**package** com.simplilearn.demo;

**import** java.util.\*;

**import** java.util.ArrayList;

**import** java.util.Scanner;

**public** **class** BugsFixing {

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

**private** **static** **final** String ***ERROR\_MESSAGE*** = "ERROR:Please enter a valid integer!";

**private** **final** **static** StringBuilder ***arr*** = **new**

StringBuilder()

.append("1. I wish to review my expenditure\n")

.append("2. I wish to add my expenditure\n")

.append("3. I wish to delete my expenditure\n")

.append("4. I wish to sort the expenditures\n")

.append("5. I wish to search for a particular expenditure\n")

.append("6. Close the application\n");

**public** **static** **void** main(String[] args) {

System.***out***.println("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\* \n");

System.***out***.println("\tWelcome to TheDesk \n");

System.***out***.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*")

;

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

*addInitialExpenses*();

System.***out***.println("Current expenses: " + *expenses*);

*optionsSelection*();

}

**private** **static** **void** addInitialExpenses() {

*expenses*.add(2000);

*expenses*.add(4600);

*expenses*.add(90000);

*expenses*.add(64000);

*expenses*.add(220);

}

**private** **static** **void** optionsSelection() {

**int** optionSelected = 1;

**do** {

System.***out***.print(***arr***);

Scanner sc = **new** Scanner(System.***in***);

**try** {

optionSelected = sc.nextInt();

} **catch** (InputMismatchException e) {

System.***out***.println("\n" + ***ERROR\_MESSAGE*** +

"\n");

**continue**;

}

**switch** (optionSelected) {

**case** 1:

System.***out***.println("Your saved expenses are listed below: \n");

System.***out***.println(*expenses* + "\n");

**break**;

**case** 2:

*addExpenditure*(sc);

**break**;

**case** 3:

*deleteExpenses*(optionSelected, sc);

**break**;

**case** 4:

*sortExpenses*(*expenses*);

**break**;

**case** 5:

*searchExpenses*(*expenses*, sc);

**break**;

**case** 6:

*closeApp*();

**break**;

**default**:

System.***out***.println("\nYou have made an invalid choice!\nChoose '6' if you wish to exit.\n");

**break**;

}

} **while** (**true**);

}

**private** **static** **void** closeApp() {

System.***out***.println("Closing your application... \nThank you!");

System.*exit*(0);

}

**private** **static** **void** searchExpenses(List<Integer>

arrayList, Scanner sc) {

System.***out***.println("Enter the expense you need to search:\t");

**int** key = -1;

**try** {

key = sc.nextInt();

} **catch** (InputMismatchException e) {

System.***out***.println("\n" + ***ERROR\_MESSAGE***);

**return**;

}

System.***out***.println(arrayList);

**int** index = arrayList.indexOf(key);

**if** (index < 0)

System.***out***.println(key + " is not present in the list!");

**else**

System.***out***.println("Value " + "[ " + key + " ]"

+ " has been found at index: " + index);

}

**private** **static** **void** sortExpenses(List<Integer> arrayList) {

Collections.*sort*(arrayList);

System.***out***.println("\n" + arrayList);

}

**private** **static** **void** deleteExpenses(**int** optionSelected,

Scanner sc) {

System.***out***.println("You are about the delete allyour expenses! " +"\nConfirm again by selecting the same option...\n");

**int** con\_choice = -1;

**try** {

con\_choice = sc.nextInt();

} **catch** (InputMismatchException e) {

System.***out***.println(***ERROR\_MESSAGE***);

**return**;

}

**if** (con\_choice == optionSelected) {

*expenses*.clear();

System.***out***.println(*expenses* + "\n");

System.***out***.println("All your expenses are erased!\n");

} **else** {

System.***out***.println("Oops... try again!");

}

}

**private** **static** **void** addExpenditure(Scanner sc) {

System.***out***.println("Enter the value to add your Expense: \n");

**int** value;

**try** {

value = sc.nextInt();

} **catch** (InputMismatchException e) {

System.***out***.println(***ERROR\_MESSAGE***);

**return**;

}

System.***out***.println("Your value is updated\n");

*expenses*.add(value);

System.***out***.println(*expenses* + "\n");

}

}