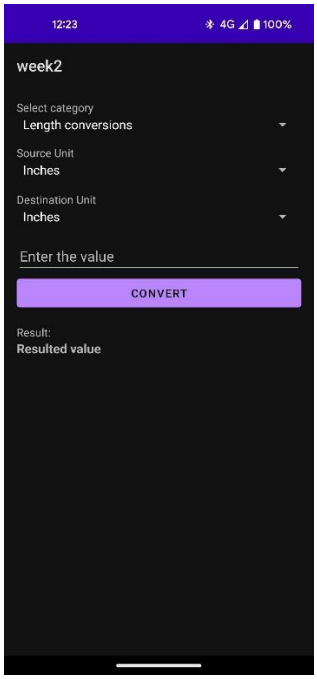
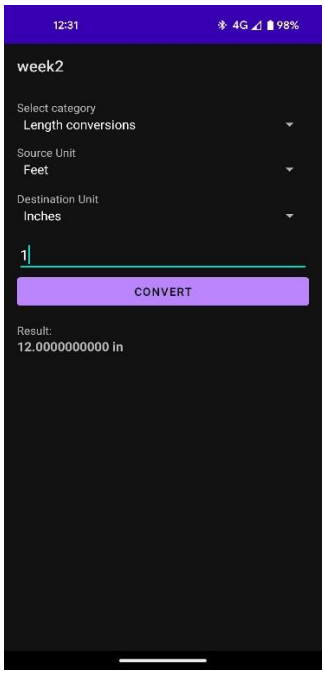
Pass Task 2.1 - Unit Converter App

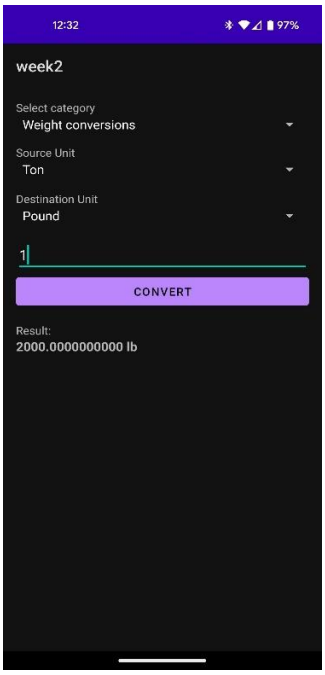
Subtask 1: Design UI for the App:

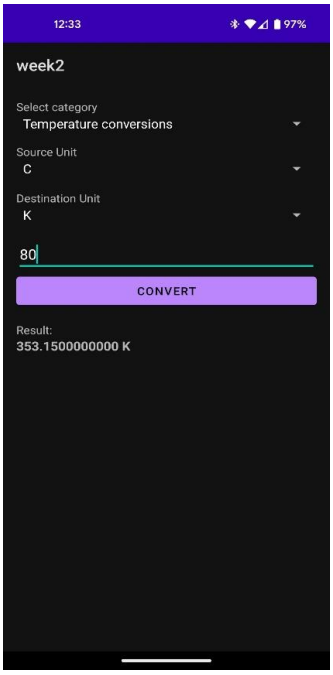
- A dropdown menu or spinner to select the source unit
- A dropdown menu or spinner to select the destination unit
- A text field to enter the value to be converted
- A button to initiate the conversion
- A text view to display the converted value



Subtask 2: Implement the Conversion Logic:







App's functionality recording: https://deakin365-my.sharepoint.com/:v:/g/personal/s222448467_deakin_edu_au/EQh7E5rr9mhEshyB2etu1-IBxpBISROXDanABFxQfzBvTg?nav=eyJyZWZlcnJhbEluZm8iOnsicmVmZXJyYWxBcHAiOiJPbmVEcml2ZUZvckJ1c2luZXNzIiwicmVmZXJyYWxBcHBQbGF0Zm9ybSI6IldlYiIsInJlZmVycmFsTW9kZSI6InZpZXciLCJyZWZlcnJhbFZpZXciOiJNeUZpbGVzTGlua0NvcHkifX0&e=K6CAkB

Subtask 3: Research on Llama2:

Llama 2, the latest advancement in large language models developed collaboratively by Meta and Microsoft, presents a significant opportunity for enhancing the capabilities of Android apps. With its powerful natural language understanding and generation capabilities, Llama 2 can revolutionize the way users interact with mobile applications. In this report, we explore five potential use cases where Llama 2 can be integrated into Android apps to automate tasks and enrich user experiences.

1. **Conversational Interfaces:**
   One major use case for Llama 2 in Android apps is the development of conversational interfaces or chat bots. By integrating Llama 2, developers can create virtual assistants or chatbots that engage users in natural language conversations. These virtual assistants can handle major tasks of user, such as placing orders, answering questions, or providing personalized recommendations. With Llama 2's advanced language understanding capabilities, these conversational interfaces can offer more natural and user-friendly experiences.

2. **Content Generation and Personalization:**
   Llama 2 can generate text based on user's provided input prompt, it opens possibilities for content generation and personalization within Android apps. Developers can take advantage of Llama 2 to dynamically generate personalized product descriptions, articles, or recommendations based on user preferences and behaviour which could be helpful in business growth.

3. **Smart Text Input and Autocompletion:**
   Integrating Llama 2 into text input fields within Android apps can significantly improve the typing experience for users. Llama 2 can offer intelligent autocomplete suggestions based on context, user history, and common language patterns, speeding up text input and reducing errors.

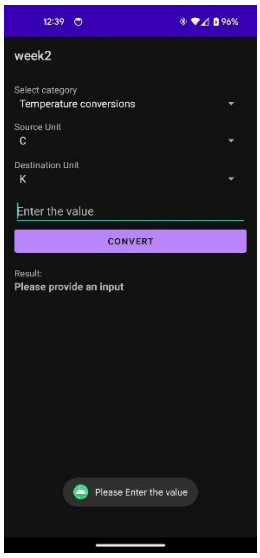
4. **Language Translation:**
   With its multilingual capabilities, Llama 2 can facilitate language translation and localization features in Android apps. Developers can integrate Llama 2 to provide real-time translation of text inputs or app content into multiple languages, enabling seamless communication across language barriers. Furthermore, Llama 2 can assist in adapting app interfaces, content, and experiences to different

cultural preferences and verbal tones, ensuring a more accessible user experience for global audiences.

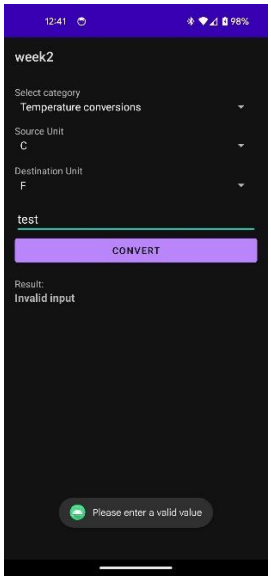
5. **Virtual Learning Assistants:**
   Llama 2 can be attached to create virtual learning assistants within educational Android apps. These assistants can provide personalized tutoring assistance, answer students' questions, and offer real-time feedback on assignments and because of that, student can correct them self immediately. By analysing user inputs and learning patterns, Llama 2 can adapt its teaching approach to suit individual learning styles which could be very helpful to students.

Subtask 4: Add Validation and Error Handling:

App behaviour with no input,



App behaviour with non-numeric input,



GitHub link (Task Code): https://github.com/Rutik-Deakin/SIT708_Task-2.1P/tree/master

References:

[1]Meta, “Meta and Microsoft Introduce the Next Generation of Llama,” Meta, Jul. 18, 2023. https://about.fb.com/news/2023/07/llama-2/ (accessed Mar. 27, 2024).

[1] “Deep Dive Into LLaMa-2 Use Cases”, https://textcortex.com/post/llama-2-use-cases (accessed Mar. 27, 2024).

[1]“Meta Llama 2 Applications,” Lab Lab. https://lablab.ai/apps/tech/meta/llama-2 (accessed Mar. 27, 2024).