrong!
Question 3:
13-3=10
Correct!
```

7. For the above question 5 and 6, write a main menu so that the student can choose either to try the addition questions or the subtraction questions. The student will have to enter the word 'quit' to end the program.

   Samples of the expected program outputs are provided as follows:

```
Welcome to math tutor!
Please selection the challenge you would like to try, enter 'quit' to exit:
1. Addition challenge
2. Subtraction challenge
Your selection please:1

Welcome to Addition challenge!
Please enter the number of questions you would like to attempt:2
Question 1:
5+4=9
Correct!
Question 2:
13+3=10
Sorry its wrong!

Welcome to math tutor!
Please selection the challenge you would like to try, enter 'quit' to exit:
1. Addition challenge
2. Subtraction challenge
Your selection please:2

Welcome to Subtraction challenge!
Please enter the number of questions you would like to attempt:1
Question 1:
10-4=6
Correct!

Welcome to math tutor!
Please selection the challenge you would like to try, enter 'quit' to exit:
1. Addition challenge
2. Subtraction challenge
Your selection please:quit
Good Bye!
```