Python Test FC

1. You have a list of integers representing temperatures in Celsius. Create a lambda function to convert each temperature to Fahrenheit.

2. You have a list of student scores as integers. Convert each score to a corresponding grade ('A', 'B', 'C', 'D', 'F') using a map function.

3. You have a list of student ages. Filter out the underage students (below 18 years old).

4. You're designing a game. Define a base class `Character` with attributes `name` and `health`, and then create a class `Hero` inheriting from `Character` with an additional attribute `weapon`.

5. You're building a simple calculator. Write a loop to continuously ask the user for two numbers and an operation until they choose to exit.

6. You're creating a program to categorize movies based on their age rating. Implement a function that checks if a movie is suitable for children (rated G or PG) or not.

7. You're building a script to analyze a log file. Create a function to read the log file and extract all error messages.

8. You're designing a math library. Write a function to calculate the area of a circle given its radius.

9. You have a list of tuples containing student names and their corresponding ages. Create a lambda function to sort the list based on age.

10. You have a list of sentences. Convert each sentence to lowercase using a map function.

11. You're working with a list of email addresses. Filter out the invalid email addresses (those without '@' symbol).

12. You're developing a game. Define a base class `Enemy` with attributes `name` and `power`, then create a class `Boss` inheriting from `Enemy` with an additional attribute `level`.

13. You're building a program to display a countdown timer. Write a loop to count down from 10 to 1 and then display "Blast Off!".

14. You're creating a program to calculate shipping costs. Implement a function that checks if a customer qualifies for free shipping based on their order total.

15. You're working on a data analysis project. Write a function to read a CSV file and extract specific columns.

16. You're developing a utility library. Write a function to check if a given number is a prime number.

17. You have a list of dictionaries representing students' information (name, age, grade). Create a lambda function to sort the list based on the students' grades.

18. You have a list of numbers as strings. Convert each string to an integer using a map function.

19. You're analyzing a list of transactions. Filter out the transactions with negative amounts (refunds).

20. You're building a zoo management system. Define a base class `Animal` with attributes `name` and `species`, then create a class `Bird` inheriting from `Animal` with an additional attribute `can_fly`.