Week 2 Quiz 2

1. What is the benefit of assigning a specific 'role' to an LLM in your prompts?

   - It limits the model's capabilities.

   - <mark>It helps guide the AI's tone, level of detail, and perspective.</mark>

   - It restricts the model to simple tasks.

   - It makes the responses less accurate.

     Specifying a role for the LLM effectively guides its responses, ensuring the tone, level of detail, and perspective are aligned with the user's expectations and needs, enhancing the relevance and utility of the information provided.

2. You use the following prompt to analyze a database application:

   "As an expert in software architecture, critique my database code and give me suggestions for improvement."

   Which of the following items is the LLM most likely to address in its response?

   - Redundancies affecting performance.

   - Vulnerabilities like SQL injection.

   - Test cases to check the code functions properly.

   - <mark>Suitability of the design pattern used in the code.</mark>

     The suitability of design patterns is most aligned with software architecture and design considerations, and would more likely be addressed by an LLM acting as an expert in software architecture.

3. You should always expect an LLM to return the code you need after a single prompt.

   - True

   - <mark>False</mark>

   You will generally achieve better results when writing code with LLMs by iterating on any code that the model writes with specific feedback and ongoing requests for refinement and improvement.

4. Which prompting best practices are being used in the following prompt? Select all correct answers.

"I'm working on an E-commerce application that uses a sqlite database as the backend and SQLAlchemy to execute queries. I'll be working with a college intern on this code base in the upcoming summer break. Working as a friendly coding mentor for undergraduates, write clear documentation that will help the intern learn how the code works."

- Request an expert opinion

- Assign a role

   The prompt assigns the role of "friendly code mentor for undergraduates" to help the LLM understand how to write the documentation for the summer intern.

- Be specific

   The prompt includes technical detail about the context of the project, the Python libraries being used, and the intended audience of the code. All of these specific details will help the LLM write the code for the intern.

- Give feedback

5. Which of the following prompts would be most likely to produce matplotlib code to generate an interactive pie chart for a website dashboard?

- You are an expert in building interactive dashboards for websites with deep familiarity of the matplotlib library in python. Create an interactive piechart that will be included in a website dashboard.

- Create an interactive piechart for a website dashboard

- As an expert in interactive dashboard development, create a piechart visualization in python

- Create a pie chart for a website

   This prompt includes important details, like the fact the piechart will be hosted on a website and should be interactive, assigns an expert role and specifies a speciality in matplotlib, so this prompt would be very likely to result in the code you want.