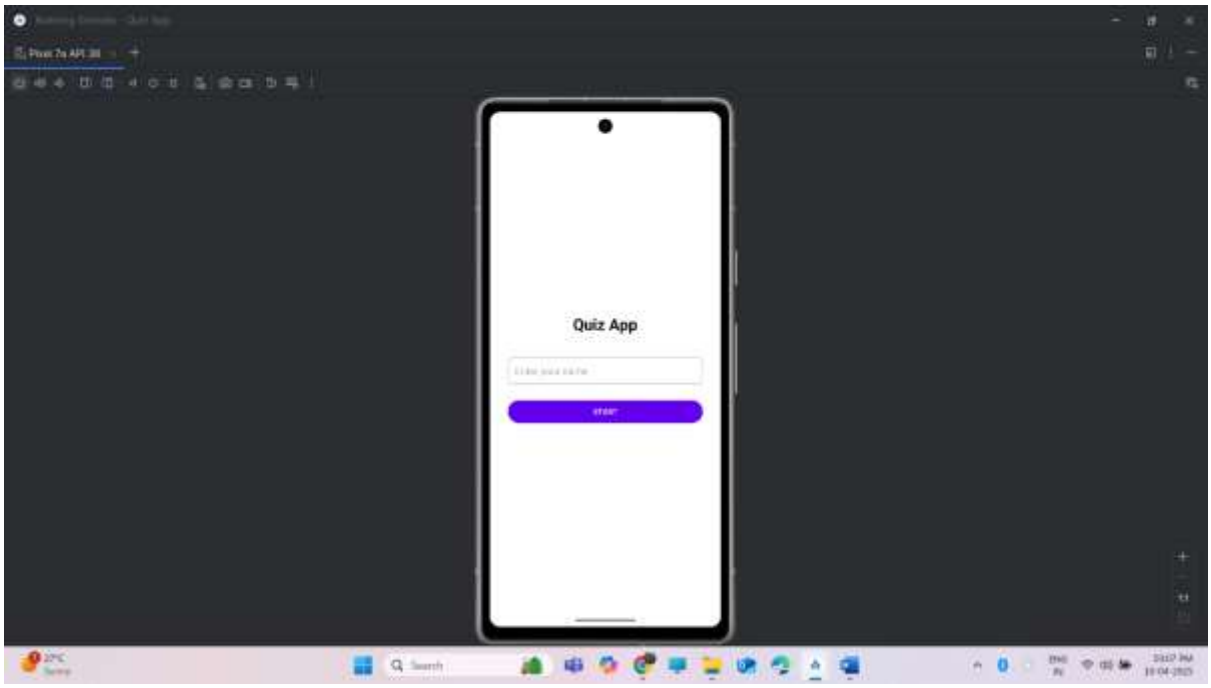
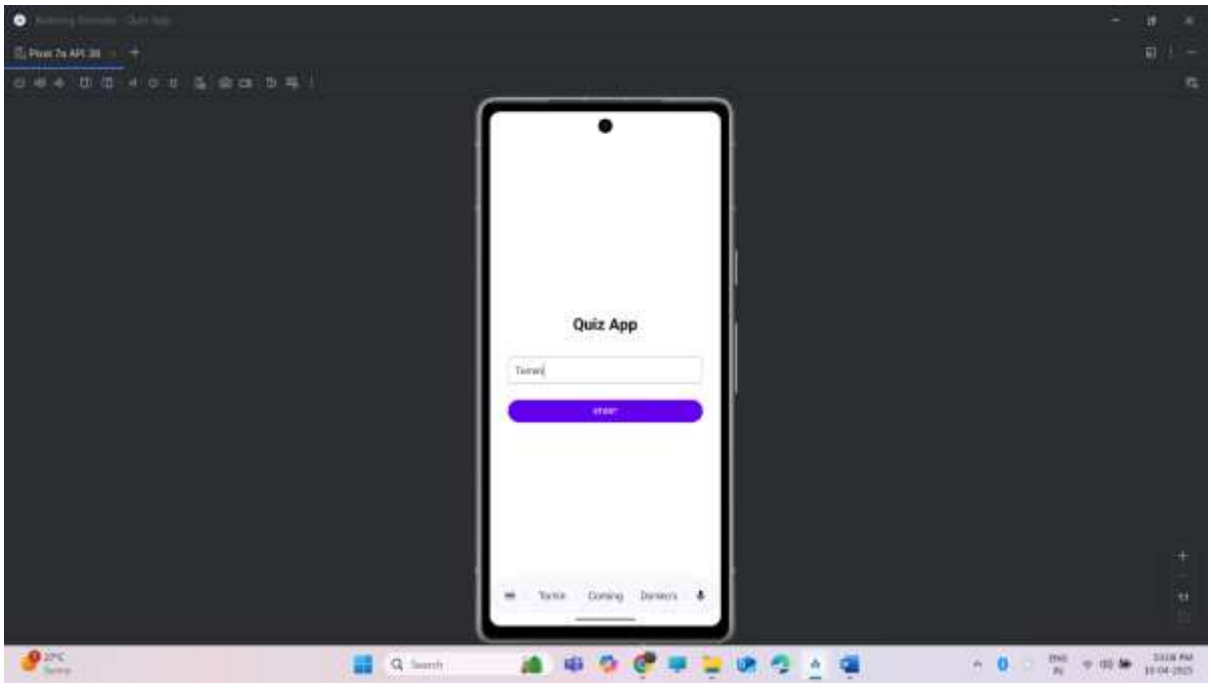
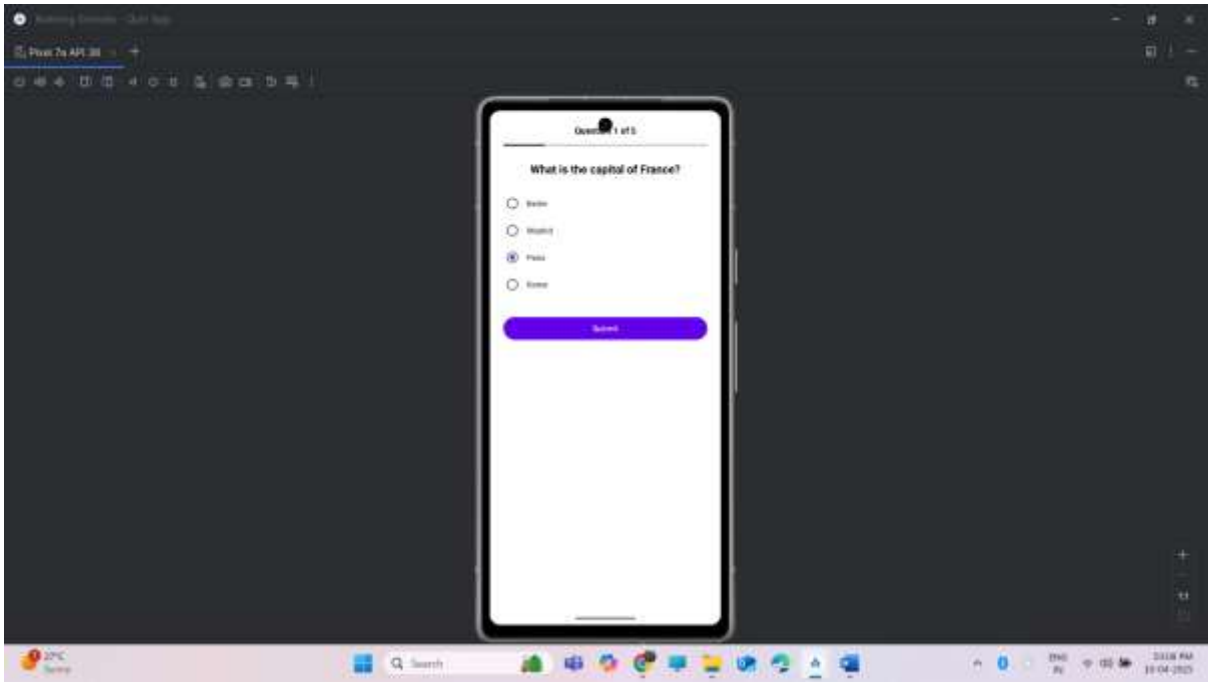
Git Repo: https://github.com/TOMINJOSE88/SIT708.git

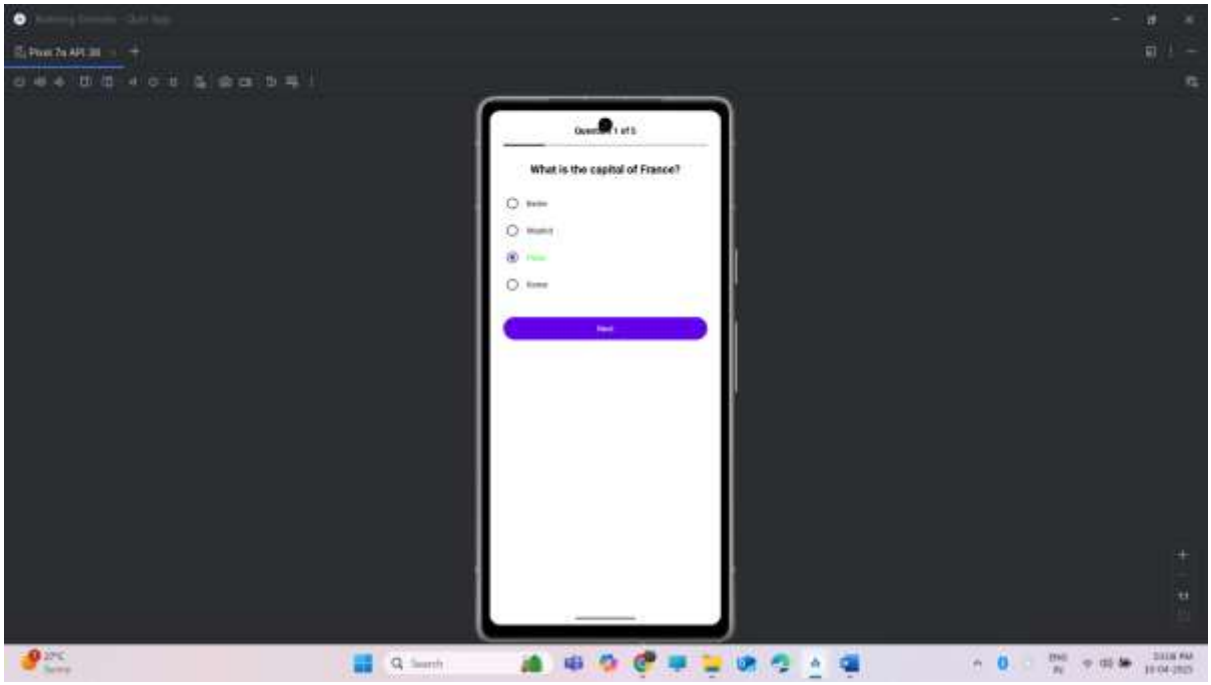
Quiz app video link: 3.1c Quiz app.mp4

Quiz app:






What is the capital of France?
Submit


What is the capital of France?
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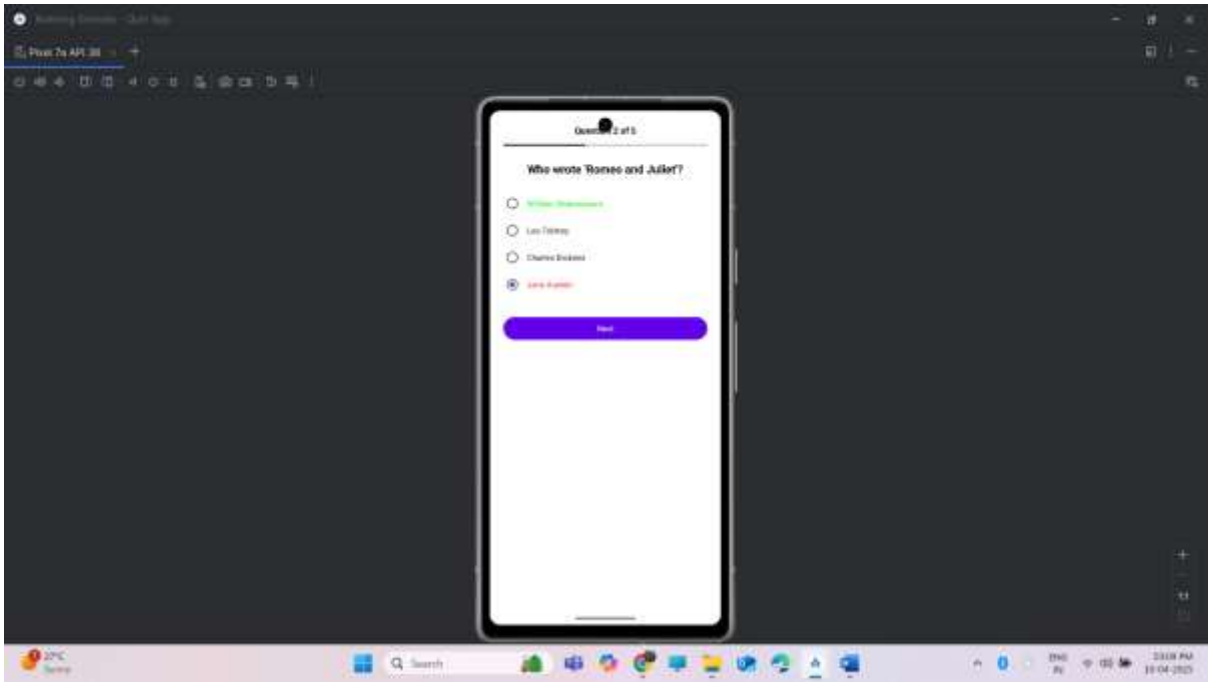
Who wrote 'Romeo and Juliet'?
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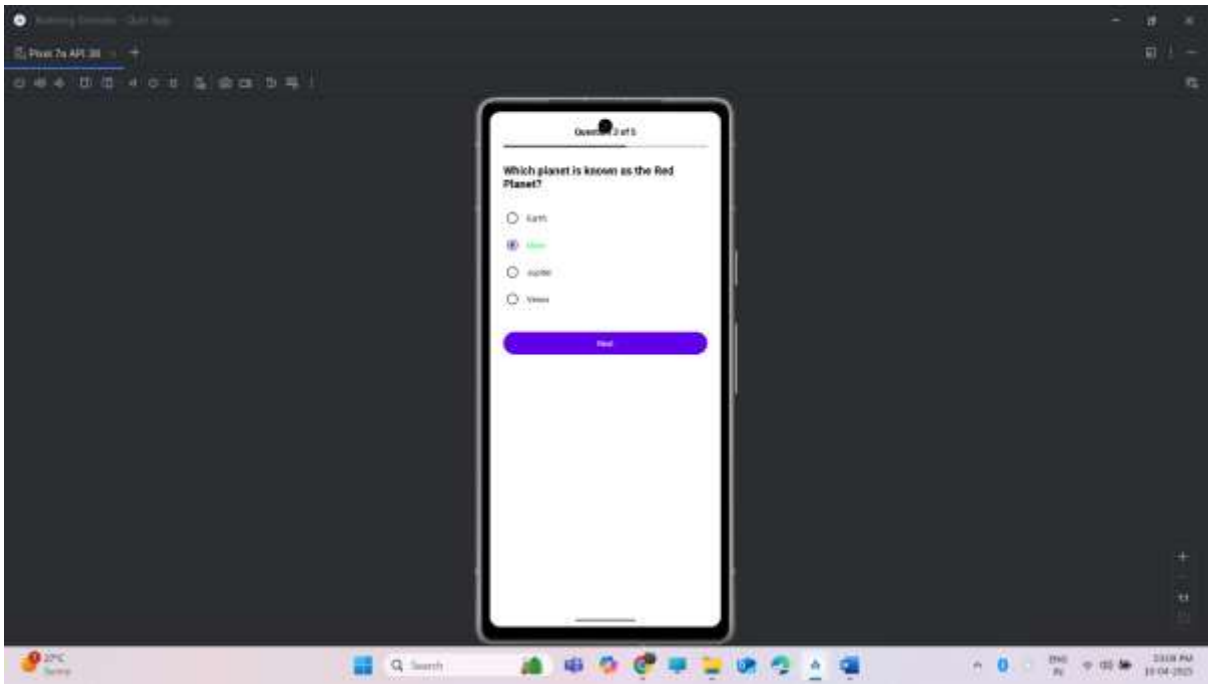
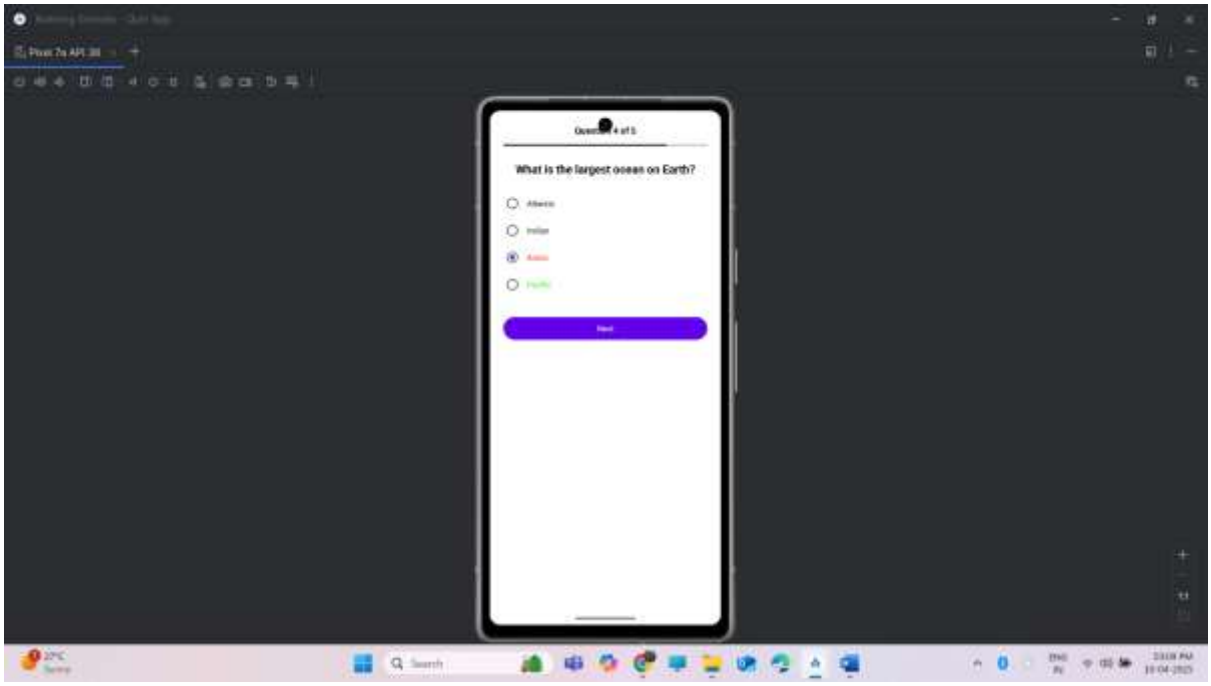
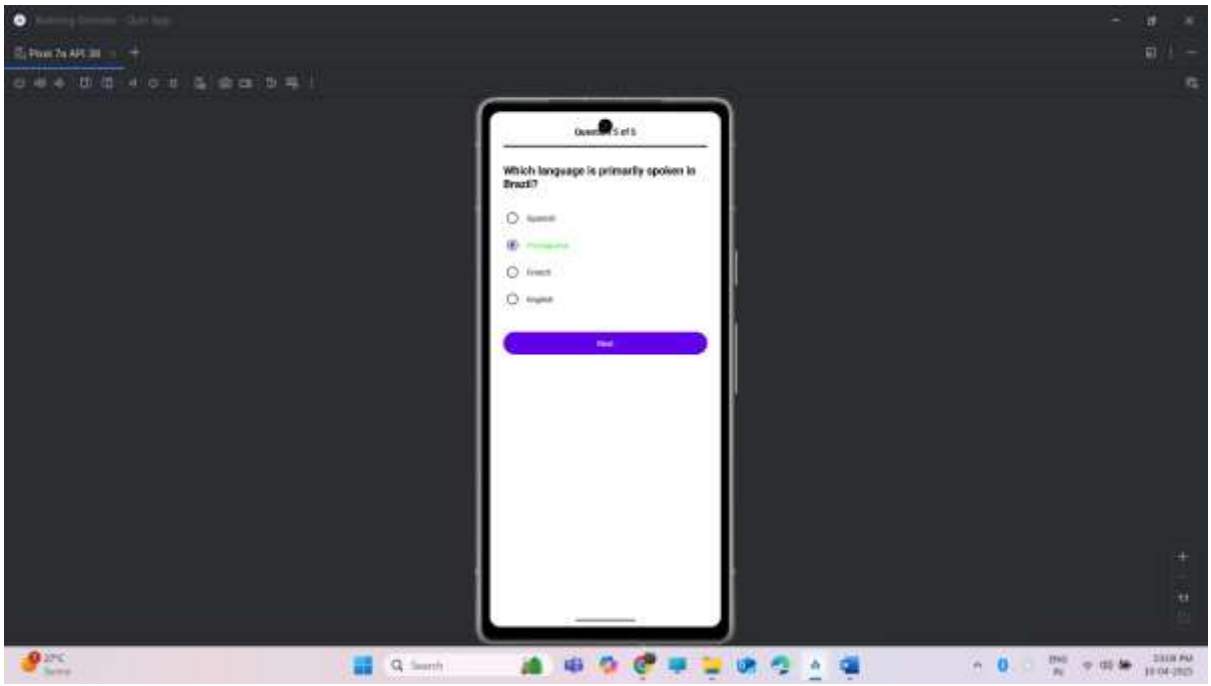
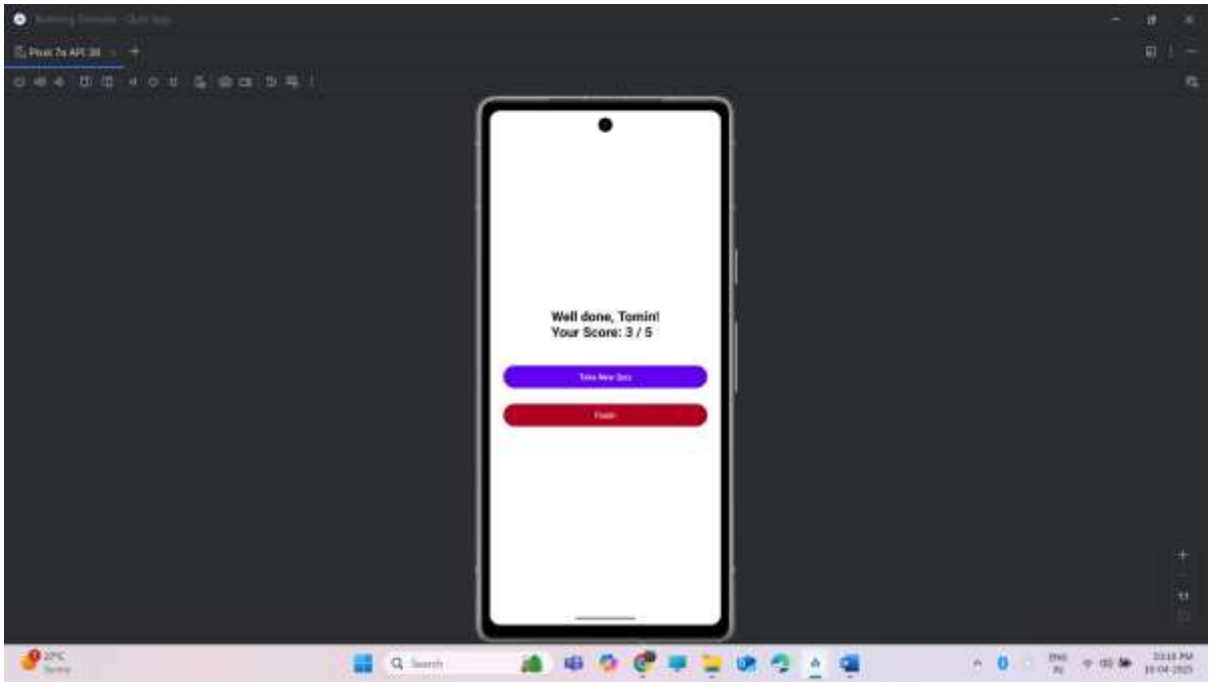
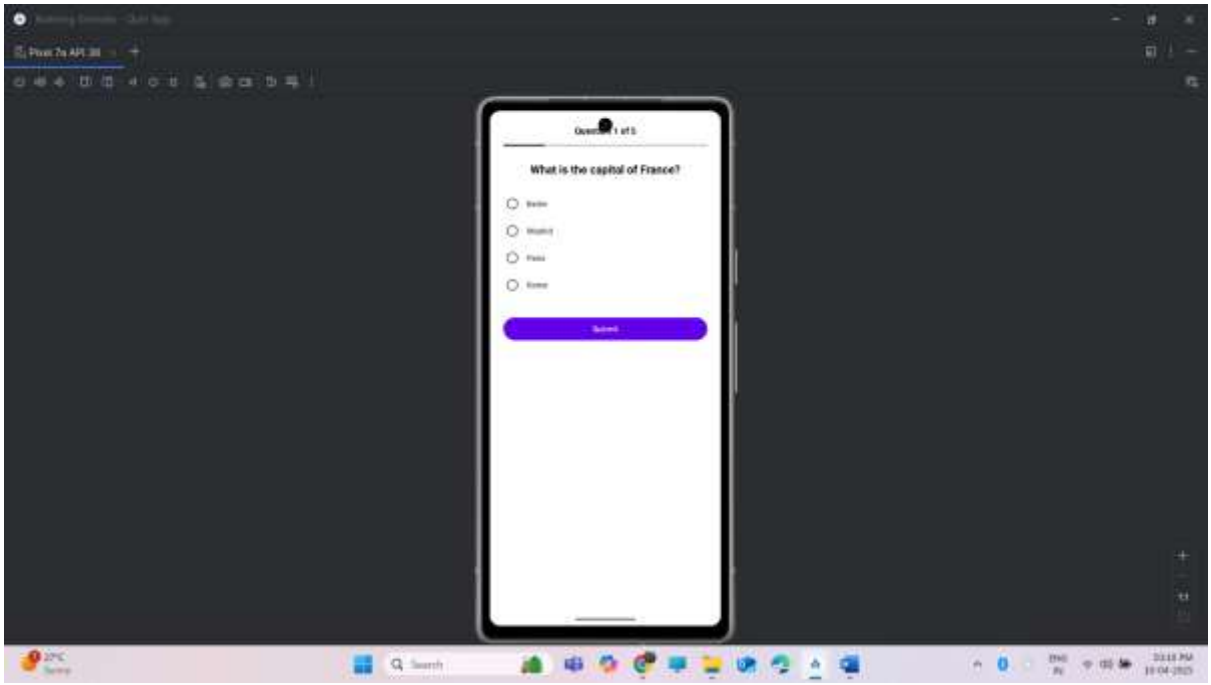

Which planet is known as the Red Planet?
Next


What is the largest ocean on Earth?
Next


Which language is primarily spoken in Brazil?
Next



When I click on take new quiz:



Integration of LLMs like LLaMA 2 in Quiz App

Large Language Models (LLMs) such as Meta's LLaMA 2, OpenAI's GPT-4, and Google's Gemini are transforming the way digital systems understand and interact with users. Integrating LLMs into a mobile quiz app opens exciting possibilities for delivering smarter and more personalized learning experiences.

One of the most valuable applications is dynamically generating quiz content. Rather than manually entering all the questions, the app could ask LLaMA 2 to create questions on any topic chosen by the user. For example, if someone types "World War II" or "Basic Algebra," the model could instantly return five unique multiple-choice questions. This makes the app highly flexible and adaptable to different user needs and interests.

LLMs can also help by providing meaningful feedback. Instead of simply showing the correct answer after a question, the app could ask the model to generate a short explanation in plain language. This allows users to understand why their answer was wrong and learn from their mistakes. For instance, if a user selects the wrong planet as the "Red Planet," the model could explain, "Mars is called the Red Planet because its surface is covered in iron oxide, giving it a reddish color."

Another interesting idea is to let users interact with the app using natural language. Instead of tapping buttons or selecting from a fixed list, they could say or type something like, "Give me a quiz about European countries with five easy questions," and the app would respond accordingly. This would make the experience more intuitive and user-friendly, especially for children or people with accessibility needs.

LLMs can also adapt the quiz based on user performance. If the app notices that a user is doing well with medium-level questions, it could ask the model for harder ones. This kind of adaptive learning path would help users grow at their own pace and stay motivated without feeling overwhelmed or bored.

Even the way the app gives feedback can be enhanced. Rather than just saying "Wrong answer," it could say something encouraging like, "Almost there! You're getting closer. Want to try a similar question?" It could even use humor or gentle nudges to keep users engaged and reduce frustration.

While most LLMs require internet connectivity, there are ways to bring them offline too. Smaller, quantized versions of models like LLaMA 2 can run directly on the device using tools like GGML or ONNX. This means the app could still offer basic AI features even without a network connection, making it useful for learners in remote areas or when traveling.

In summary, integrating LLaMA 2 or similar LLMs can transform a simple quiz app into a highly intelligent learning companion. From generating fresh questions and explanations to offering voice input, adaptive difficulty, and offline AI, these models open up a new

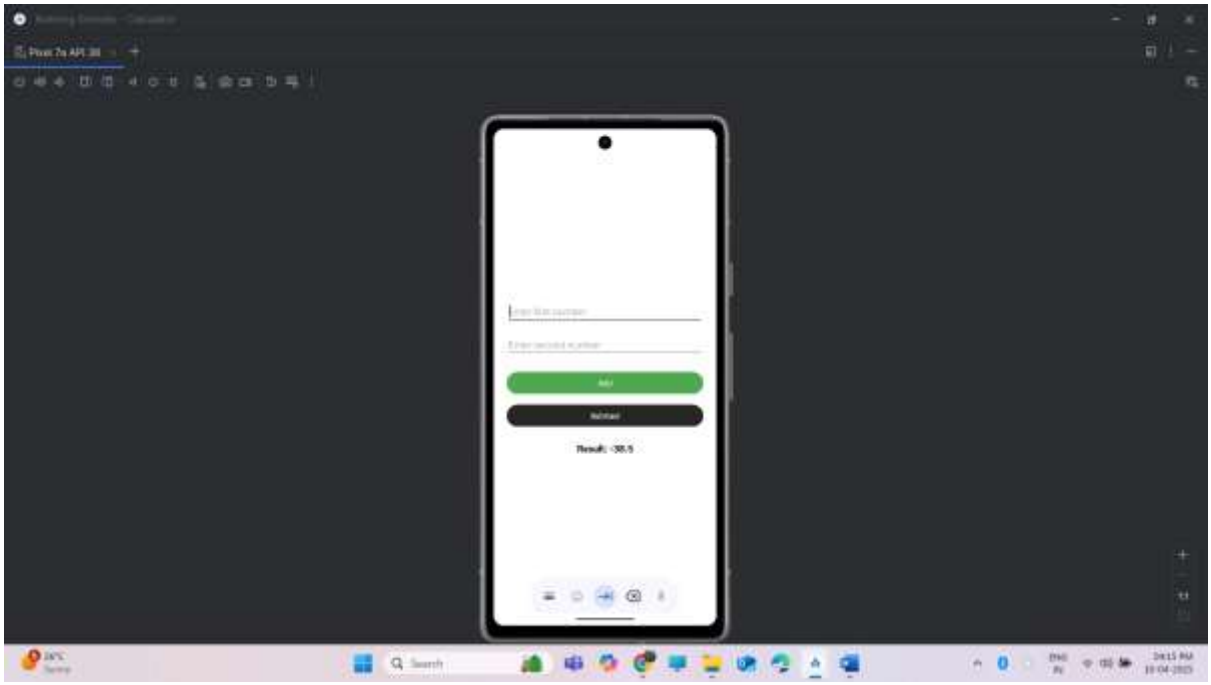
level of interactivity and educational value. It turns passive quizzing into a personalized, engaging, and even fun learning journey

References

1. OpenAI, 2023. *GPT-4 Technical Report*. [online] Available at: https://openai.com/research/gpt-4 [Accessed 10 Apr. 2025].
2. Meta AI, 2023. *Introducing LLaMA 2: Open Foundation and Fine-Tuned Chat Models*. [online] Available at: https://ai.meta.com/llama/ [Accessed 10 Apr. 2025].
3. Google DeepMind, 2024. *Gemini 1.5: Bringing multimodal LLMs to developers*. [online] Available at: https://deepmind.google/technologies/gemini/ [Accessed 10 Apr. 2025].

Calculator app videos link: 3.1c Calculator.mp4

Calculator app:



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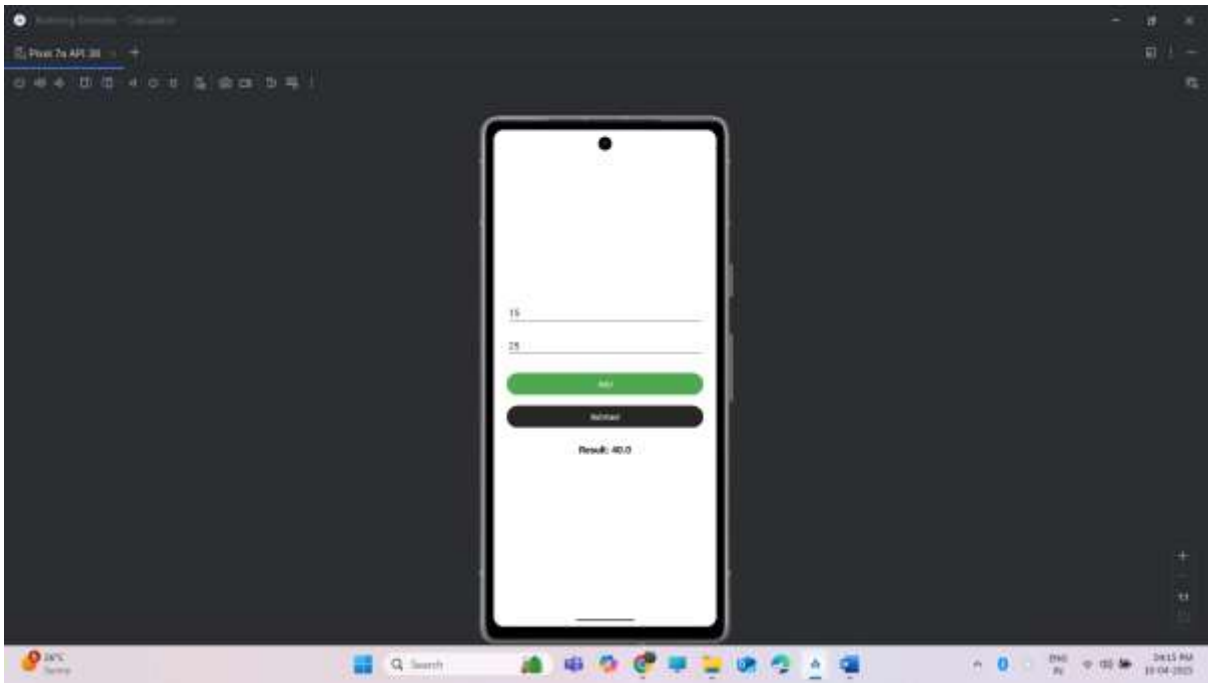

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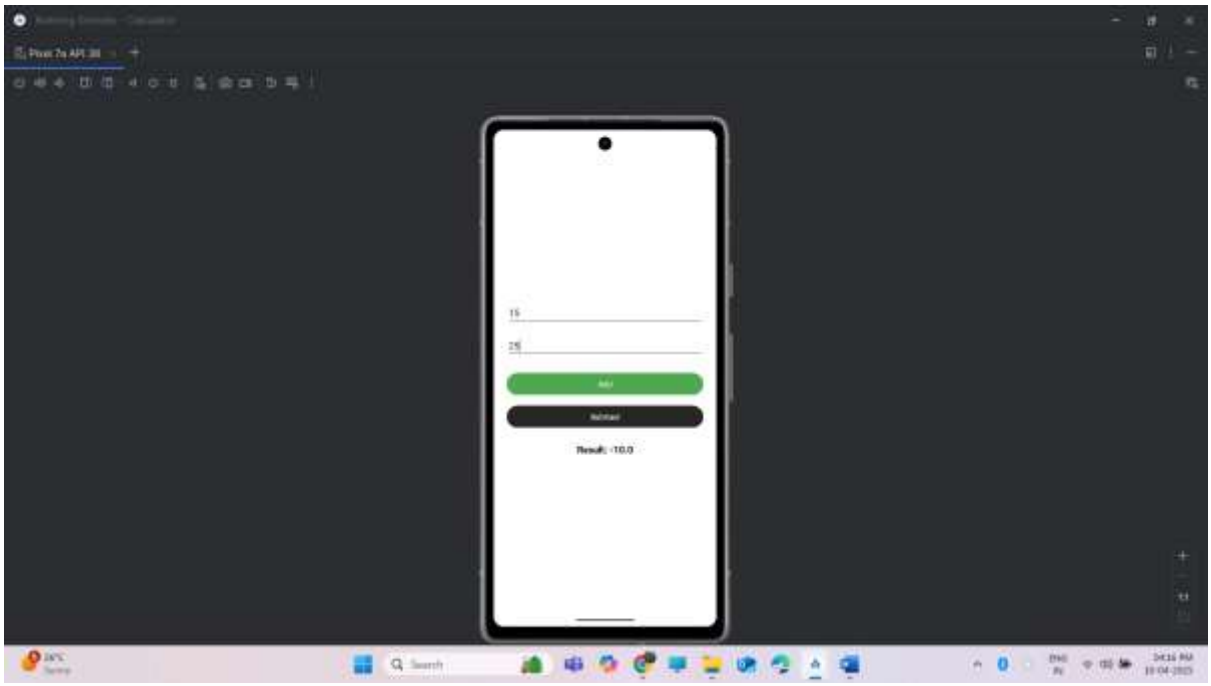

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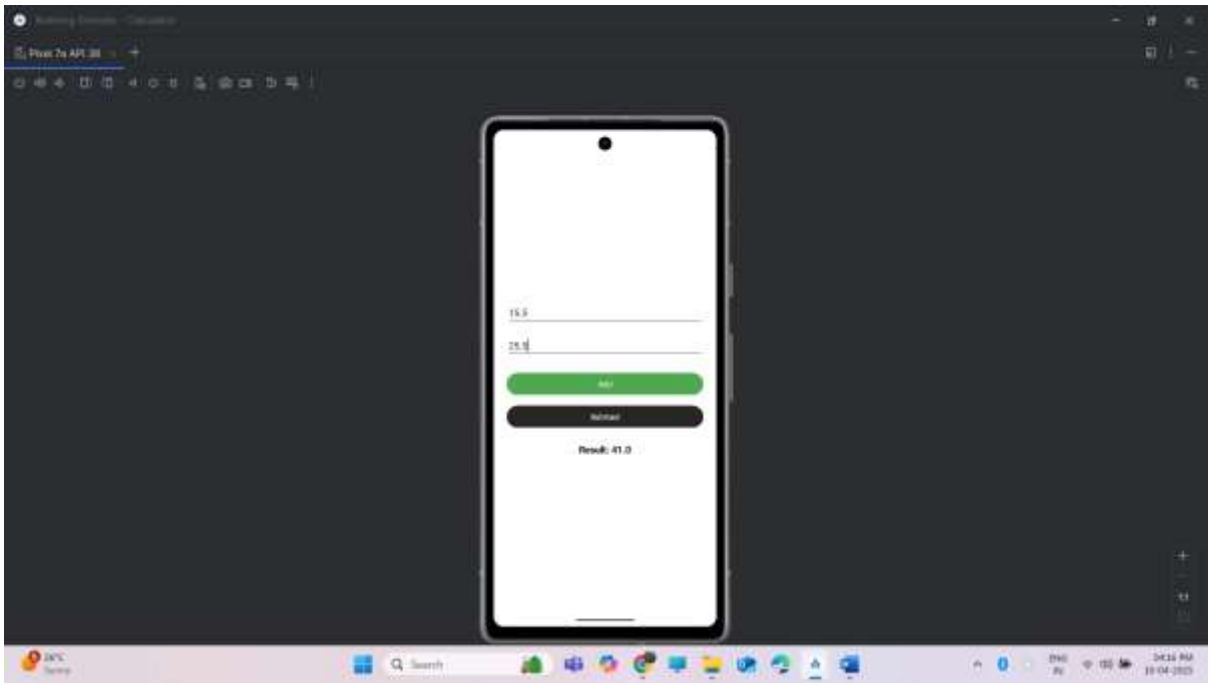

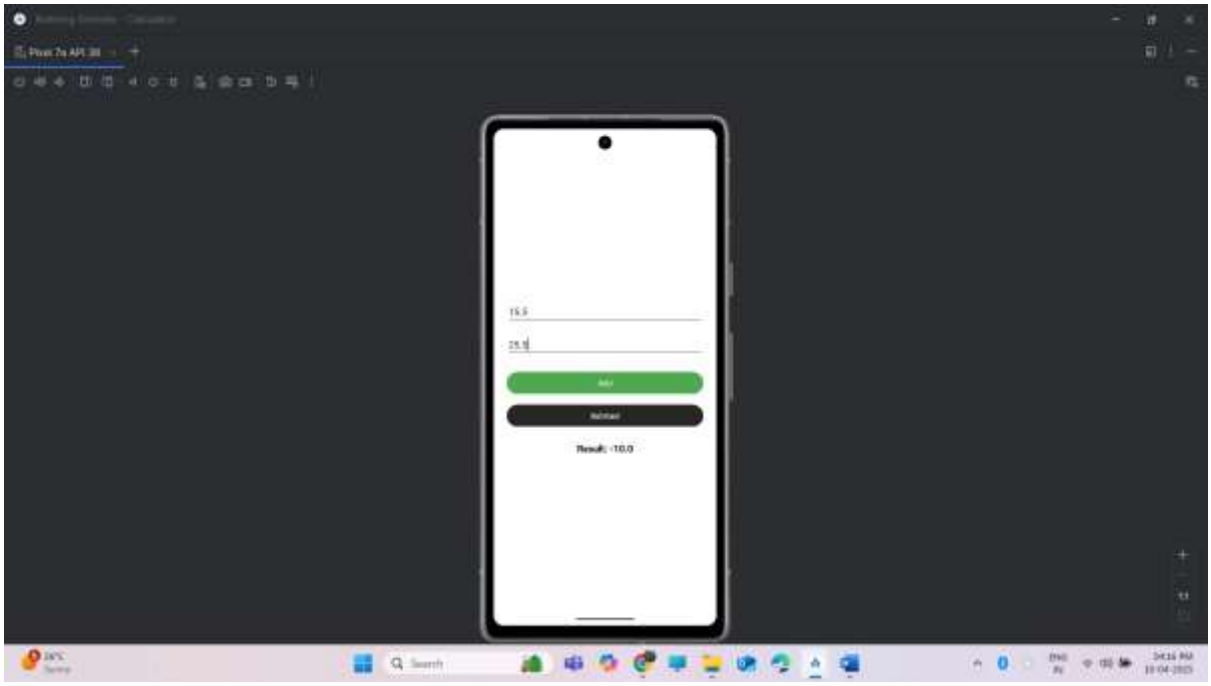
15.5
25.5
Add
Subtract
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