## Project Instructions

Read the following articles, documents and papers. You can experiment with any open source CodeLLM such as CodeLlama or IBM Granite.

1. https://research.ibm.com/blog/what-is-ai-prompt-tuning
2. https://microsoft.github.io/prompt-engineering/
3. https://www.promptingguide.ai/applications/coding

Try to write example codes to generate the codes (listed below) in python using appropriate in-context examples. Note that the in-context examples should not replicate the codes to be produced but only try to teach general concepts.
Codes to be generated:
1. Matrix multiplication
2. SQL statements (INSERT, UPDATE, DELETE, CREATE) on a sample table
3. Generate a JSON file from given sample data
4. Recursive function to compute a factorial with slight modifications.
5. Recursive function to check if a string is a palindrome.
6. <More programs will be specified later>

Join an introductory meeting on 24 June at 6.30PM  on
https://ibm.webex.com/meet/ysabharwal

How can you determine correlation between the type of in-context prompt examples provided and getting accurate code generation. For example, is it based on the types of statements, types of variables or recursive/non-recursive nature of in-context exampes?

Prepare an approach note to describe how you can correlate the information in the in-context examples with the quality of the code that is generated for different programs.