

## Assignment-1

### Program:

```
import java.util.Scanner;

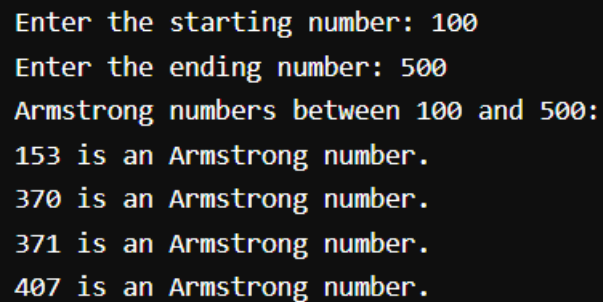
public class ArmstrongNumberFinder {

    public static void printArmstrongNumber(int start, int end) {
        for (int num = start; num <= end; num++) {
            int sum = 0;
            int originalNum = num;
            int digitsCount = 0;
            int tempNum = num;
            while (tempNum > 0) {
                tempNum /= 10;
                digitsCount++;
            }
            tempNum = num;
            while (tempNum > 0) {
                int digit = tempNum % 10;
                int cube = 1;
                for (int i = 0; i < digitsCount; i++) {
                    cube *= digit;
                }
                sum += cube;
                tempNum /= 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("Armstrong numbers between " + start + " and " + end + ":");
printArmstrongNumber(start, end);
scanner.close();
}
}
```

## Output:

A screenshot of a terminal window with a black background and white text. The text shows the program's execution: it prompts for a starting number (100) and an ending number (500), then lists Armstrong numbers in that range: 153, 370, 371, and 407.

```
Enter the starting number: 100
Enter the ending number: 500
Armstrong numbers between 100 and 500:
153 is an Armstrong number.
370 is an Armstrong number.
371 is an Armstrong number.
407 is an Armstrong number.
```

## Assignment-2

## Program:

```
import java.util.Scanner;

public class GrossSalaryCalculator {

    public static void calculateGrossSalary(double basicSalary) {
        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("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) {
        Scanner scanner = new Scanner(System.in);
        while (true) {
            System.out.print("Enter the basic salary of the employee: ");
            double basicSalary = scanner.nextDouble();
            calculateGrossSalary(basicSalary);
            System.out.print("Enter -1 to exit or any other integer to calculate for another employee:");
            int choice = scanner.nextInt();

            if (choice == -1) {
```

```
        break;
    }
}22
scanner.close();
}
}
```

## Output:

```
Enter the basic salary of the employee: 25000
Basic Salary: 25000.0
HRA: 5000.0
DA: 15000.0
Gross Salary: 45000.0
Enter -1 to exit or any other integer to calculate for another employee: -1
```