Week 8

import java.util.ArrayList;

import java.util.Scanner;

public class ArrayListSum {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

boolean playAgain = true;

while (playAgain) {

ArrayList<Integer> numbers = new ArrayList<>();

System.out.println("Enter numbers (enter nothing to finish):");

boolean finished = false;

while (!finished) {

try {

String input = scanner.nextLine().trim();

if (input.isEmpty()) {

finished = true;

} else {

int number = Integer.parseInt(input);

numbers.add(number);

}

} catch (NumberFormatException e) {

System.out.println("Invalid input. Please enter an integer.");

}

}

System.out.println("ArrayList of numbers with corresponding indices:");

for (int i = 0; i < numbers.size(); i++) {

System.out.println("Index " + i + ": " + numbers.get(i));

}

int sum = sumValues(numbers);

System.out.println("Number of elements: " + numbers.size());

System.out.println("Sum total: " + sum);

System.out.println("Do you want to play again? (Y/N)");

boolean validAnswer = false;

while (!validAnswer) {

String answer = scanner.nextLine().trim().toUpperCase();

if (answer.equals("Y")) {

validAnswer = true;

} else if (answer.equals("N")) {

validAnswer = true;

playAgain = false;

} else {

System.out.println("Invalid input. Please enter Y or N.");

}

}

}

System.out.println("Program execution done!");

}

public static int sumValues(ArrayList<Integer> numbers) {

int sum = 0;

for (int number : numbers) {

sum += number;

}

return sum;

}

}