Assignment No: 01

Code:

```
import java.util.Scanner;

public class ArmstrongRange {
    public static void printArmstrongNumber(int start, int end) {
        for (int num = start; num <= end; num++) {
            int originalNum = num;
            int sum = 0;
            int temp = num;
            int digits = 0;
            while (temp > 0) {
                digits++;
                temp /= 10;
            }
            temp = num;
            while (temp > 0) {
                int digit = temp % 10;

                int power = 1;
                for (int i = 0; i < digits; i++) {
                    power *= digit;
                }
                sum += power;
                temp /= 10;
            }
            if (sum == originalNum) {
                System.out.println(originalNum + " is an Armstrong number.");
            }
        }
    }
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter the starting number: ");
        int start = scanner.nextInt();

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

        System.out.println("\nArmstrong numbers between " + start + " and " +
end + " are:");
        printArmstrongNumber(start, end);

        scanner.close();
    }
}
```

Output:

```
W:\Tranning\lab codes>javac ArmstrongRange.java

W:\Tranning\lab codes>java ArmstrongRange
Enter the starting number: 150
Enter the ending number: 200

Armstrong numbers between 150 and 200 are:
153 is an Armstrong number.

W:\Tranning\lab codes>
```

Assignment No: 02

Code:

```java
import java.util.Scanner;

public class grosalcal {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int choice = -1;

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

            double hra, da, grossSalary;

            if (basicSalary > 15000) {
                hra = 0.20 * basicSalary;
                da = 0.60 * basicSalary;
            } else {
                hra = 3000;
                da = 0.70 * basicSalary;
            }
            grossSalary = basicSalary + hra + da;

            System.out.println("Gross Salary = " + grossSalary);

            System.out.print("Enter -1 to calculate salary for another
employee, or any other number to exit: ");
            choice = scanner.nextInt();

        }
```

```
        while (choice == -1);
        System.out.println("Program terminated.");
        scanner.close();
    }
}
```

Output:

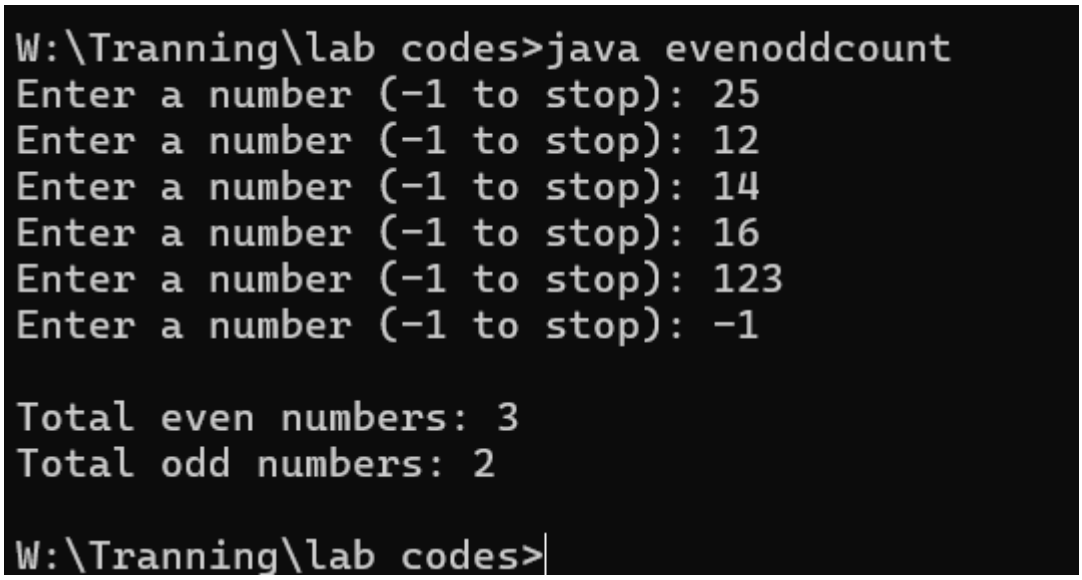
```
W:\Tranning\lab codes>java grosalcal
Enter basic salary of the employee: 16000
Gross Salary = 28800.0
Enter -1 to calculate salary for another employee, or any other number to exit: -1
Enter basic salary of the employee: 10000
Gross Salary = 20000.0
Enter -1 to calculate salary for another employee, or any other number to exit:
```

Assignment No: 03

Code:

```
import java.util.Scanner;

public class evenoddcount {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int evenCount = 0;
        int oddCount = 0;
        int number;

        while (true) {
            System.out.print("Enter a number (-1 to stop): ");
            number = scanner.nextInt();

            if (number == -1) {
                break;
            }

            if (number % 2 == 0) {
                evenCount++;
            } else {
                oddCount++;
            }
        }
        System.out.println("\nTotal even numbers: " + evenCount);
        System.out.println("Total odd numbers: " + oddCount);

        scanner.close();
    }
}
```

Output:


W:\Tranning\lab codes>java evenoddcount
Enter a number (-1 to stop): 25
Enter a number (-1 to stop): 12
Enter a number (-1 to stop): 14
Enter a number (-1 to stop): 16
Enter a number (-1 to stop): 123
Enter a number (-1 to stop): -1
Total even numbers: 3
Total odd numbers: 2
W:\Tranning\lab codes>