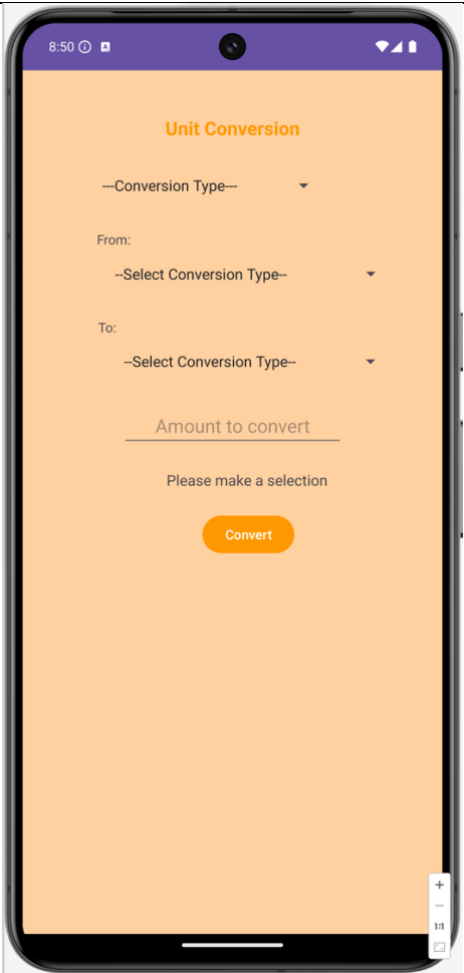# SIT708 Mobile Application Development | Task 2.1P
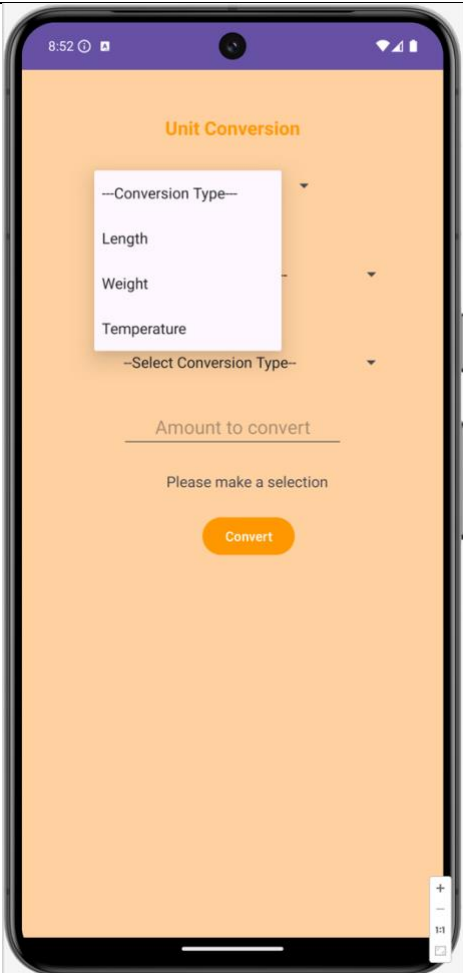
Student: Rachel Lara Mackie

SID: 212362921 / mackier

Subtask 1, 2, 4:

- o GitHub: https://github.com/ra-lama/Task2.1P
- o Video: https://youtu.be/RlOqDdHSsQM
- o Screenshots (examples, not all possible):

Start (before anything selected)	User must select a conversion type to prepopulate Spinners with compatible measures
For example, user select Length, only compatible length measures will be populated in the Spinners.	Various errors are caught or avoided with an appropriate message to the user
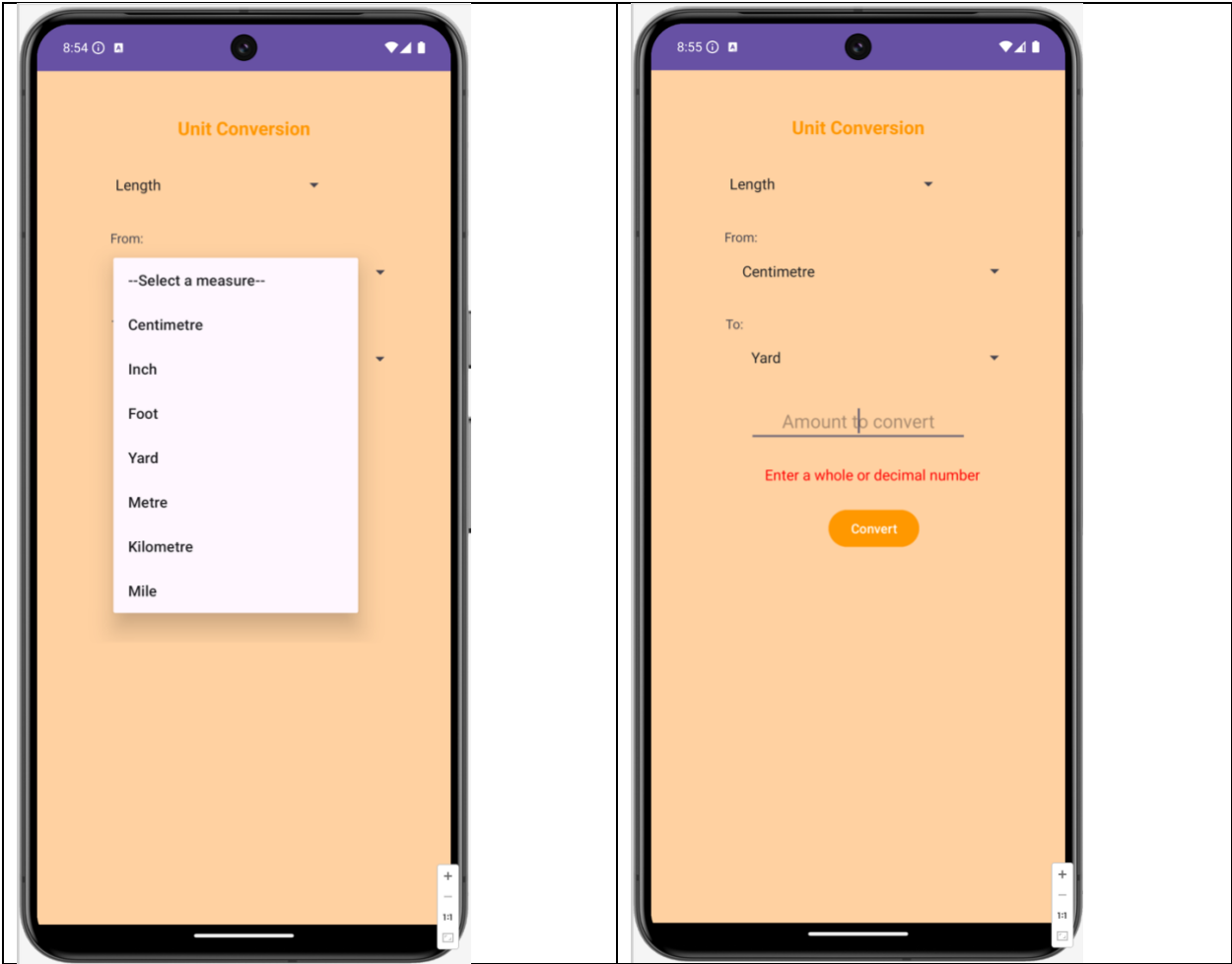
Four decimal places are used so that the user has feedback for extreme calculations
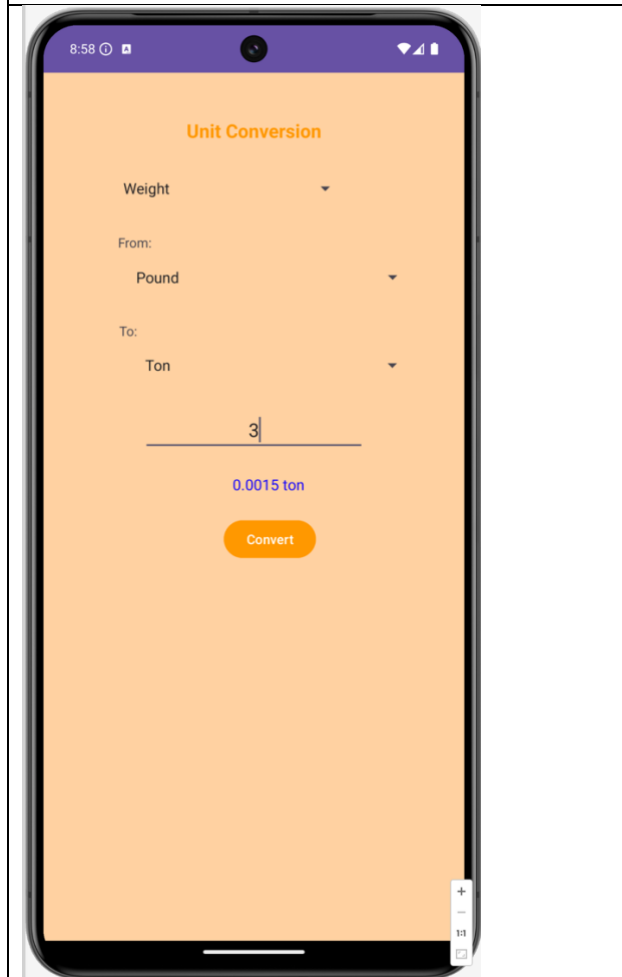
Subtask 3: Research on Llama2

Llama 2 is a Large Language Models, commonly referred to as LLM, and is a type of AI model. As the name suggests, LLMs like Llama 2 are models that are trained on or learn from very large text-based datasets, and in some instances based on a large portion of text on the web in order to generate human language. The purpose is many, but its uses mainly revolve around natural human language inputs – or prompts – and outputs, known as natural language processing.

Llama 2 falls under this definition of an LLM. It was first released in 2023 by Meta AI with 7 to 70 billion parameters and predominantly trained on English data and thus currently performs best in English, and its primary usage is chat. It is considered an open-source LLM. At a very high level, Llama 2 would use mathematics and neural networks to learn language, by clustering words into common groups, that is, common words become associated with other words as the model learns and digests more data. Additionally, a so-called transformer model is used to enhance and pivot word meanings to give them context. All this helps the model make associations or assumptions about similar words, which in turn helps generate answers and human-like language. Unfortunately, this is also said to be the cause of biases, depending on the input and similar inputs the model has received, which is why a model with greater and more varied data is unsurprisingly more likely to produce better results or responses. These models may source data from books, the web or articles provided to it.

The most common use includes chat applications, as can be seen on many web stores as a kind of customer service representative; search or research, whereby the user asks questions with or without constraints known as prompts and the model responds with answers in human language by summarising text data, which is often used by students and business; and providing creative content (e.g. letters, lyrics, stories, abstracts, etc.).

Potential mobile app uses could be in a self-care diary app, where the LLM helps identify patterns and issues *before* they occur, based on language used in diary entries on certain days (e.g. work day), user activity (e.g. has exercised consistently for X days) and mindful or restful time. The second app I could envisage is an app that finds rental accommodation or property for sale based on listings the user has flagged, provided the listings have sufficient descriptions which they generally do. The third app would be for recruiters, as they often do not understand what the candidate is really like and if they are really suitable for their clients, the companies with the jobs. In this case, candidates interviewing with recruiters should honestly answer a questionnaire with multiple choice and free-text answers about their feelings on past jobs, managers, ambitions and so on, and it should help better understand job history and tenure and likelihood of being happy with their client's job opportunity. The

fourth would be similar to the recruiter app, but for a dating app, including flagged interests and their descriptions being analysed and offered to potential dates. The fifth app could be for lonely but also high risk citizens to simply chat with, but also send out an alert to medical professionals or similar if the app detects critical issues arising (e.g. suicide, pains that suggest a medical event, etc.).