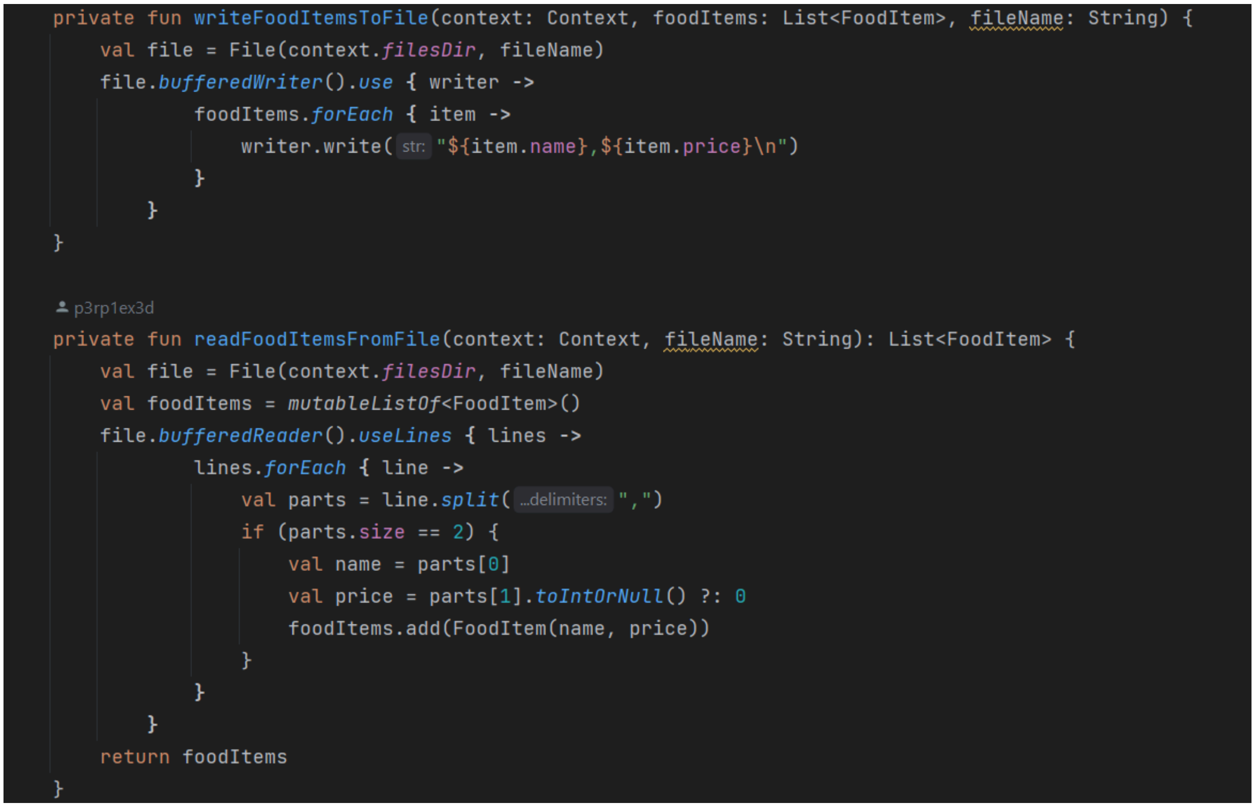
Android - Jetpack Compose Study Jam
Week -3

Welcome to Week 3 of the Jetpack Compose Study Jam. This week we'll be learning how to create a Lazy List and read data from the file we stored details in last week.

Read data From the file:



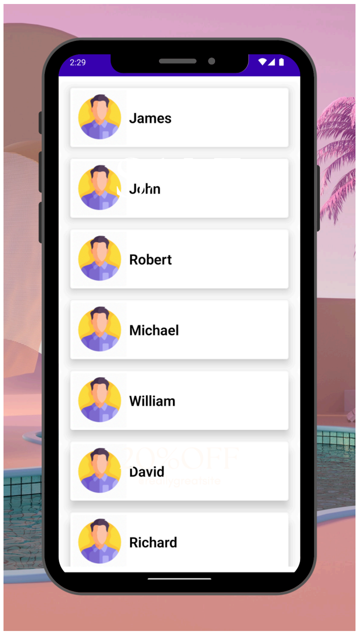
```
private fun writeFoodItemsToFile(context: Context, foodItems: List<FoodItem>, fileName: String) {
    val file = File(context.filesDir, fileName)
    file.bufferedWriter().use { writer ->
            foodItems.forEach { item ->
                writer.write( str: "${item.name},${item.price}\n")
            }
        }
}

p3rp1ex3d
private fun readFoodItemsFromFile(context: Context, fileName: String): List<FoodItem> {
    val file = File(context.filesDir, fileName)
    val foodItems = mutableListOf<FoodItem>()
    file.bufferedReader().useLines { lines ->
            lines.forEach { line ->
                val parts = line.split( ...delimiters: ",")
                if (parts.size == 2) {
                    val name = parts[0]
                    val price = parts[1].toIntOrNull() ?: 0
                    foodItems.add(FoodItem(name, price))
                }
            }
        }
    return foodItems
}
```

The details in the file are essentially the food items that we need to display on the main screen. So, how this works is that, we have a file that contains food details and these food items are displayed to the user through a lazy list. So, what is a lazy list?

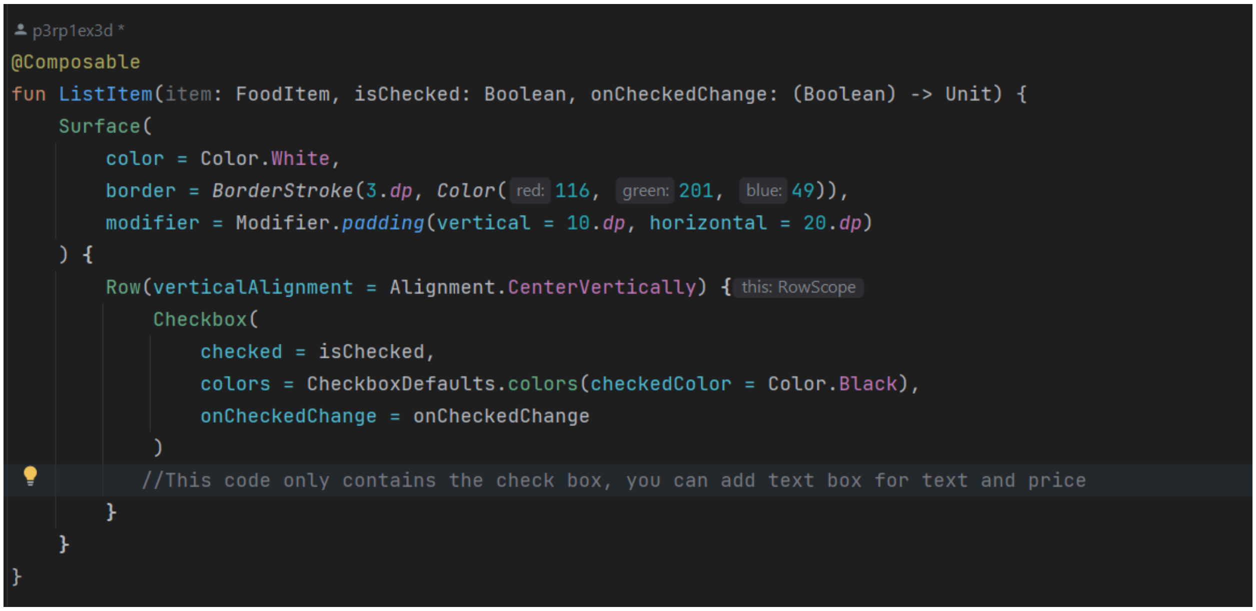
Let's go back to our good old example, Whatsapp. You will be having hundreds of contacts on your whatsapp and yet it doesn't take so much space or crash frequently due to the amount of data it is dealing with. Ever wondered why?

That is because of the lazy list. It only keeps the items displayed on screen in memory and recycles the rest.



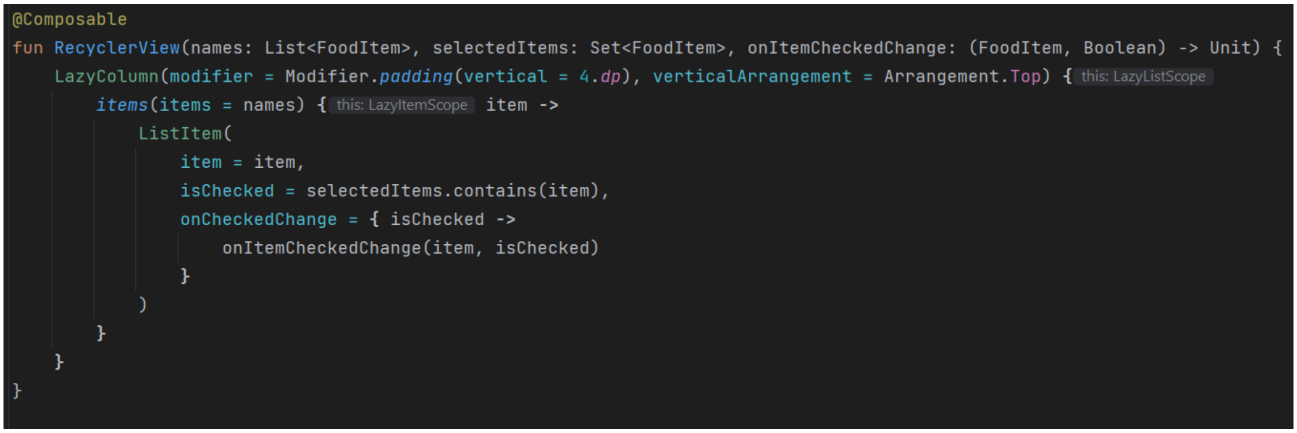
As you might have noticed they have a common template like an image text and the content of each row alone changes. That is what we are going to build today.

The first step for that will be creating the UI for the template.



```
p3rp1ex3d *
@Composable
fun ListItem(item: FoodItem, isChecked: Boolean, onCheckedChange: (Boolean) -> Unit) {
    Surface(
        color = Color.White,
        border = BorderStroke(3.dp, Color( red: 116,  green: 201,  blue: 49)),
        modifier = Modifier.padding(vertical = 10.dp, horizontal = 20.dp)
    ) {
        Row(verticalAlignment = Alignment.CenterVertically) { this: RowScope
            Checkbox(
                checked = isChecked,
                colors = CheckboxDefaults.colors(checkedColor = Color.Black),
                onCheckedChange = onCheckedChange
            )
           //This code only contains the check box, you can add text box for text and price
        }
    }
}
```

Then you need to design a function that performs activities like displaying the data like mentioned above.

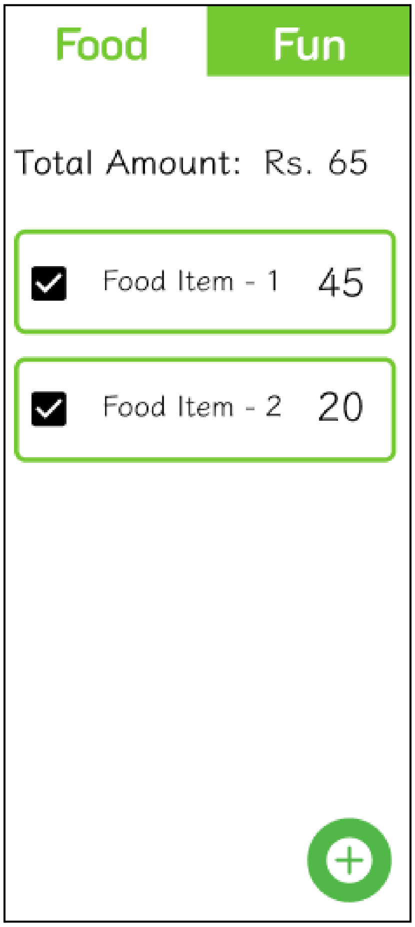


```
@Composable
fun RecyclerView(names: List<FoodItem>, selectedItems: Set<FoodItem>, onItemCheckedChange: (FoodItem, Boolean) -> Unit) {
    LazyColumn(modifier = Modifier.padding(vertical = 4.dp), verticalArrangement = Arrangement.Top) { this: LazyListScope
        items(items = names) { this: LazyItemScope item ->
            ListItem(
                item = item,
                isChecked = selectedItems.contains(item),
                onCheckedChange = { isChecked ->
                    onItemCheckedChange(item, isChecked)
                }
            )
        }
    }
}
```

Here, LazyColumn is a part of Jetpack Compose LazyList that helps with the vertical implementation of a LazyList.

We are almost at the end here, if you make a call to the RecyclerView function from your food screen function then that would be it.

The basic task is to display the details of the food items in the lazy list.
An additional task would be to implement the check box functionality such that, when you select the items, the total would be displayed on the top.



Total Amount: Rs. 65

☑ Food Item - 1 45

☑ Food Item - 2 20

Reference Video and Links:

- https://www.youtube.com/watch?v=zf6QJemVs2k
- https://www.youtube.com/watch?v=8odoUzsGUWI
- https://www.youtube.com/watch?v=ytCWjSN0iTI
- https://medium.com/@abhineshchandra1234/lazy-list-in-jetpack-compose-5345d23ded34
- https://www.jetpackcompose.net/lazycolumn-and-lazyrow