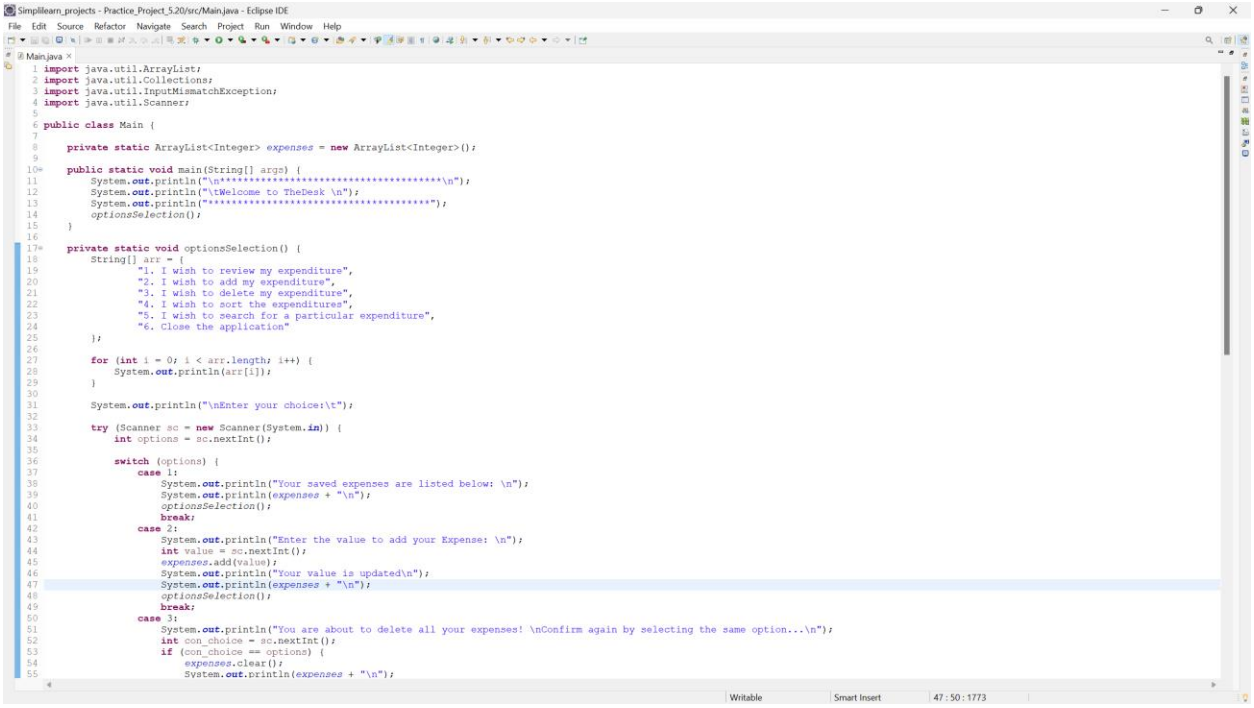
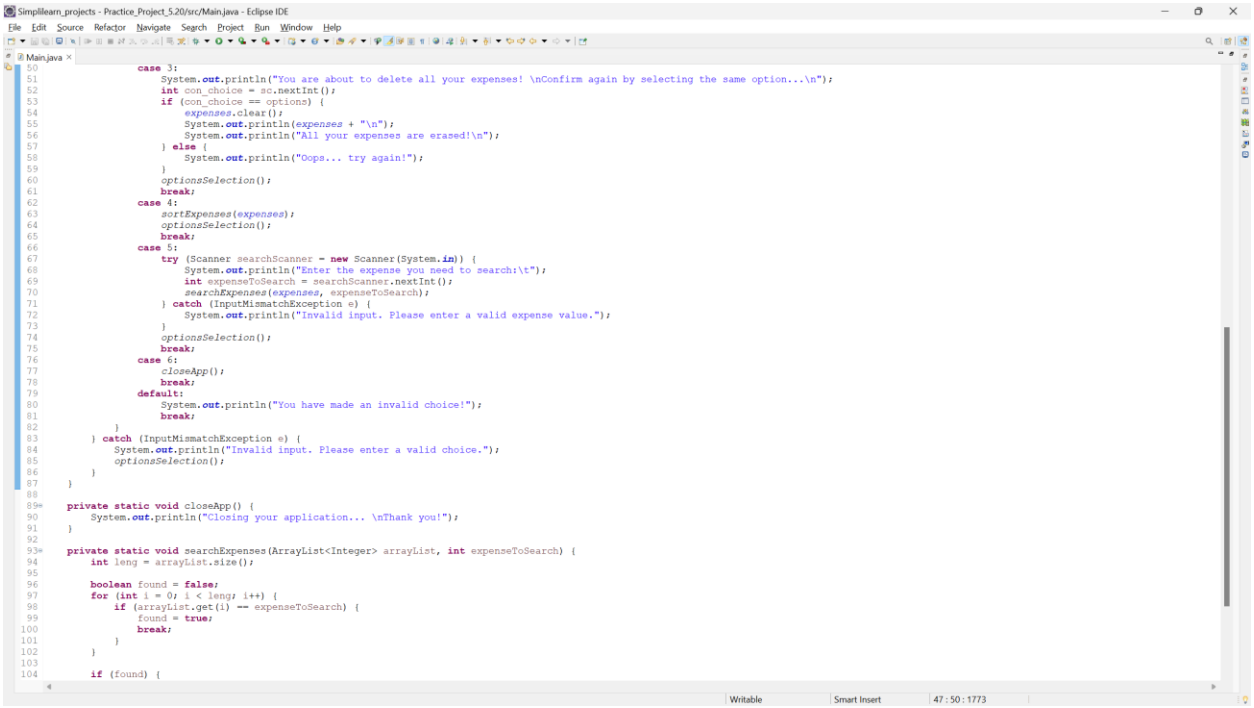
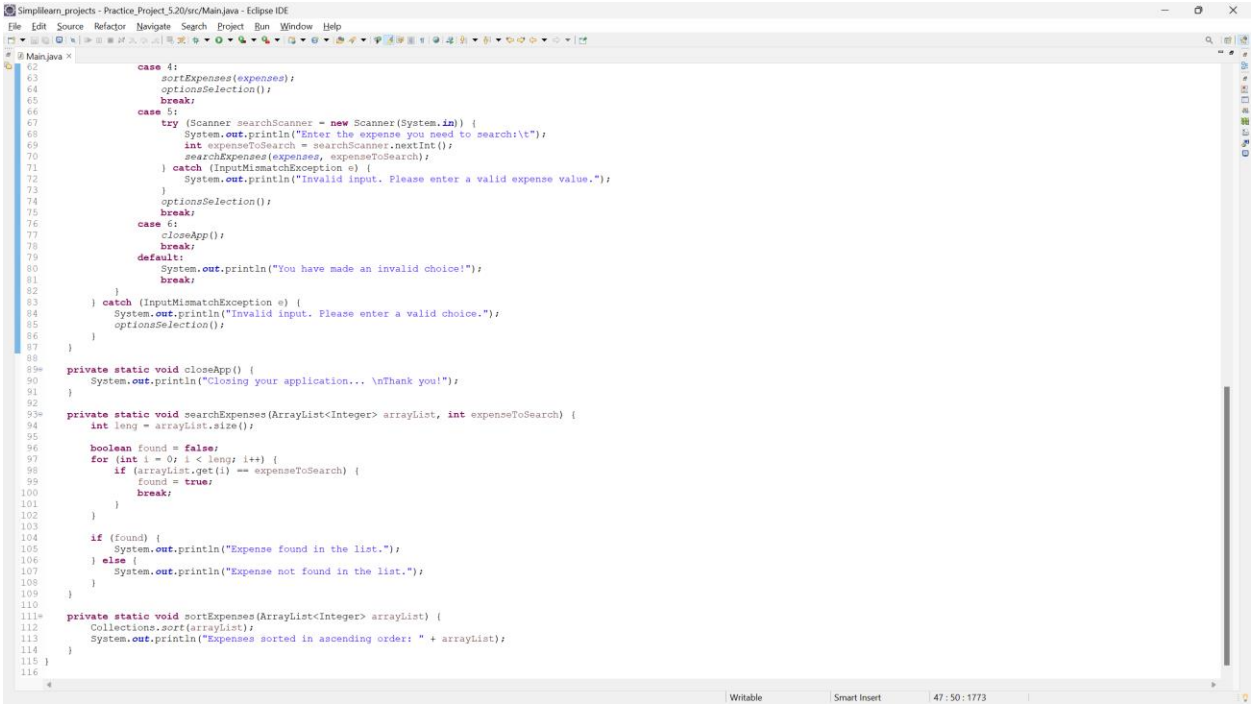



```java
import java.util.ArrayList;
import java.util.Collections;
import java.util.InputMismatchException;
import java.util.Scanner;

public class Main {

    private static ArrayList<Integer> expenses = new ArrayList<Integer>();

    public static void main(String[] args) {
        System.out.println("\n**************************************\n");
        System.out.println("\tWelcome to TheDesk \n");
        System.out.println("**************************************");
        optionsSelection();
    }

    private static void optionsSelection() {
        String[] arr = {
                "1. I wish to review my expenditure",
                "2. I wish to add my expenditure",
                "3. I wish to delete my expenditure",
                "4. I wish to sort the expenditures",
                "5. I wish to search for a particular expenditure",
                "6. Close the application"
        };

        for (int i = 0; i < arr.length; i++) {
            System.out.println(arr[i]);
        }

        System.out.println("\nEnter your choice:\t");

        try (Scanner sc = new Scanner(System.in)) {
            int options = sc.nextInt();

            switch (options) {
                case 1:
                    System.out.println("Your saved expenses are listed below: \n");
                    System.out.println(expenses + "\n");
                    optionsSelection();
                    break;
                case 2:
                    System.out.println("Enter the value to add your Expense: \n");
                    int value = sc.nextInt();
                    expenses.add(value);
                    System.out.println("Your value is updated\n");
                    System.out.println(expenses + "\n");
                    optionsSelection();
                    break;
                case 3:
                    System.out.println("You are about to delete all your expenses! \nConfirm again by selecting the same option...\n");
                    int con_choice = sc.nextInt();
                    if (con_choice == options) {
                        expenses.clear();
                        System.out.println(expenses + "\n");
```




```java
                case 3:
                    System.out.println("You are about to delete all your expenses! \nConfirm again by selecting the same option...\n");
                    int con_choice = sc.nextInt();
                    if (con_choice == options) {
                        expenses.clear();
                        System.out.println(expenses + "\n");
                        System.out.println("All your expenses are erased!\n");
                    } else {
                        System.out.println("Oops... try again!");
                    }
                    optionsSelection();
                    break;
                case 4:
                    sortExpenses(expenses);
                    optionsSelection();
                    break;
                case 5:
                    try (Scanner searchScanner = new Scanner(System.in)) {
                        System.out.println("Enter the expense you need to search:\t");
                        int expenseToSearch = searchScanner.nextInt();
                        searchExpenses(expenses, expenseToSearch);
                    } catch (InputMismatchException e) {
                        System.out.println("Invalid input. Please enter a valid expense value.");
                    }
                    optionsSelection();
                    break;
                case 6:
                    closeApp();
                    break;
                default:
                    System.out.println("You have made an invalid choice!");
                    break;
            }
        } catch (InputMismatchException e) {
            System.out.println("Invalid input. Please enter a valid choice.");
            optionsSelection();
        }
    }

    private static void closeApp() {
        System.out.println("Closing your application... \nThank you!");
    }

    private static void searchExpenses(ArrayList<Integer> arrayList, int expenseToSearch) {
        int leng = arrayList.size();

        boolean found = false;
        for (int i = 0; i < leng; i++) {
            if (arrayList.get(i) == expenseToSearch) {
                found = true;
                break;
            }
        }

        if (found) {
```




```
                case 4:
                    sortExpenses(expenses);
                    optionsSelection();
                    break;
                case 5:
                    try (Scanner searchScanner = new Scanner(System.in)) {
                        System.out.println("Enter the expense you need to search:\t");
                        int expenseToSearch = searchScanner.nextInt();
                        searchExpenses(expenses, expenseToSearch);
                    } catch (InputMismatchException e) {
                        System.out.println("Invalid input. Please enter a valid expense value.");
                    }
                    optionsSelection();
                    break;
                case 6:
                    closeApp();
                    break;
                default:
                    System.out.println("You have made an invalid choice!");
                    break;
            }
        } catch (InputMismatchException e) {
            System.out.println("Invalid input. Please enter a valid choice.");
            optionsSelection();
        }
    }

    private static void closeApp() {
        System.out.println("Closing your application... \nThank you!");
    }

    private static void searchExpenses(ArrayList<Integer> arrayList, int expenseToSearch) {
        int leng = arrayList.size();

        boolean found = false;
        for (int i = 0; i < leng; i++) {
            if (arrayList.get(i) == expenseToSearch) {
                found = true;
                break;
            }
        }

        if (found) {
            System.out.println("Expense found in the list.");
        } else {
            System.out.println("Expense not found in the list.");
        }
    }

    private static void sortExpenses(ArrayList<Integer> arrayList) {
        Collections.sort(arrayList);
        System.out.println("Expenses sorted in ascending order: " + arrayList);
    }
}
```