

# **BCS 371 Lab – Kotlin Flow**

## ***Overview***

Create an app that uses a Kotlin Flow.

## ***Create a project***

Create a new Android application in Android Studio. Choose the **Empty Activity** type to create an empty activity that uses Jetpack Compose.

## ***Create MainScreenViewModel Class***

Set up a state flow for a List<String> in the view model class.

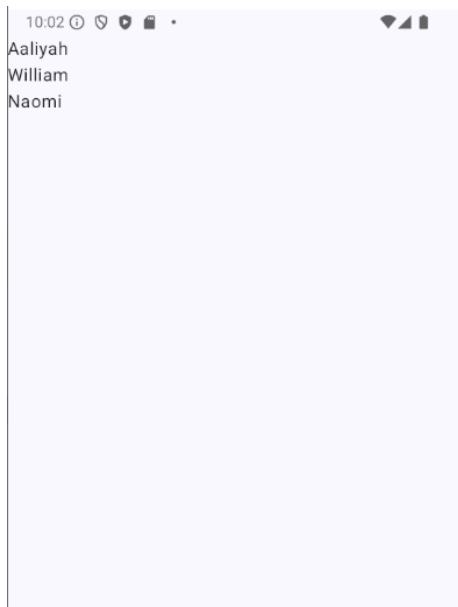
- There should be a MutableStateFlow<List<String>> member. Initialize it with the following strings: "Aaliyah", "William", "Naomi"
- Write a function that puts the list parameter in the flow (set the value of the state flow). Here is the function header:  
fun putListInFlow(list: List<String>)

## ***Setup the Main Screen***

Create a Kotlin file named MainScreen.kt. Add a composable function named MainScreen. Here is the function header:

```
@Composable
fun MainScreen(modifier: Modifier)
```

It should collect data from the flow and display it. Here is a screenshot:

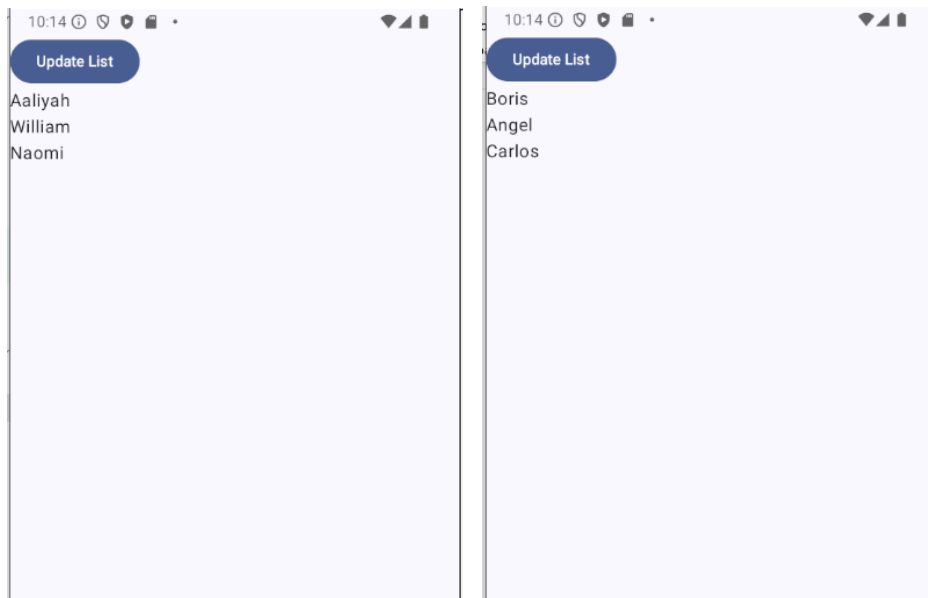


## ***Put a New List in the State Flow***

Add a button to mainScreen. When the button is pressed it should put the following list in the flow:  
"Boris", "Angel", "Carlos"

Use the `putListInFlow` view model function to put the list in the flow.

Here are screenshots before and after pressing the button:



## Create an Employee Class

It should have member variables for name and salary.

## Setup Employee List Flow in View Model Class

Set up a state flow for a List<Employee> in the view model class.

- There should be a MutableStateFlow<List<Employee>> member. Initialize it with a list of employee sample data (see screenshot below for data).
- Write a function that puts a list of employees into the flow. Here is the function header:  
fun putEmployeeListInFlow(list: List<Employee>)

## Add Employee List Flow to Main Screen

Do the following:

- Add a button to update the employee list. When the button is pressed it should create an employee list with different data. Use the putEmployeeListInFlow view model function to put the new employee list in the flow.
- Display all employee list data below the button.

Here are screenshots before and after pressing the button:

