### 1. Main Class (Main):

• The **main** method is the entry point of the program. It prints a welcome message and then calls the **optionsSelection** method to display the menu and handle user input.

# 2. optionsSelection Method:

- This method presents a menu of options to the user.
- It uses two arrays: **arr** for storing menu options as strings and **arr1** for storing corresponding integers representing menu choices.
- It initializes an ArrayList<Integer> named expenses to store the user's expenses.
- The user is prompted to choose an option, and based on their choice, various actions are performed using a switch statement.
- Options include reviewing, adding, deleting, sorting, searching expenses, and closing the application.
- Recursive calls to **optionsSelection** are used to keep the program running until the user decides to close it.

### 3. closeApp Method:

• A simple method that prints a closing message when the user chooses to exit the application.

# 4. searchExpenses Method:

- Takes an ArrayList<Integer> as input and prompts the user to enter an expense to search for.
- It iterates through the expenses to check if the specified expense is present and prints the result.

# 5. sortExpenses Method:

- Prints the list of expenses before sorting.
- Calls the **bubbleSort** method to sort the expenses in ascending order.
- Prints the sorted list of expenses.

#### 6. bubbleSort Method:

• Implements the bubble sort algorithm to sort the expenses in ascending order.

# 7. printArrayList Method:

• Prints the contents of an ArrayList<Integer>.

### **Overall Flow:**

- The user is presented with a menu.
- Based on the user's choice, various operations on expenses are performed.
- The program allows the user to review, add, delete, sort, search expenses, or close the application.
- Recursive calls to the menu selection method keep the program running until the user chooses to exit.