Flow control and Parameter Passing

Assignment-2

```java
package Abstract;

import java.util.Scanner;

public class EmployeeSalary {
// Method to calculate and print the gross salary of an employee
    public static void calculateSalary(double basicSalary) {
        double HRA, DA, grossSalary;

        // Calculate HRA and DA based on the basic salary
        if (basicSalary > 15000) {
            HRA = basicSalary * 0.20; // 20% of basic salary
            DA = basicSalary * 0.60; // 60% of basic salary
        } else {
            HRA = 3000; // Fixed HRA for salary <= 15,000
            DA = basicSalary * 0.70; // 70% of basic salary
        }

        // Calculate gross salary
        grossSalary = basicSalary + HRA + DA;

        // Display the gross salary
        System.out.println("Basic Salary: " + basicSalary);
        System.out.println("HRA: " + HRA);
        System.out.println("DA: " + DA);
        System.out.println("Gross Salary: " + grossSalary);
    }

    public static void main(String[] args) {
        // TODO Auto-generated method stub

        Scanner scanner = new Scanner(System.in);
        int choice;

        do {
            // Ask for the basic salary input
            System.out.print("Enter the basic salary of the employee: ");
            double basicSalary = scanner.nextDouble();
```

```
            // Call the method to calculate the salary
                calculateSalary(basicSalary);

        // Ask if the user wants to calculate for another employee
System.out.print("Enter -1 to exit or any other number to continue: ");
                choice = scanner.nextInt();

    } while (choice != -1); // Loop continues until user enters -1

                // Close the scanner
                  scanner.close();

            System.out.println("Program exited. Goodbye!");

                        }

                        }
```

Output

```
Enter the basic salary of the employee: 10000
            Basic Salary: 10000.0
                 HRA: 3000.0
                  DA: 7000.0
            Gross Salary: 20000.0
Enter -1 to exit or any other number to continue: 18000
Enter the basic salary of the employee: 20000
            Basic Salary: 20000.0
                 HRA: 4000.0
                 DA: 12000.0
            Gross Salary: 36000.0
Enter -1 to exit or any other number to continue: -1
            Program exited. Goodbye!
```

Assignment-1

```
                package Abstract;

              import java.util.Scanner;

            public class ArmstrongNumber {

        // Method to print Armstrong numbers in a given range
public static void printArmstrongNumber(int start, int end) {
```

```java
        // Loop through the range from start to end
        for (int num = start; num <= end; num++) {
            int originalNum = num;
            int sum = 0;

        // Calculate the sum of cubes of the digits
            while (num > 0) {
        int digit = num % 10; // Get the last digit
sum += digit * digit * digit; // Cube the digit and add to sum
            num /= 10; // Remove the last digit
            }
   // Check if the sum of cubes equals the original number
            if (sum == originalNum) {

System.out.println( originalNum +" is an Armstrong number.");
            }
            }
            }

        public static void main(String[] args) {
           // TODO Auto-generated method stub

        Scanner scanner = new Scanner(System.in);

        // Take input for the range from the user
      System.out.print("Enter the start of the range: ");
            int start = scanner.nextInt();

       System.out.print("Enter the end of the range: ");
            int end = scanner.nextInt();

// Call the method to print Armstrong numbers in the given range
            printArmstrongNumber(start, end);

                // Close scanner
                scanner.close();




                }

                }
```

Output

```
Enter the start of the range: 100
 Enter the end of the range: 999

   153 is an Armstrong number.
   370 is an Armstrong number.
   371 is an Armstrong number.
   407 is an Armstrong number.
```