AI ASSISTED CODING

ASSIGNMENT 2.4

ENROLLMENT NO:2503A51L35

BATCH NO:20

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Task 1:

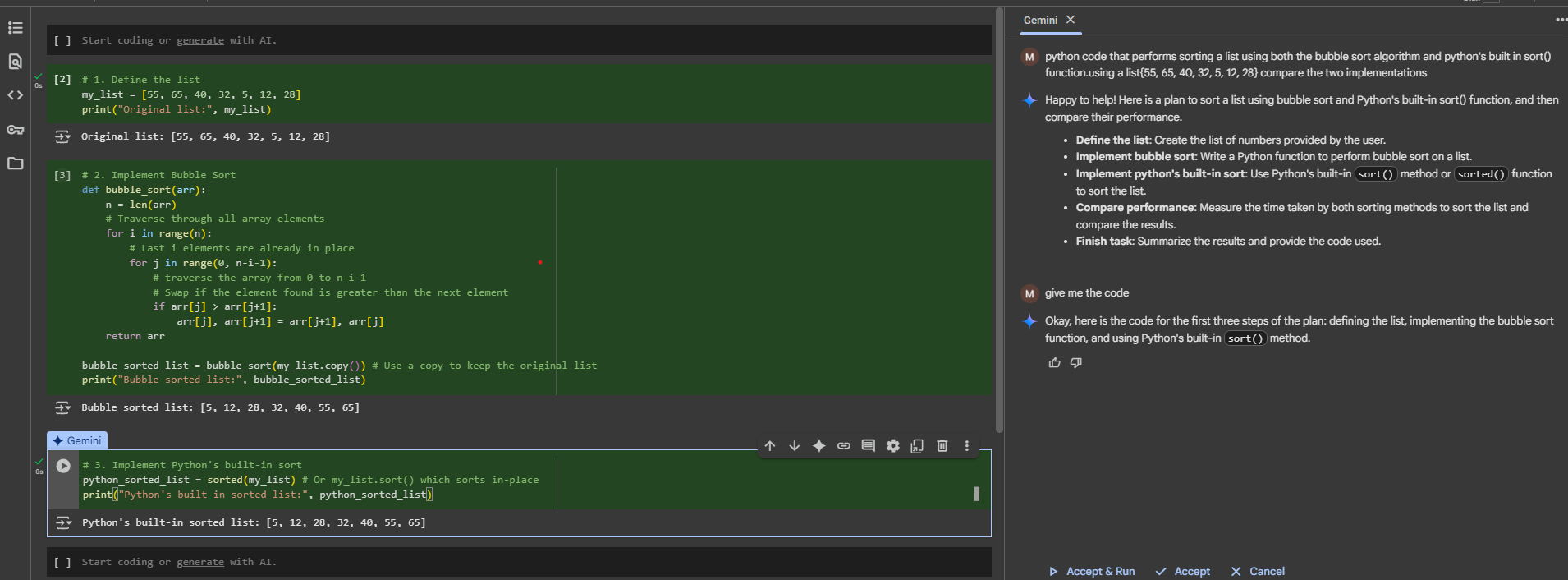
Description

Open Google Colab and use Google Gemini to generate Python code that performs sorting of a list using both the bubble sort algorithm and Python’s built-in sort() function. Compare the two implementations.

Prompt:

Python code that performs sorting of a list using both the bubble sort algorithm and Python’s built-in sort() function. Compare the two implementations.  
(give any list name)

Code&output:



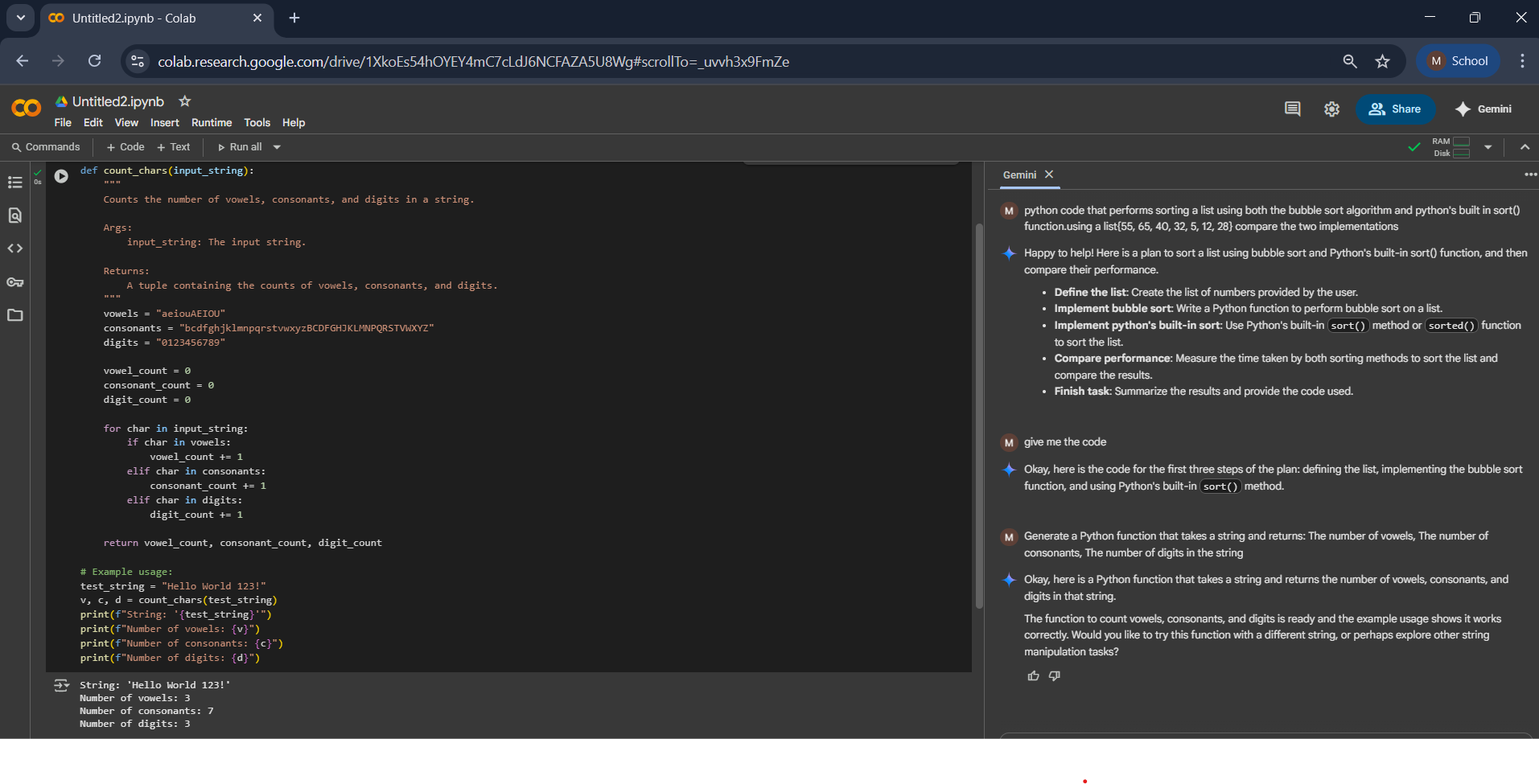
Task 2:

Description:

In Colab, use Google Gemini to generate a Python function that takes a string and returns The number of vowels, The number of consonants, The number of digits in the string.

Prompt: -Generate a Python function that takes a string and returns: The number of vowels, The number of consonants, The number of digits in the string

Code & output:



**Task 4**

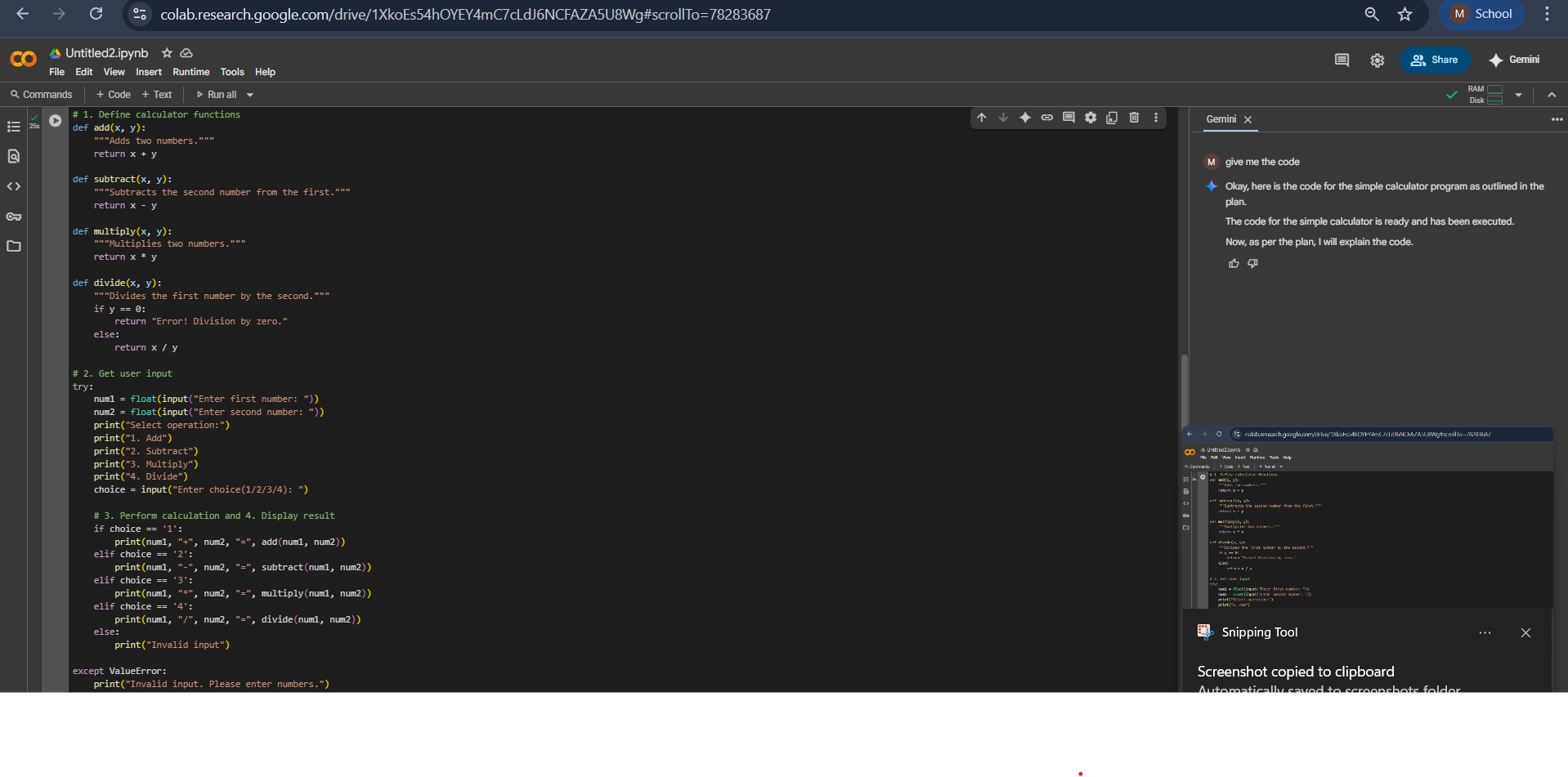
Description:

Ask Google Gemini to generate a Python program that implements a simple calculator using functions (add, subtract, multiply, divide). Then, ask Gemini to explain how the code works.

Prompt:

Generate a Python program that implements a simple calculator using functions (add, subtract, multiply, divide).And explain the code

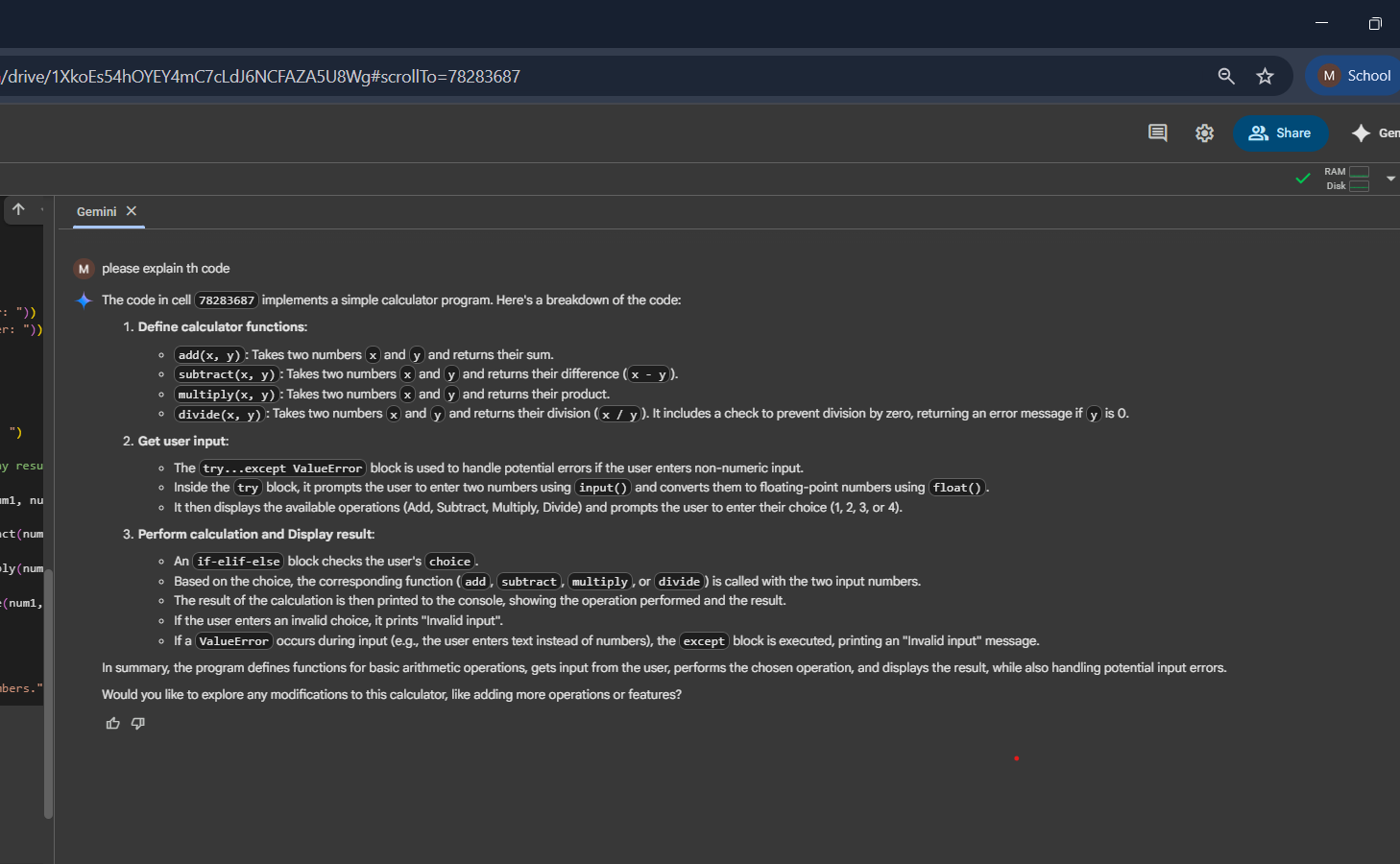
Code & output:



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AI-generated content may be incorrect.

Explanation of code:



OBSERVATION:-

I observed how Google Gemini can generate Python programs when provided with clear prompts and how different problem-solving approaches can be compared and analyzed.

• In Task 1, Gemini generated two different sorting implementations: one using the manual Bubble Sort algorithm and the other using Python’s built-in sort() function. This highlighted the difference between a step-by-step algorithmic approach and an optimized built-in method, making it clear that while algorithms are useful for learning, built-in functions provide efficiency in practical use.

• In Task 2, I observed that Gemini was able to implement a function that processes a string and accurately counts vowels, consonants, and digits. This task demonstrated the AI’s ability to handle string manipulation and conditional logic effectively.

• In Task 4, Gemini successfully generated a program for a simple calculator using functions for addition, subtraction, multiplication, and division. More importantly, when asked to explain the code, it provided a step-by-step breakdown, showing how AI can assist not only in code generation but also in teaching and concept explanation.