5COSC023W - Tutorial 4 Exercises

As part of this tutorial for this week, you should complete **ALL** the tasks described in the following specifications: (**make sure that you ask questions to your tutor for anything that you do not understand or if you are stuck at any point**).

Like all other modules, you are expected to study towards you module outside the lecture and dedicated tutorial slots for a number of hours. If you do not finish all of the exercises in the tutorial session, make sure that you finish them on your own time and by the end of the week. This is a normal process and part of your university learning.

1   The Lottery Program (Jetpack Compose)

Implement the Lottery Android app developed in the using the Jetpack Compose library introduced in the last lecture. Do not use Views! **Make sure that you type the code and NOT simply copy and paste. Make sure that you understand the full code**.

You should create a new Android Studio project using the `Empty Activity` template and NOT the `Empty Views Activity`.

2   Extending the Lottery Program based on Jetpack Compose

1. Add a second button next to the first one (**Hint:** use a `Row` Composable) which every time that it is clicked it sorts the results generated in ascending order.

2. Modify your code so that the second button sorts the results in ascending order if the number of button clicks is odd and in descending order if the number of button clicks is even (i.e. every time the button is clicked the order of the results changes from ascending to descending order).

3   Creating User text input

Implement an application which contains a textbox asking the user to enter their name. The application displays the messame "Hello name, how are you doing?" where name is the user text input.

Hint: Use the `TextField` composable function (similar to the `Button` composable we have seen in the lecture and you used in the previous exercises.

The arguments accepted in a `TextField` are:

```
TextField(value = name, onValueChange = {})
```

where `value` is what the textbox displays (in the above example it is set to the value of a variable called `name`) and the `onValueChange` contains the code that it will be executed every time that the user starts typing something.

You should create a state for this composable with a variable called `name` and change its value within the `onValueChange` argument of the `TextField`.