Individual Project Report Specifications

Final Program: Unit Converter GUI

This part of the project is the last for the unit conversion program and will be based around converting our program to a **Graphical User Interface (GUI)** with **user-defined functions** to perform the conversions.

- **Graphical User Interfaces** are what we're most familiar with when using computer programs; they consist of pop-up windows with buttons, text boxes, drop-down menus, radio buttons and other graphical elements that can be interacted with by a user to input information into the program.
- **User-defined functions** allow for effective code reuse and is good programming practice when creating programs that require the same or similar code to be executed many times.

```
function out = MyFunction(in1, in2) % Rename function and
input/output variables to appropriate name (not MyFunction)

% Insert code here to perform appropriate unit conversions.

out = % Set output variable to the converted value
```

For this part of the project re-write your unit conversion program so the actual conversions (the mathematics) take place in **user-defined functions**.

- Once you have your user-defined functions written, convert your unit conversion program to a **graphical user interface (GUI)** using App Designer (DO NOT use the `menu( )` function or
- GUIDE!!!).
- You will need to think not only about the way your program will calculate the output required to solve the problem (its **functionality**) but also how your GUI will look (its **aesthetics**) and how simple it is for a user to input and receive output from your program (its **usability**).
- Think about the structure of your program, will you use **one or many function scripts** to convert the units required? Where will **error checks** be performed? **What should the input**(s) to the function(s) be? **Output**(s)? Use **comments** in your scripts to explain how your function(s) operate.

Due date and further details on this task:

The submission for **Individual Project Report** is due at the **end of Week 10, Sunday, 06th of September before 23:59pm**.

You are required to submit your:

- **MATLAB files (including GUI file (.mlapp) and user-defined function files (.m))**
- **Report** containing an **introduction, design methodology, output/evidence of testing and conclusion/future scope.**

The final submission should fulfil the requirements, you need to do the following:

- Design and implement a unit converter app that requests input from a user on **which unit type**, **direction** (imperial to/from metric) and **value** they want to convert.
- Your program must now be in the form of a **graphical user interface (GUI)** designed using App Designer (not GUIDE).
- Your conversions should also be performed in separate **user-defined functions**.

Note: More details on this can be found on Canvas.