C-DAC MUMBAI

OOPJ Lab Assignment

Name – Vedant Padave.

1. Greatest of Two Test Scores Scenario: Your friend took two mock tests. Write a program to take the two test scores as input and print which test the friend scored higher in.

```
import java.util.Scanner;
class TestScore{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Score In 1st Test :- ");
        int test1 = sc.nextInt();
        System.out.println("Enter The Score In 2nd Test :- ");
        int test2 = sc.nextInt();
        if (test1>test2){
            System.out.println("Test 1 Score Is Higher and The Score Is "+test1);
        }
        else{
            System.out.println("Test 2 Score Is Higher and The Score Is "+test2);
        }
    }
}
```

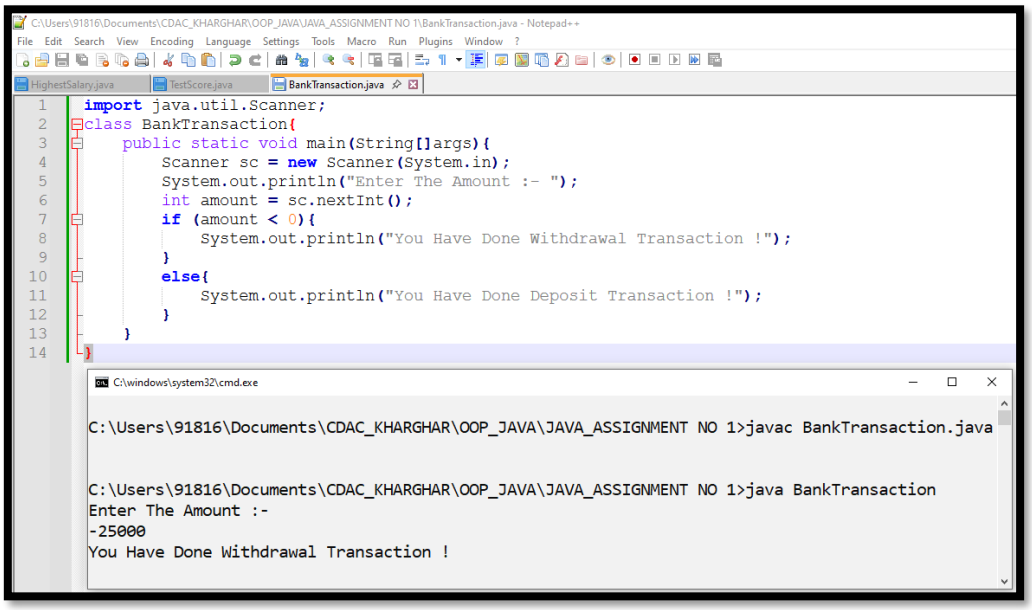
```
Microsoft Windows [Version 10.0.19045.4046]
(c) Microsoft Corporation. All rights reserved.

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac TestScore.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java TestScore
Enter The Score In 1st Test :-
78
Enter The Score In 2nd Test :-
85
Test 2 Score Is Higher and The Score Is 85

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

2. Highest Salary Among Three Offers Scenario: You have three job offers. Take the offered salaries as input and print which company is offering the highest salary.

```
import java.util.Scanner;
class HighestSalary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Salary Of 1st Company :- ");
        int company1 = sc.nextInt();
        System.out.println("Enter The Salary Of 2nd Company :- ");
        int company2 = sc.nextInt();
        System.out.println("Enter The Salary Of 3rd Company :- ");
        int company3 = sc.nextInt();
        if (company1>company2 && company1>company3){
            System.out.println("Company 1 Offers Highest Salary Which Is "+company1);
        }
        else if (company2>company3 && company2>company1){
            System.out.println("Company 2 Offers Highest Salary Which Is "+company2);
        }
        else {
            System.out.println("Company 3 Offers Highest Salary Which Is "+company3);
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac HighestSalary.java


C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java HighestSalary
Enter The Salary Of 1st Company :-
45000
Enter The Salary Of 2nd Company :-
52000
Enter The Salary Of 3rd Company :-
50000
Company 2 Offers Highest Salary Which Is 52000
```

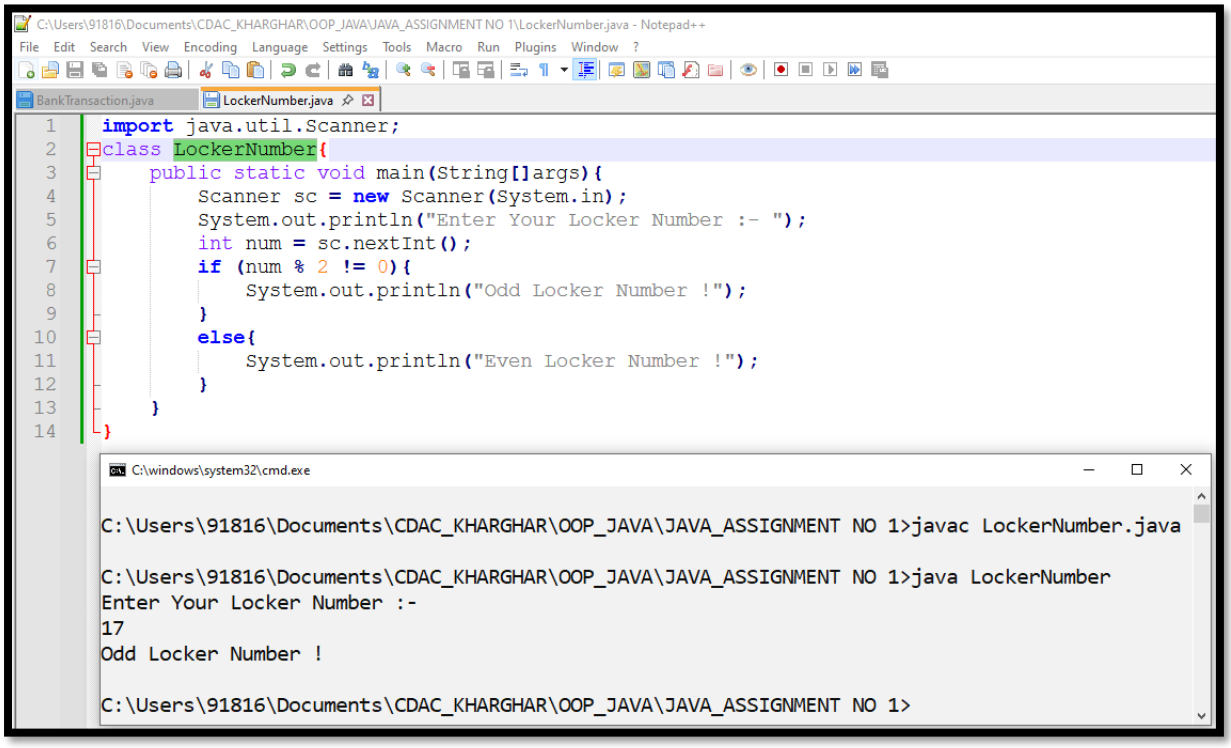
3. Bank Transaction Check Scenario: You check your bank account and see a transaction amount. Print whether the transaction is a deposit (positive) or a withdrawal (negative).



```
import java.util.Scanner;
class BankTransaction{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Amount :- ");
        int amount = sc.nextInt();
        if (amount < 0){
            System.out.println("You Have Done Withdrawal Transaction !");
        }
        else{
            System.out.println("You Have Done Deposit Transaction !");
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac BankTransaction.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java BankTransaction
Enter The Amount :-
-25000
You Have Done Withdrawal Transaction !
```

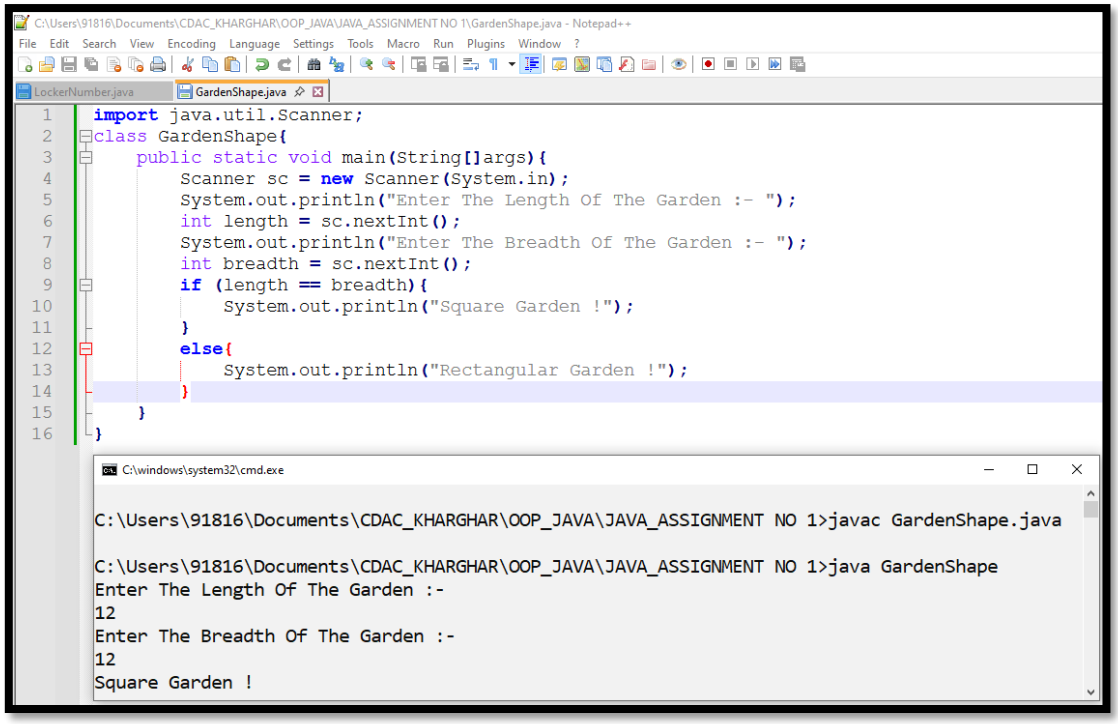
4. Even or Odd Locker Number Scenario: Your school assigns lockers with numbers. Take locker number as input and print whether it is even or odd.



```
import java.util.Scanner;
class LockerNumber{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Your Locker Number :- ");
        int num = sc.nextInt();
        if (num % 2 != 0){
            System.out.println("Odd Locker Number !");
        }
        else{
            System.out.println("Even Locker Number !");
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac LockerNumber.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java LockerNumber
Enter Your Locker Number :-
17
Odd Locker Number !

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

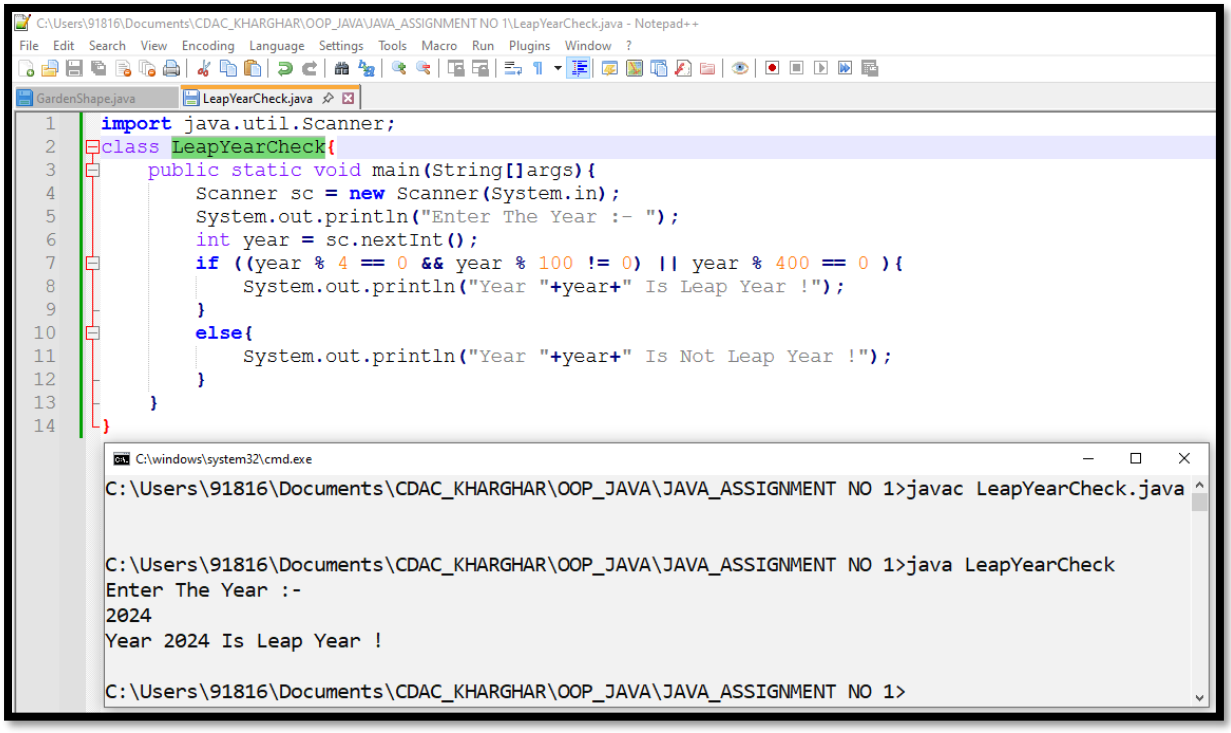
5. Square or Rectangle Garden Scenario: You are designing a small garden. Take its length and breadth as input and check whether it is a square garden or rectangular.



```
import java.util.Scanner;
class GardenShape{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Length Of The Garden :- ");
        int length = sc.nextInt();
        System.out.println("Enter The Breadth Of The Garden :- ");
        int breadth = sc.nextInt();
        if (length == breadth){
            System.out.println("Square Garden !");
        }
        else{
            System.out.println("Rectangular Garden !");
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac GardenShape.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java GardenShape
Enter The Length Of The Garden :-
12
Enter The Breadth Of The Garden :-
12
Square Garden !
```

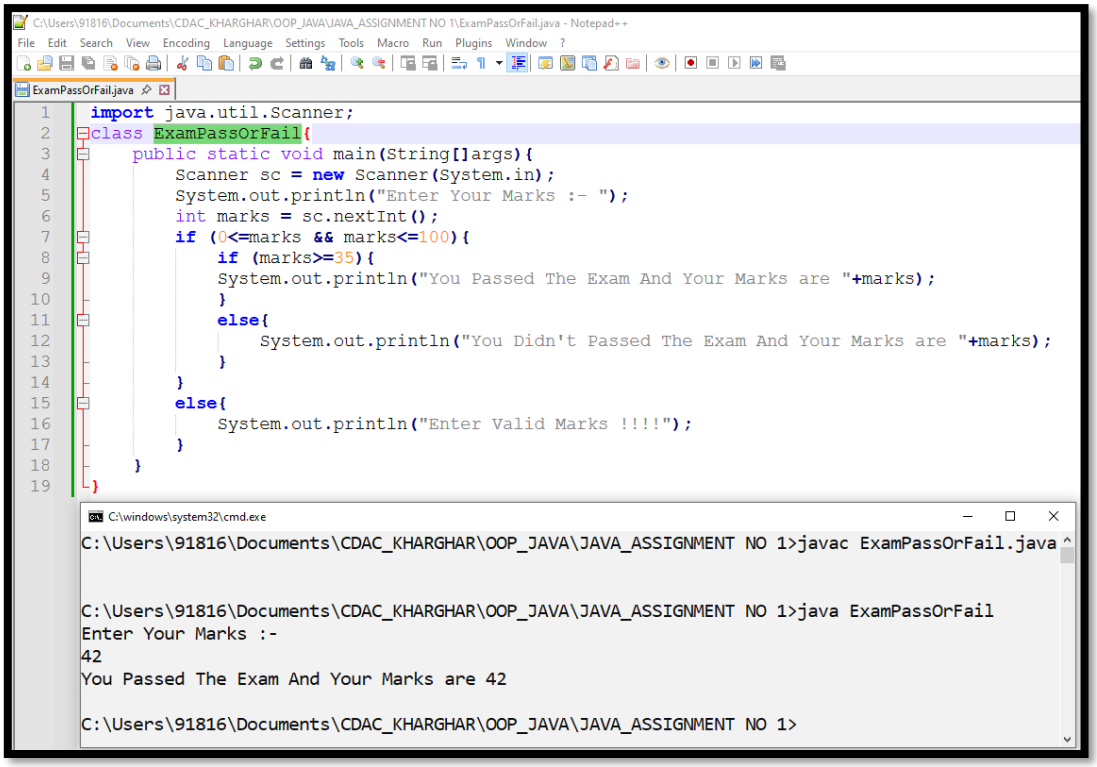
6. Leap Year Check for a Birthday Scenario: You want to celebrate your friend's birthday on Feb 29 if it's a leap year. Take the year as input and check if it's a leap year.



```
import java.util.Scanner;
class LeapYearCheck{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Year :- ");
        int year = sc.nextInt();
        if ((year % 4 == 0 && year % 100 != 0) || year % 400 == 0 ){
            System.out.println("Year "+year+" Is Leap Year !");
        }
        else{
            System.out.println("Year "+year+" Is Not Leap Year !");
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac LeapYearCheck.java


C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java LeapYearCheck
Enter The Year :-
2024
Year 2024 Is Leap Year !

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

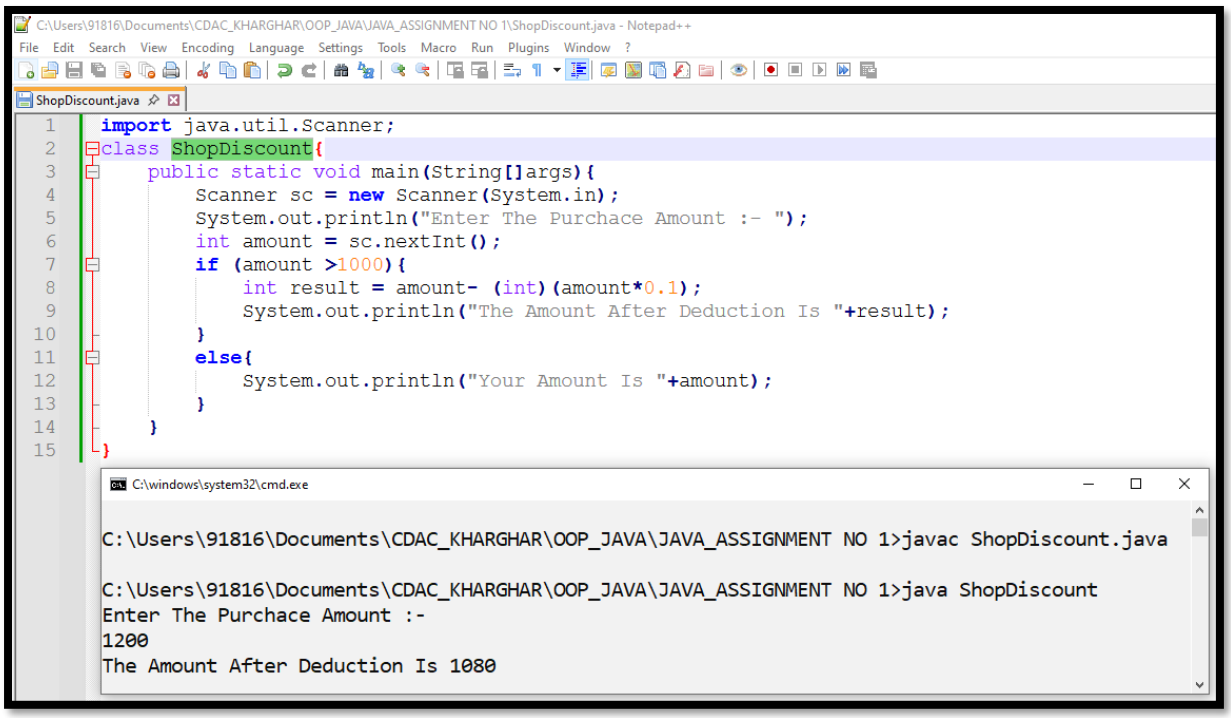
7. Exam Pass or Fail Scenario: A student gives an exam. Take marks (0–100) as input and print whether the student has passed (>=35) or failed.



```
import java.util.Scanner;
class ExamPassOrFail{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Your Marks :- ");
        int marks = sc.nextInt();
        if (0<=marks && marks<=100){
            if (marks>=35){
            System.out.println("You Passed The Exam And Your Marks are "+marks);
            }
            else{
                System.out.println("You Didn't Passed The Exam And Your Marks are "+marks);
            }
        }
        else{
            System.out.println("Enter Valid Marks !!!!");
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac ExamPassOrFail.java


C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java ExamPassOrFail
Enter Your Marks :-
42
You Passed The Exam And Your Marks are 42

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

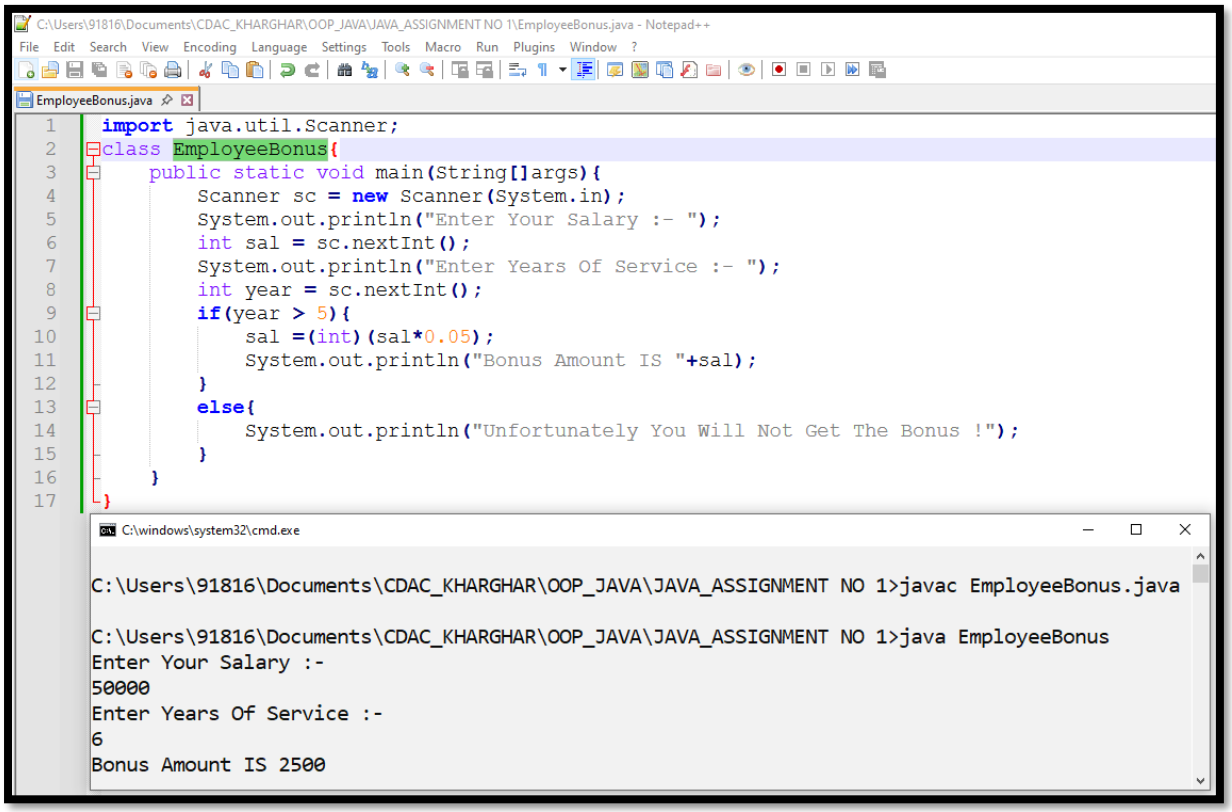
8. Shop Discount Calculation Scenario: A shop offers 10% discount if the purchase amount exceeds 1000. Take total purchase amount as input and calculate final cost.



```
import java.util.Scanner;
class ShopDiscount{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Purchace Amount :- ");
        int amount = sc.nextInt();
        if (amount >1000){
            int result = amount- (int)(amount*0.1);
            System.out.println("The Amount After Deduction Is "+result);
        }
        else{
            System.out.println("Your Amount Is "+amount);
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac ShopDiscount.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java ShopDiscount
Enter The Purchace Amount :-
1200
The Amount After Deduction Is 1080
```

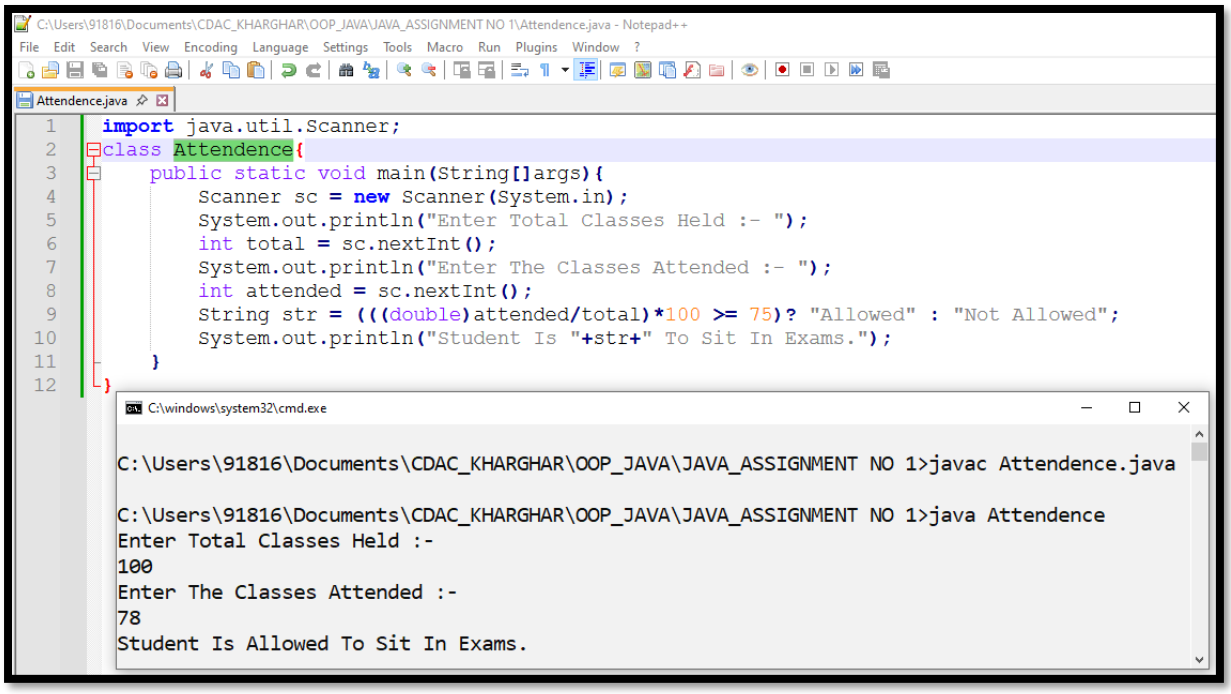
9. Employee Bonus Eligibility Scenario: A company gives a 5% bonus to employees with more than 5 years of service. Take salary and years of service as input and print bonus amount.



```
import java.util.Scanner;
class EmployeeBonus{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Your Salary :- ");
        int sal = sc.nextInt();
        System.out.println("Enter Years Of Service :- ");
        int year = sc.nextInt();
        if(year > 5){
            sal =(int)(sal*0.05);
            System.out.println("Bonus Amount IS "+sal);
        }
        else{
            System.out.println("Unfortunately You Will Not Get The Bonus !");
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac EmployeeBonus.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java EmployeeBonus
Enter Your Salary :-
50000
Enter Years Of Service :-
6
Bonus Amount IS 2500
```

10. Exam Attendance Eligibility Scenario: A student can sit in exams only if attendance >=75%. Take total classes held and attended as input, print allowance.

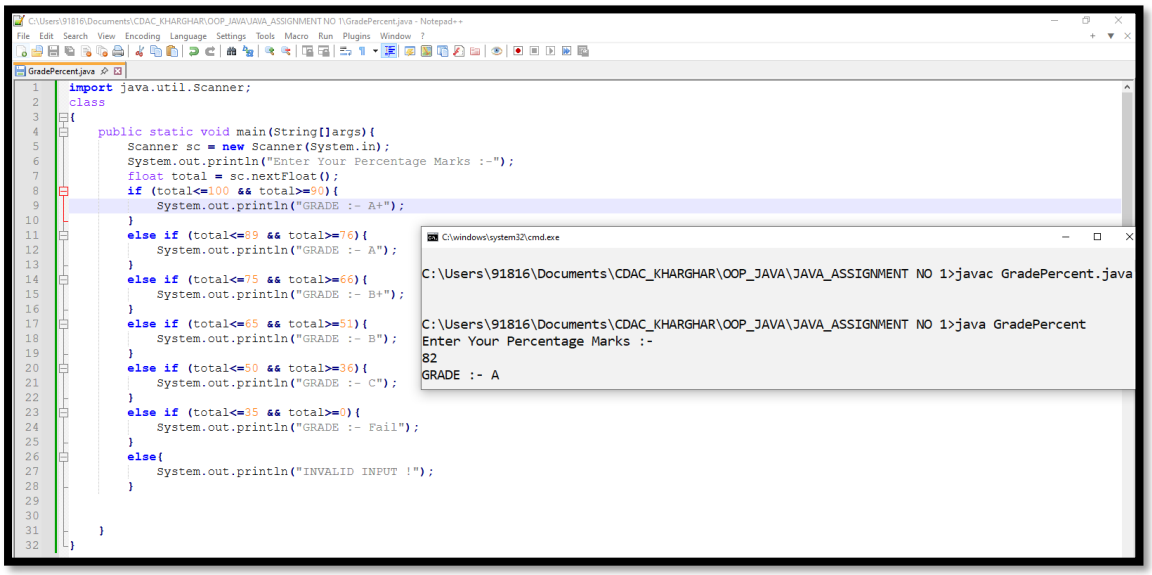


```
import java.util.Scanner;
class Attendence{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Total Classes Held :- ");
        int total = sc.nextInt();
        System.out.println("Enter The Classes Attended :- ");
        int attended = sc.nextInt();
        String str = (((double)attended/total)*100 >= 75)? "Allowed" : "Not Allowed";
        System.out.println("Student Is "+str+" To Sit In Exams.");
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac Attendence.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java Attendence
Enter Total Classes Held :-
100
Enter The Classes Attended :-
78
Student Is Allowed To Sit In Exams.
```

11. Grade Based on Percentage Scenario: Your friend got exam marks. Take percentage marks as input and print the grade:

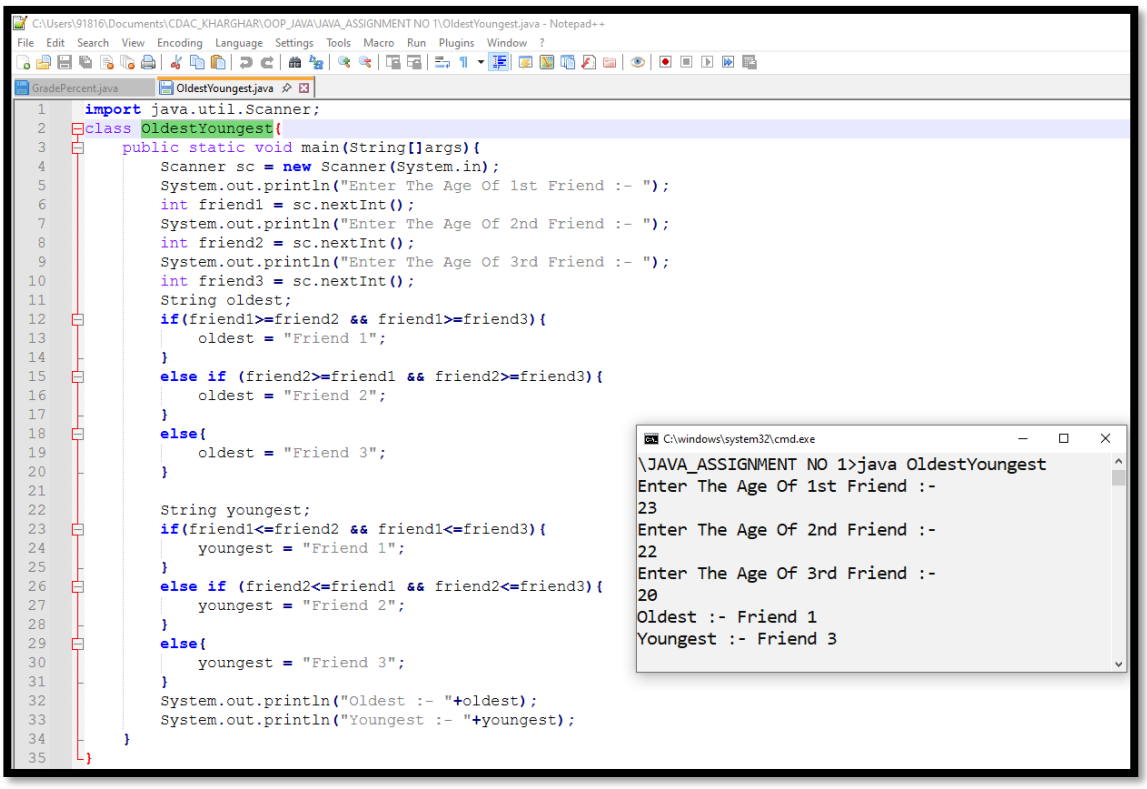
- 90+ → A+
- 76–89 → A
- 66–75 → B+
- 51–65 → B
- Below 35 → Fail



```
import java.util.Scanner;
class
{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Your Percentage Marks :-");
        float total = sc.nextFloat();
        if (total<=100 && total>=90){
            System.out.println("GRADE :- A+");
        }
        else if (total<=89 && total>=76){
            System.out.println("GRADE :- A");
        }
        else if (total<=75 && total>=66){
            System.out.println("GRADE :- B+");
        }
        else if (total<=65 && total>=51){
            System.out.println("GRADE :- B");
        }
        else if (total<=50 && total>=36){
            System.out.println("GRADE :- C");
        }
        else if (total<=35 && total>=0){
            System.out.println("GRADE :- Fail");
        }
        else{
            System.out.println("INVALID INPUT !");
        }


    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac GradePercent.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java GradePercent
Enter Your Percentage Marks :-
82
GRADE :- A
```

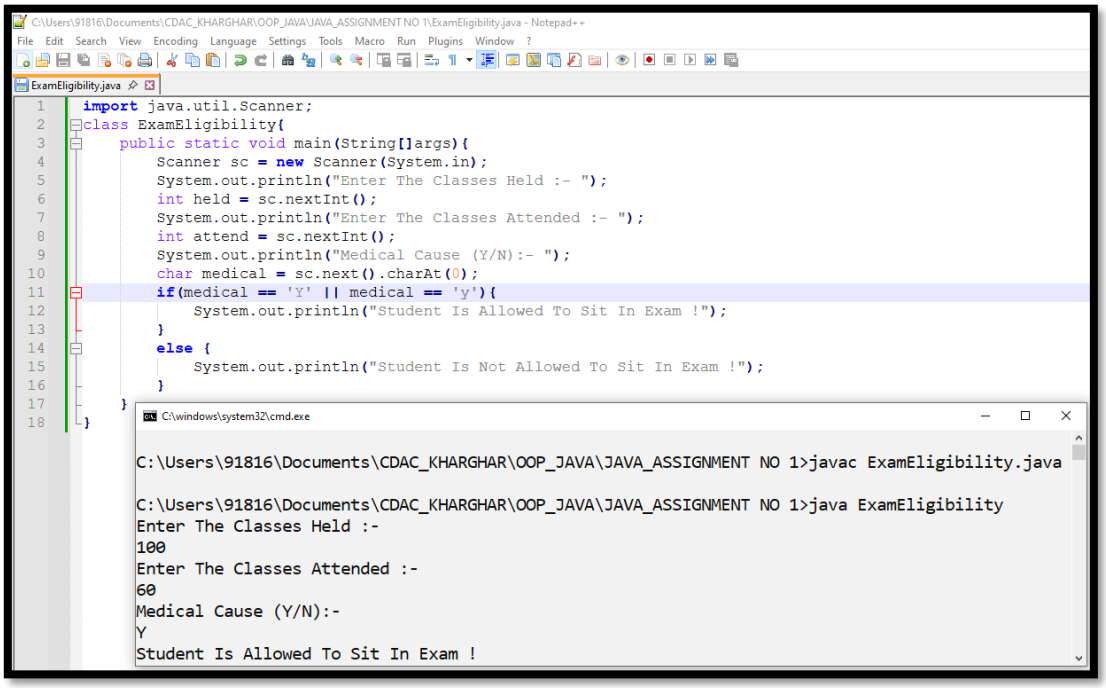
12. Oldest and Youngest Among Three Friends Scenario: You and two friends want to know who is oldest and youngest. Take ages as input and print the oldest and youngest.



```
import java.util.Scanner;
class OldestYoungest{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Age Of 1st Friend :- ");
        int friend1 = sc.nextInt();
        System.out.println("Enter The Age Of 2nd Friend :- ");
        int friend2 = sc.nextInt();
        System.out.println("Enter The Age Of 3rd Friend :- ");
        int friend3 = sc.nextInt();
        String oldest;
        if(friend1>=friend2 && friend1>=friend3){
            oldest = "Friend 1";
        }
        else if (friend2>=friend1 && friend2>=friend3){
            oldest = "Friend 2";
        }
        else{
            oldest = "Friend 3";
        }

        String youngest;
        if(friend1<=friend2 && friend1<=friend3){
            youngest = "Friend 1";
        }
        else if (friend2<=friend1 && friend2<=friend3){
            youngest = "Friend 2";
        }
        else{
            youngest = "Friend 3";
        }
        System.out.println("Oldest :- "+oldest);
        System.out.println("Youngest :- "+youngest);
    }
}
```

```
\JAVA_ASSIGNMENT NO 1>java OldestYoungest
Enter The Age Of 1st Friend :-
23
Enter The Age Of 2nd Friend :-
22
Enter The Age Of 3rd Friend :-
20
Oldest :- Friend 1
Youngest :- Friend 3
```

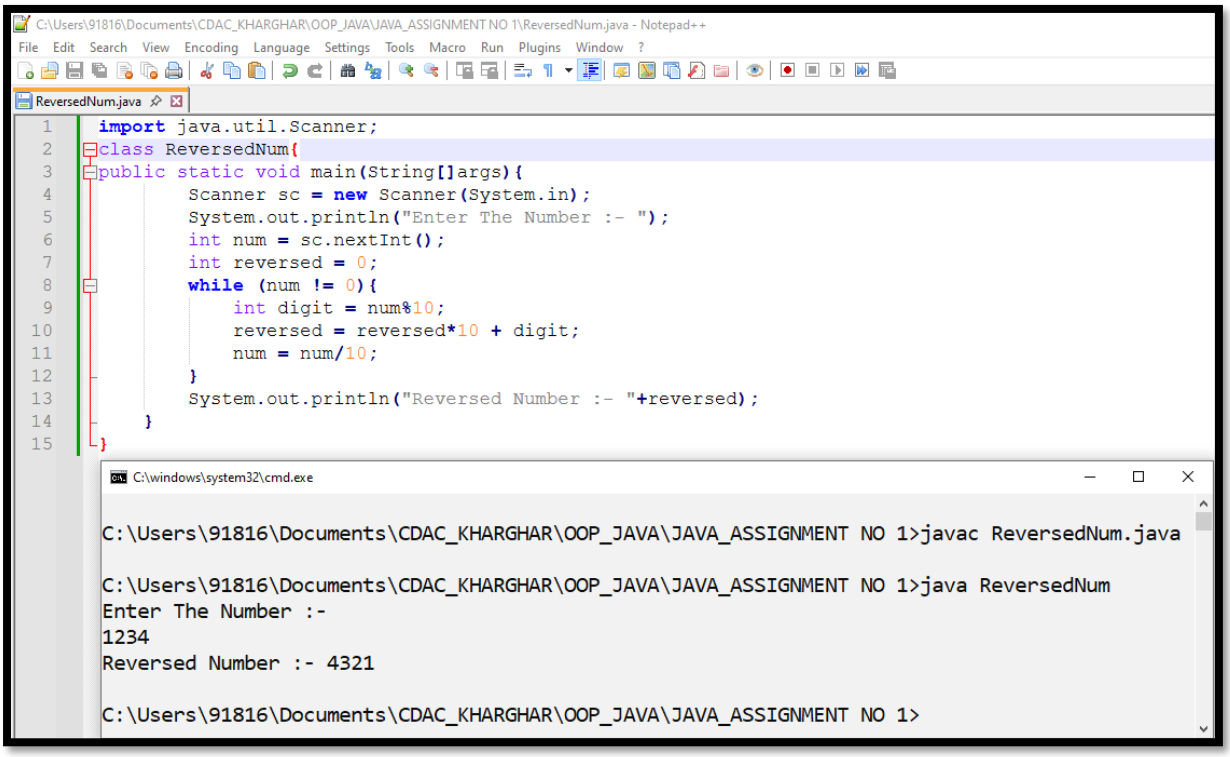
13. Exam Eligibility with Medical Cause Scenario: A student's attendance is low but may have medical cause. Take classes held, attended, and medical cause (Y/N) as input and decide if the student can sit in exam.



```
import java.util.Scanner;
class ExamEligibility{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Classes Held :- ");
        int held = sc.nextInt();
        System.out.println("Enter The Classes Attended :- ");
        int attend = sc.nextInt();
        System.out.println("Medical Cause (Y/N):- ");
        char medical = sc.next().charAt(0);
        if(medical == 'Y' || medical == 'y'){
            System.out.println("Student Is Allowed To Sit In Exam !");
        }
        else {
            System.out.println("Student Is Not Allowed To Sit In Exam !");
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac ExamEligibility.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java ExamEligibility
Enter The Classes Held :-
100
Enter The Classes Attended :-
60
Medical Cause (Y/N):-
Y
Student Is Allowed To Sit In Exam !
```

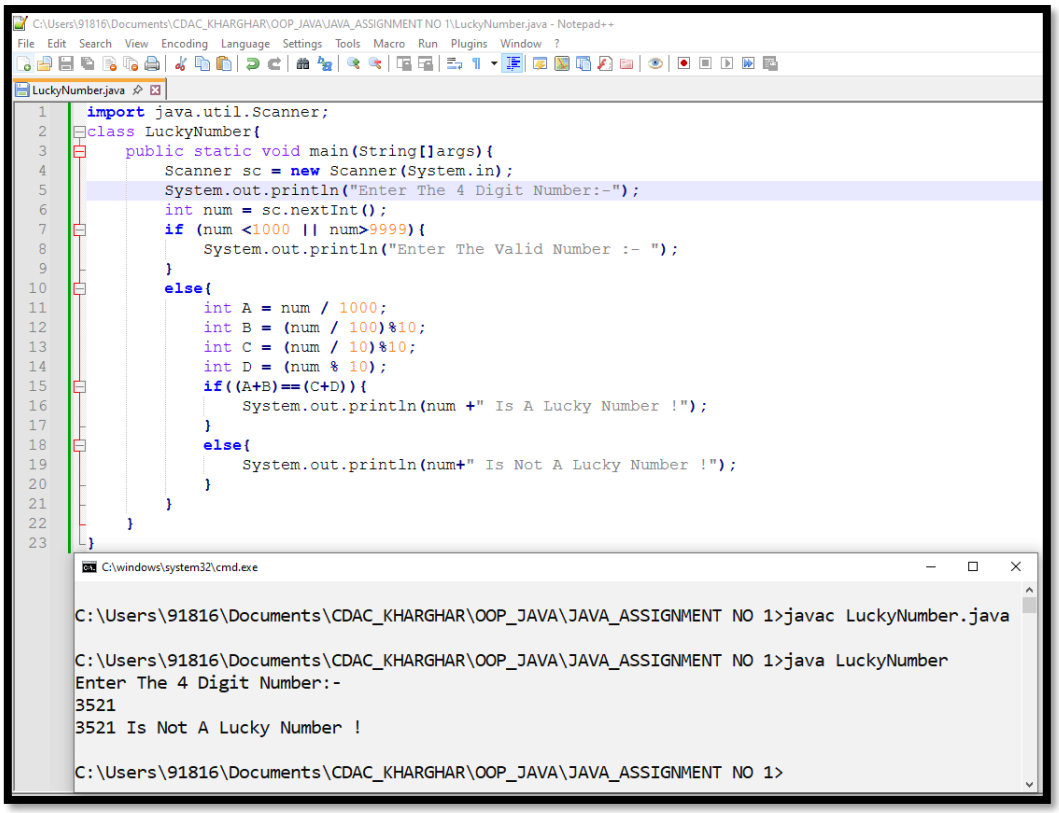
14. Reverse a 4-Digit Number Scenario: Take a 4-digit number and print its reverse.



```
import java.util.Scanner;
class ReversedNum{
public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Number :- ");
        int num = sc.nextInt();
        int reversed = 0;
        while (num != 0){
            int digit = num%10;
            reversed = reversed*10 + digit;
            num = num/10;
        }
        System.out.println("Reversed Number :- "+reversed);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac ReversedNum.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java ReversedNum
Enter The Number :-
1234
Reversed Number :- 4321

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

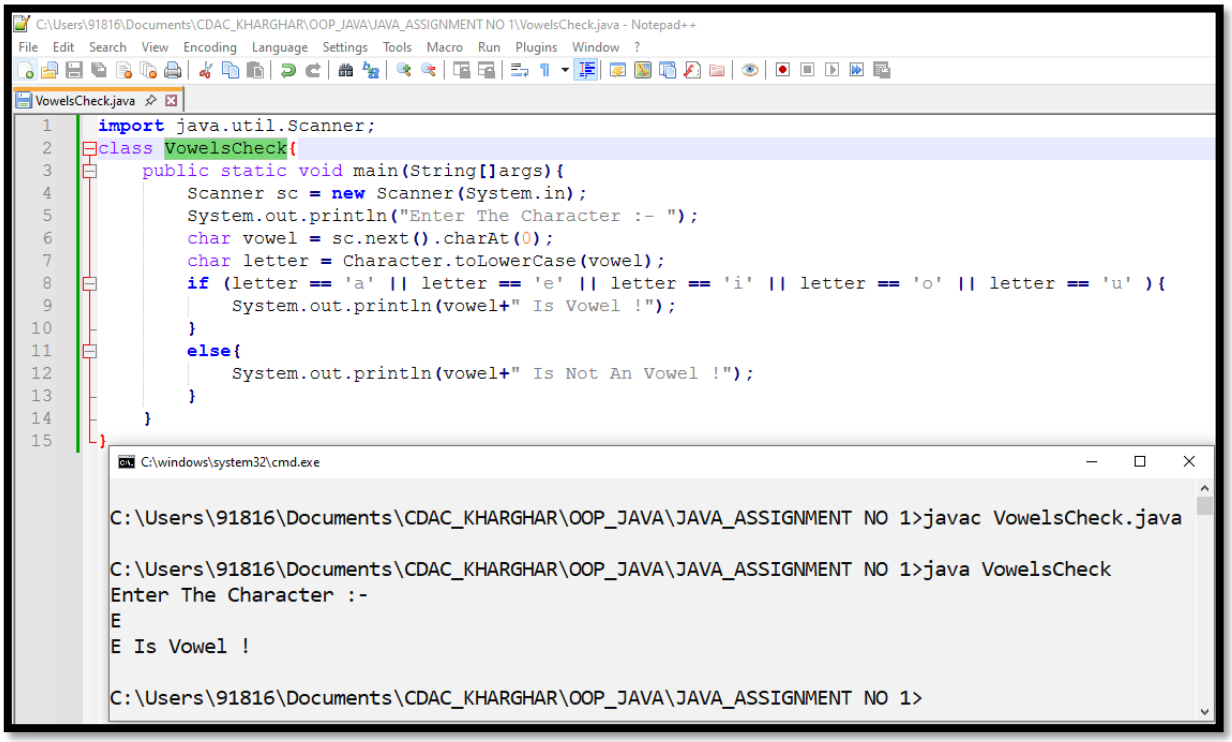
15. Lucky Number Check Scenario: A 4-digit number ABCD is lucky if A+**B = C+D. Check if a number is lucky.**



```
import java.util.Scanner;
class LuckyNumber{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The 4 Digit Number:-");
        int num = sc.nextInt();
        if (num <1000 || num>9999){
            System.out.println("Enter The Valid Number :- ");
        }
        else{
            int A = num / 1000;
            int B = (num / 100)%10;
            int C = (num / 10)%10;
            int D = (num % 10);
            if((A+B)==(C+D)){
                System.out.println(num +" Is A Lucky Number !");
            }
            else{
                System.out.println(num+" Is Not A Lucky Number !");
            }
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac LuckyNumber.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java LuckyNumber
Enter The 4 Digit Number:-
3521
3521 Is Not A Lucky Number !

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

16. Vowel or Consonant Checker Scenario: Take a character input and print whether it is a vowel or consonant. Print error for invalid input.



```
import java.util.Scanner;
class VowelsCheck{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Character :- ");
        char vowel = sc.next().charAt(0);
        char letter = Character.toLowerCase(vowel);
        if (letter == 'a' || letter == 'e' || letter == 'i' || letter == 'o' || letter == 'u' ){
            System.out.println(vowel+" Is Vowel !");
        }
        else{
            System.out.println(vowel+" Is Not An Vowel !");
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac VowelsCheck.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java VowelsCheck
Enter The Character :-
E
E Is Vowel !

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

17. Divisibility Check Scenario: Check if a number is divisible by 2, 3, and 5 using nested if-else.

```java
import java.util.Scanner;
class DivisibilityCheck{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The NUmber :- ");
        int num = sc.nextInt();
        if (num%2 == 0){
            System.out.println(num+" Is Divisible By 2 !");
            if (num%3 == 0){
                System.out.println(num+" Is Divisible By 3 !");
            }
            else{
                System.out.println(num+" Is Not Divisible By 3 !");
            }
            if (num%5 == 0){
                System.out.println(num+" Is Divisible By 5 !");
            }
            else{
                System.out.println("The Number "+num+" Is Not Divisible By 5 !");
            }
        }
        else{
            System.out.println("The Number "+num+" Is Not Divisible By 2,3 And 5 !");
        }

    }
}
```

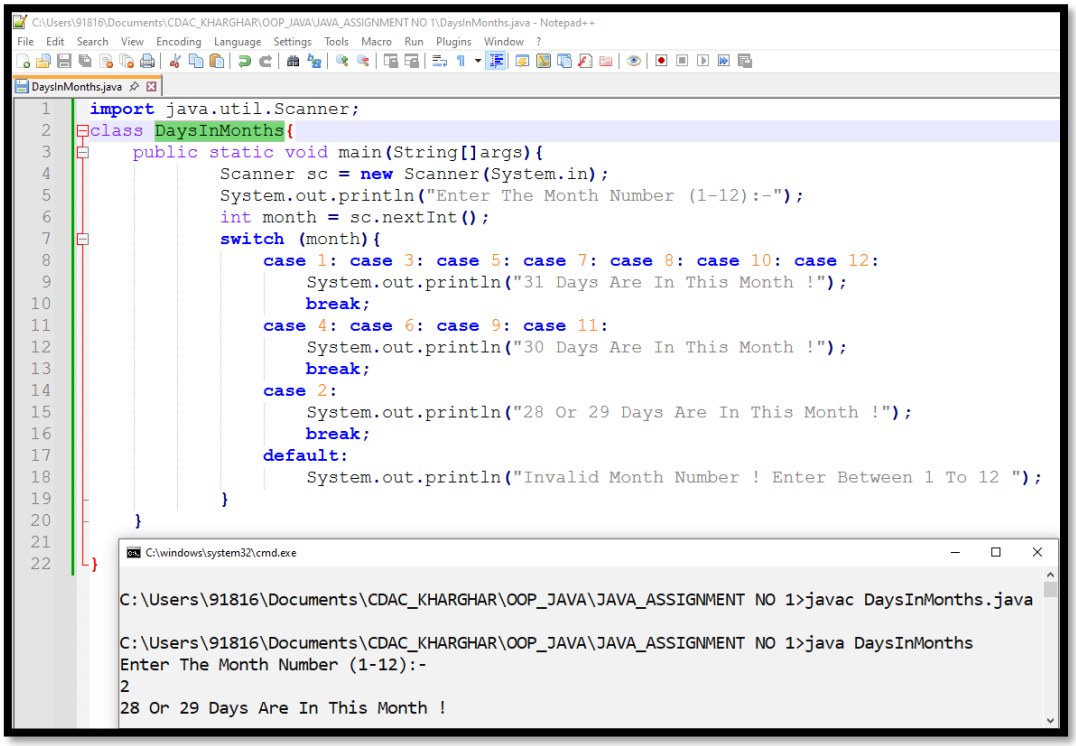
```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac DivisibilityCheck.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java DivisibilityCheck
Enter The NUmber :-
30
30 Is Divisible By 2 !
30 Is Divisible By 3 !
30 Is Divisible By 5 !
```

18. Day of the Week Scenario: Take day number (1–7) and print the day name.

```java
import java.util.Scanner;
class DaysOfWeek{
    public static void main (String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the Number :- ");
        int day = sc.nextInt();
        switch(day){
            case 1 :
                System.out.println("Monday");
                break;

            case 2 :
                System.out.println("Tuesday");
                break;

            case 3 :
                System.out.println("Wednesday");
                break;

            case 4 :
                System.out.println("Thursday");
                break;

            case 5 :
                System.out.println("Friday");
                break;

            case 6 :
                System.out.println("Saturday");
                break;

            case 7 :
                System.out.println("Sunday");
                break;

            default :
                System.out.println("INVALID INPUT !!!");

        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac DaysOfWeek.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java DaysOfWeek
Enter the Number :-
4
Thursday
```

19. Days in a Month Scenario: Take month number (1–12) and print number of days in that month.



```java
import java.util.Scanner;
class DaysInMonths{
    public static void main(String[]args){
            Scanner sc = new Scanner(System.in);
            System.out.println("Enter The Month Number (1-12):-");
            int month = sc.nextInt();
            switch (month){
                case 1: case 3: case 5: case 7: case 8: case 10: case 12:
                    System.out.println("31 Days Are In This Month !");
                    break;
                case 4: case 6: case 9: case 11:
                    System.out.println("30 Days Are In This Month !");
                    break;
                case 2:
                    System.out.println("28 Or 29 Days Are In This Month !");
                    break;
                default:
                    System.out.println("Invalid Month Number ! Enter Between 1 To 12 ");
            }
    }
}
```

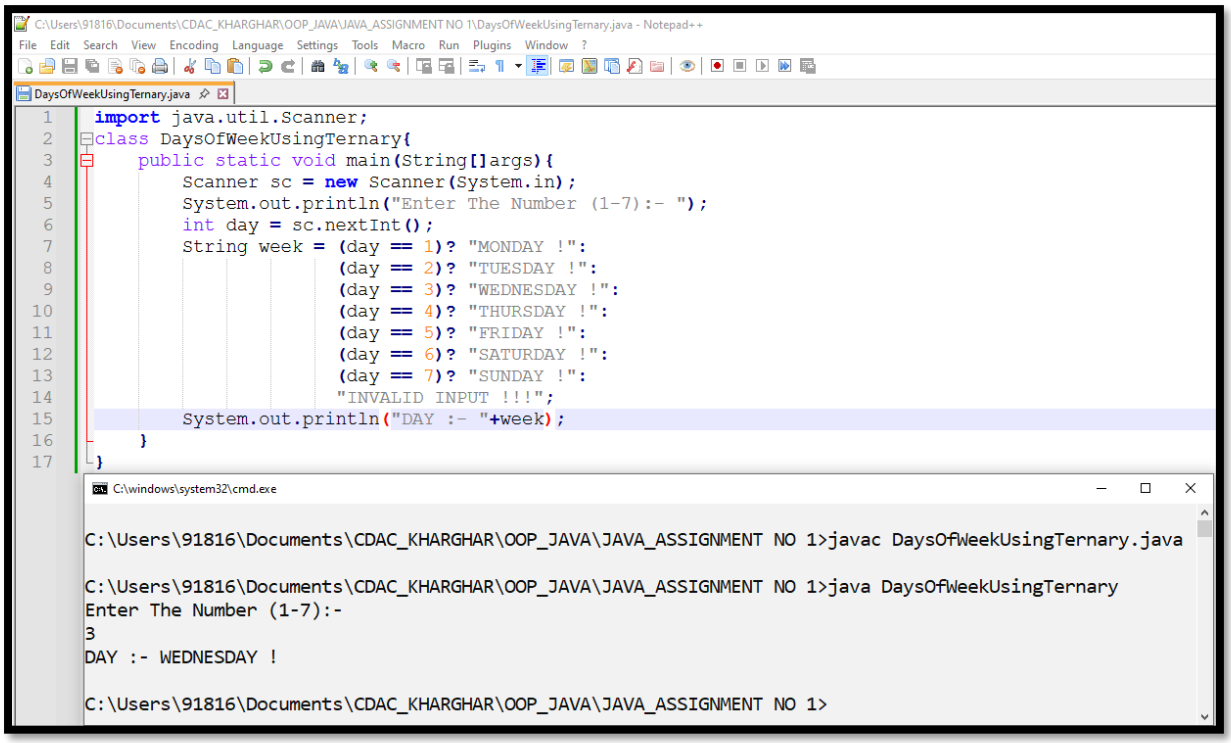
```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac DaysInMonths.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java DaysInMonths
Enter The Month Number (1-12):-
2
28 Or 29 Days Are In This Month !
```

20. Basic Calculator Using If-Else Scenario: Create a calculator that takes two numbers and an operator (+, -, *, /) and prints result using nested if-else.

```java
import java.util.Scanner;
class Calculator{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The 1st Number :- ");
        float num1 = sc.nextFloat();
        System.out.println("Enter The 2nd Number :- ");
        float num2 = sc.nextFloat();
        System.out.println("Enter The Operator (+,-,*,/) :- ");
        char sign = sc.next().charAt(0);
        float result = 0f;
        if (sign == '+' || sign == '-' || sign == '*' || sign == '/'){
            if (sign == '+'){
                result = num1 + num2;
                System.out.println("Result :- "+result);
            }
            else if (sign == '-'){
                result = num1 - num2;
                System.out.println("Result :- "+result);
            }
            else if (sign == '*'){
                result = num1 * num2;
                System.out.println("Result :- "+result);
            }
            else{
                result = num1/num2;
                System.out.println("Result :- "+result);
            }
        }
        else{
            System.out.println("Wrong Input !!!");
        }
    }
}
```

```
Enter The 1st Number :-
10
Enter The 2nd Number :-
5
Enter The Operator (+,-,*,/) :-
*
Result :- 50.0

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

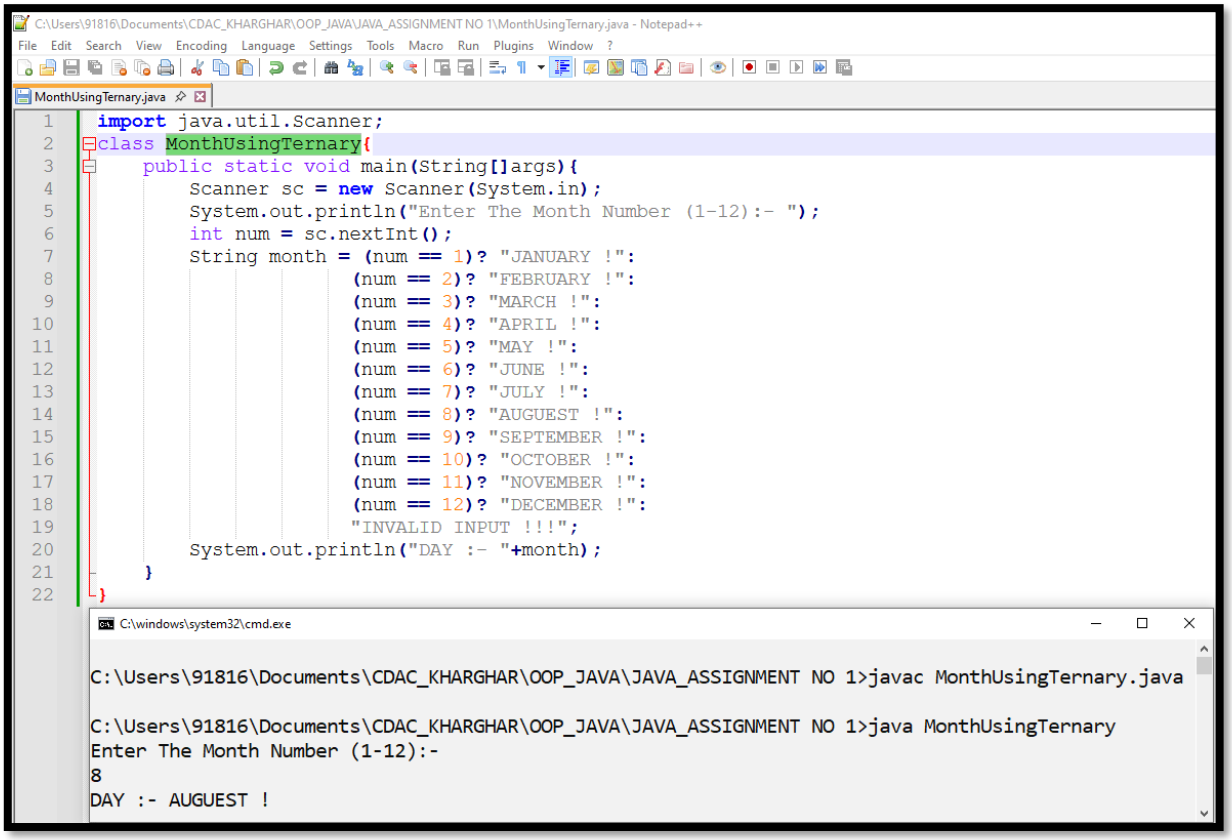
21. Day of the Week (Ternary) Scenario: Take an int (1–7) and print the corresponding day of the week using ternary operators.



```
import java.util.Scanner;
class DaysOfWeekUsingTernary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Number (1-7):- ");
        int day = sc.nextInt();
        String week = (day == 1)? "MONDAY !":
                      (day == 2)? "TUESDAY !":
                      (day == 3)? "WEDNESDAY !":
                      (day == 4)? "THURSDAY !":
                      (day == 5)? "FRIDAY !":
                      (day == 6)? "SATURDAY !":
                      (day == 7)? "SUNDAY !":
                      "INVALID INPUT !!!";
        System.out.println("DAY :- "+week);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac DaysOfWeekUsingTernary.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java DaysOfWeekUsingTernary
Enter The Number (1-7):-
3
DAY :- WEDNESDAY !

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

22. Month Name from Number Scenario: Take month number (1–12) and print the month name using ternary operators or if-else.



```
import java.util.Scanner;
class MonthUsingTernary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Month Number (1-12):- ");
        int num = sc.nextInt();
        String month = (num == 1)? "JANUARY !":
                       (num == 2)? "FEBRUARY !":
                       (num == 3)? "MARCH !":
                       (num == 4)? "APRIL !":
                       (num == 5)? "MAY !":
                       (num == 6)? "JUNE !":
                       (num == 7)? "JULY !":
                       (num == 8)? "AUGUEST !":
                       (num == 9)? "SEPTEMBER !":
                       (num == 10)? "OCTOBER !":
                       (num == 11)? "NOVEMBER !":
                       (num == 12)? "DECEMBER !":
                       "INVALID INPUT !!!";
        System.out.println("DAY :- "+month);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac MonthUsingTernary.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java MonthUsingTernary
Enter The Month Number (1-12):-
8
DAY :- AUGUEST !
```

23. Basic Calculator Using Switch-Case Scenario: Create a calculator that uses switch-case for operators (+, -, *, /) and prints result.

```java
import java.util.Scanner;
class CalculaterUsingSwitchCase{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The 1st Number :- ");
        int num1 = sc.nextInt();
        System.out.println("Enter The 2nd Number :- ");
        int num2 = sc.nextInt();
        System.out.println("Enter The Operator (+,-,*,/) :- ");
        char operator = sc.next().charAt(0);
        int result = 0;
        switch (operator){
            case '+':
                result = num1 + num2;
                System.out.println("Result :- "+result);
                break;
            case '-':
                result = num1 - num2;
                System.out.println("Result :- "+result);
                break;
            case '*':
                result = num1 * num2;
                System.out.println("Result :- "+result);
                break;
            case '/':
                result = num1 / num2;
                System.out.println("Result :- "+result);
                break;
            default :
                System.out.println("INVALID INPUT !!!");
                break;
        }
    }
}
```

```
C:\windows\system32\cmd.exe
Enter The 1st Number :-
15
Enter The 2nd Number :-
3
Enter The Operator (+,-,*,/) :-
/
Result :- 5

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT N
O 1>
```

24. Grade Using Switch (Ranges) Scenario: Take marks (0–100) and print grade using switch-case grouping: ● 55–69 → C ● 70–84 → B ● 85–100 → A ● 0–24 → F ● 25–44 → E ● 45–54 → D

```java
import java.util.Scanner;
class GradeCalculateUsingSwitchCase{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Marks (Out Of 100) :- ");
        int grade = sc.nextInt();
        if (grade>100 || grade<0){
            System.out.println("INVALID INPUT !!!");
        }
        else{
            switch (grade/10){
                case 10:
                case 9:
                case 8:
                    System.out.println("Grade :- A");
                    break;
                case 7:
                    System.out.println("Grade :- B");
                    break;
                case 6:
                    System.out.println("Grade :- C");
                    break;
                case 5:
                    System.out.println("Grade :- D");
                    break;
                case 4:
                    System.out.println("Grade :- E");
                    break;
                case 3:
                case 2:
                case 1:
                case 0:
                    if (grade<=24){
                        System.out.println("Grade :- F");
                    }
                    else{
                        System.out.println("Grade :- E");
                    }
                    break;
                default :
                    System.out.println("INVALID INPUT !!!");
```

```
C:\windows\system32\cmd.exe
Enter The Marks (Out Of 100) :-
78
Grade :- B

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1
>
```

25. Message Based on Number (1–5) Scenario: Take a number (1–5) and print a message according to the case. Useful for simple menu selection.

```java
import java.util.Scanner;
class MessageNumber{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Number (1-5):- ");
        int num = sc.nextInt();
        switch (num){
            case 1:
                System.out.println("You Selected Option:- 1");
                break;
            case 2:
                System.out.println("You Selected Option:- 2");
                break;
            case 3:
                System.out.println("You Selected Option:- 3");
                break;
            case 4:
                System.out.println("You Selected Option:- 4");
                break;
            case 5:
                System.out.println("You Selected Option:- 5");
                break;
            default:
                System.out.println("INVALID INPUT !!!");
                break;
        }
    }
}
```

```
C:\windows\system32\cmd.exe
Enter The Number (1-5):-
3
You Selected Option:- 3

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIG
NMENT NO 1>
```

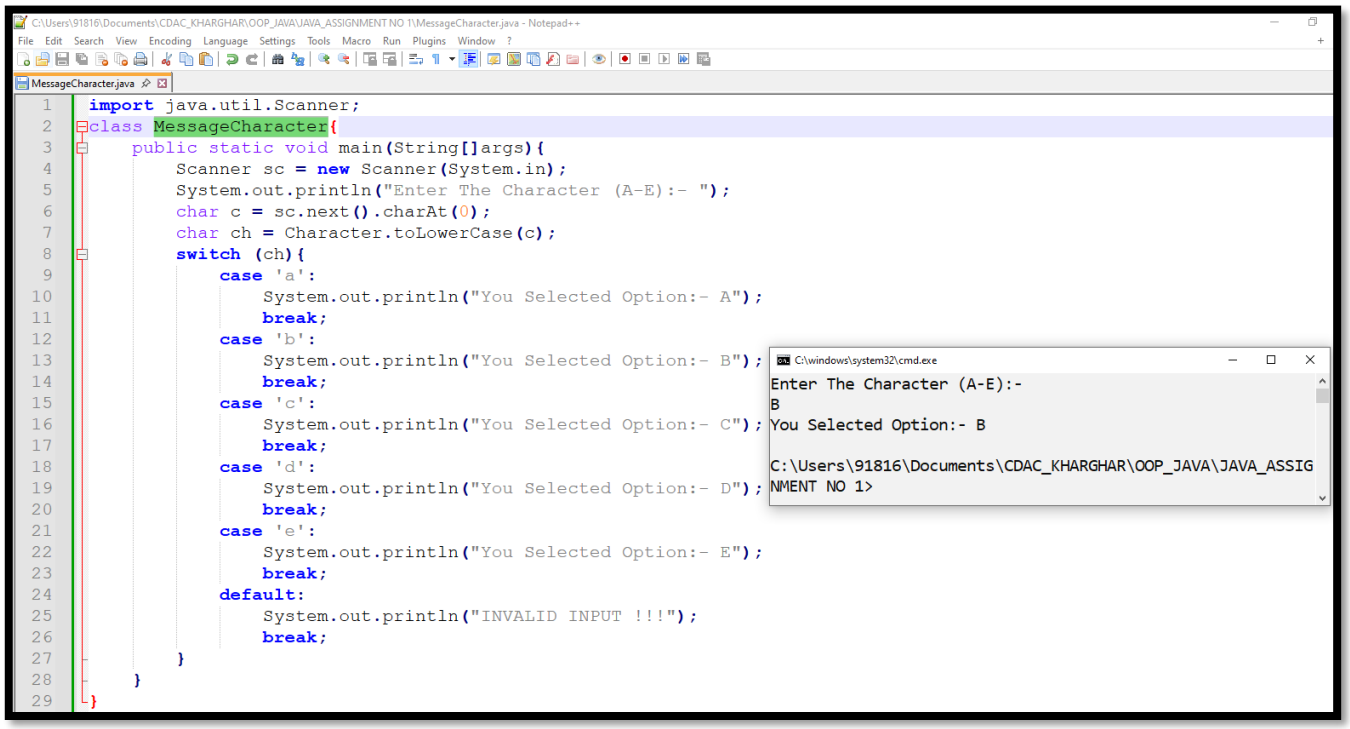
26. Season Based on Month Scenario: Print season based on month number:

- Dec–Feb → Winter
- Mar–May → Summer
- Jun–Aug → Monsoon
- Sep–Nov → Autumn

```java
import java.util.Scanner;
class SeasonsByMonths{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Month Number (1-12):- ");
        int num = sc.nextInt();
        switch (num){
            case 12:
            case 1:
            case 2:
                System.out.println("Season Is Winter !");
                break;
            case 3:
            case 4:
            case 5:
                System.out.println("Season Is Summer !");
                break;
            case 6:
            case 7:
            case 8:
                System.out.println("Season Is Monsoon !");
                break;
            case 9:
            case 10:
            case 11:
                System.out.println("Season Is Autumn !");
                break;
            default:
                System.out.println("INVALID INPUT !!!");
                break;
        }
```

```
C:\windows\system32\cmd.exe
Enter The Month Number (1-12):-
12
Season Is Winter !

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIG
NMENT NO 1>
```

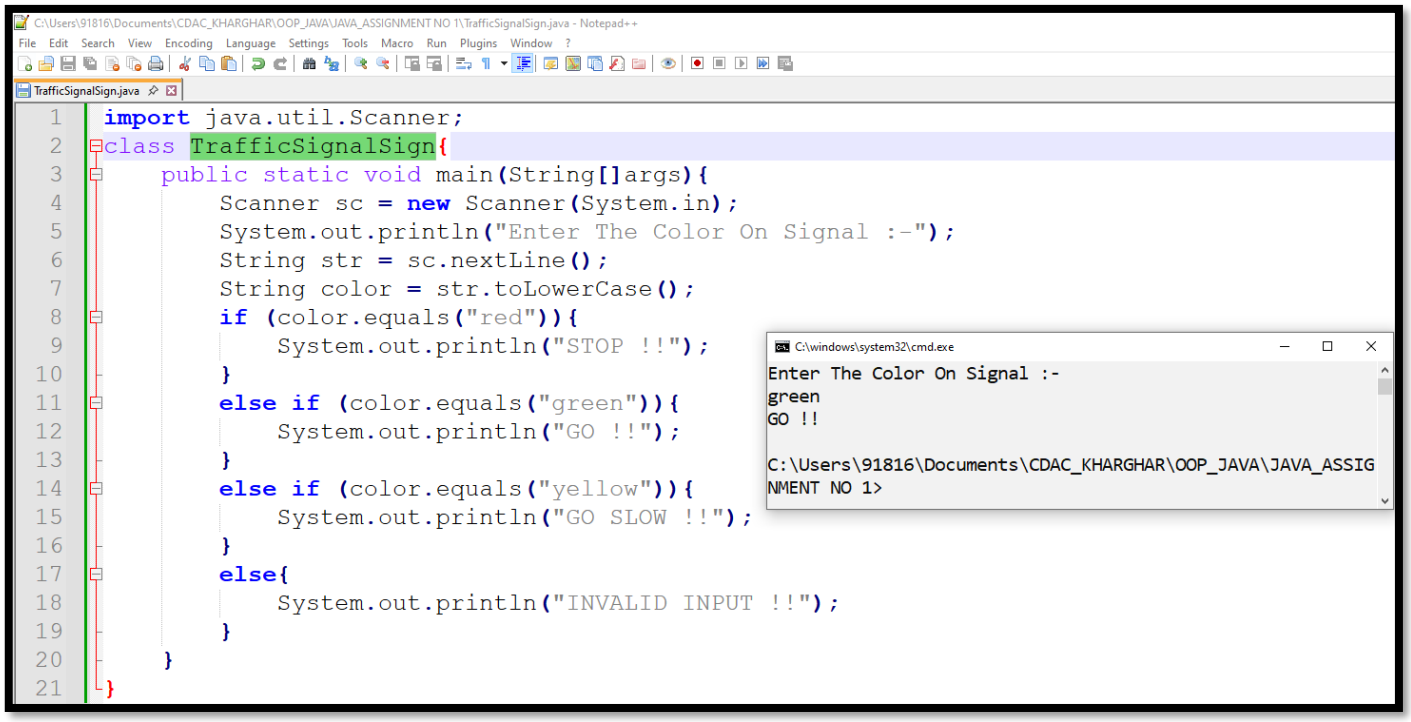
27. Print Message Based on Character (A–E) Scenario: Take a character (A–E) and print a specific message using switch-case.



```java
import java.util.Scanner;
class MessageCharacter{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Character (A-E):- ");
        char c = sc.next().charAt(0);
        char ch = Character.toLowerCase(c);
        switch (ch){
            case 'a':
                System.out.println("You Selected Option:- A");
                break;
            case 'b':
                System.out.println("You Selected Option:- B");
                break;
            case 'c':
                System.out.println("You Selected Option:- C");
                break;
            case 'd':
                System.out.println("You Selected Option:- D");
                break;
            case 'e':
                System.out.println("You Selected Option:- E");
                break;
            default:
                System.out.println("INVALID INPUT !!!");
                break;
        }
    }
}
```

```
C:\windows\system32\cmd.exe
Enter The Character (A-E):-
B
You Selected Option:- B

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

28. Traffic Signal Instruction Scenario: Take traffic signal color as input (Red, Green, Yellow) and print appropriate instruction.



```java
import java.util.Scanner;
class TrafficSignalSign{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Color On Signal :-");
        String str = sc.nextLine();
        String color = str.toLowerCase();
        if (color.equals("red")){
            System.out.println("STOP !!");
        }
        else if (color.equals("green")){
            System.out.println("GO !!");
        }
        else if (color.equals("yellow")){
            System.out.println("GO SLOW !!");
        }
        else{
            System.out.println("INVALID INPUT !!");
        }
    }
}
```

```
C:\windows\system32\cmd.exe
Enter The Color On Signal :-
green
GO !!

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

29. Day Type Selection Scenario: Take user input for day type (1–Workday, 2–Weekend) and print working status.

```java
import java.util.Scanner;
class DayTypeSelection{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Day Type (1-Workday, 2-Weekend):-");
        int day = sc.nextInt();
        String str = (day == 1)? "It's Weekday, Work Today" : "It's Weekend, No Work";
        System.out.println(str);
    }
}
```

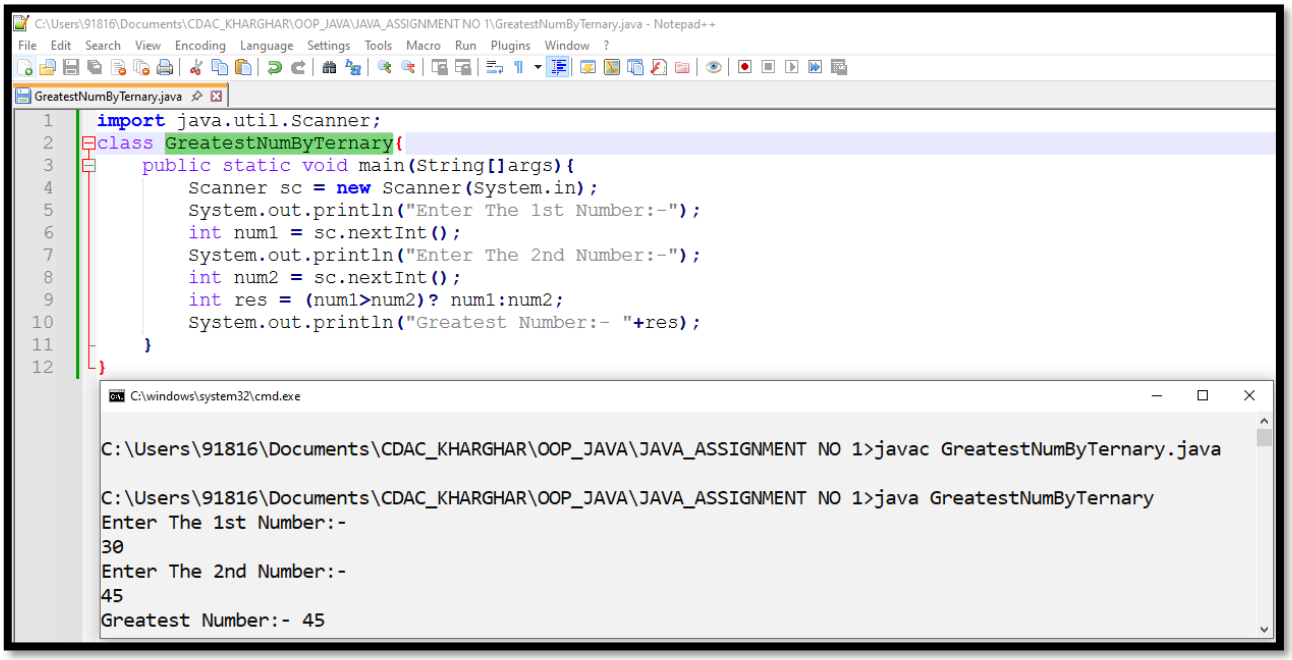
```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac DayTypeSelection.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java DayTypeSelection
Enter Day Type (1-Workday, 2-Weekend):-
2
It's Weekend, No Work

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

30. Menu-Based Simple Arithmetic Operations Scenario: Implement a menu-based program that asks user to select operation (Addition, Subtraction, Multiplication, Division) and prints result.

```java
import java.util.Scanner;
class ArithmaticOprMenu{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter 1st Number:-");
        int num1 = sc.nextInt();
        System.out.println("Enter 2nd Number:-");
        int num2 = sc.nextInt();
        System.out.println("1-Addition,2-Substarction,3-Multiplication,4-Division");
        System.out.println("Enter Your Choice:-");
        int choice = sc.nextInt();
        int res = 0;
        switch (choice){
            case 1:
                res = num1+num2;
                System.out.println("Result:- "+res);
                break;
            case 2:
                res = num1-num2;
                System.out.println("Result:- "+res);
                break;
            case 3:
                res = num1*num2;
                System.out.println("Result:- "+res);
                break;
            case 4:
                res = num1/num2;
                System.out.println("Result:- "+res);
                break;
            default:
                System.out.println("INVALID INPUT !!!");
                break;
        }
    }
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
java ArithmaticOprMenu
Enter 1st Number:-
20
Enter 2nd Number:-
30
1-Addition,2-Substarction,3-Multiplication,4-Division
Enter Your Choice:-
1
Result:- 50
```

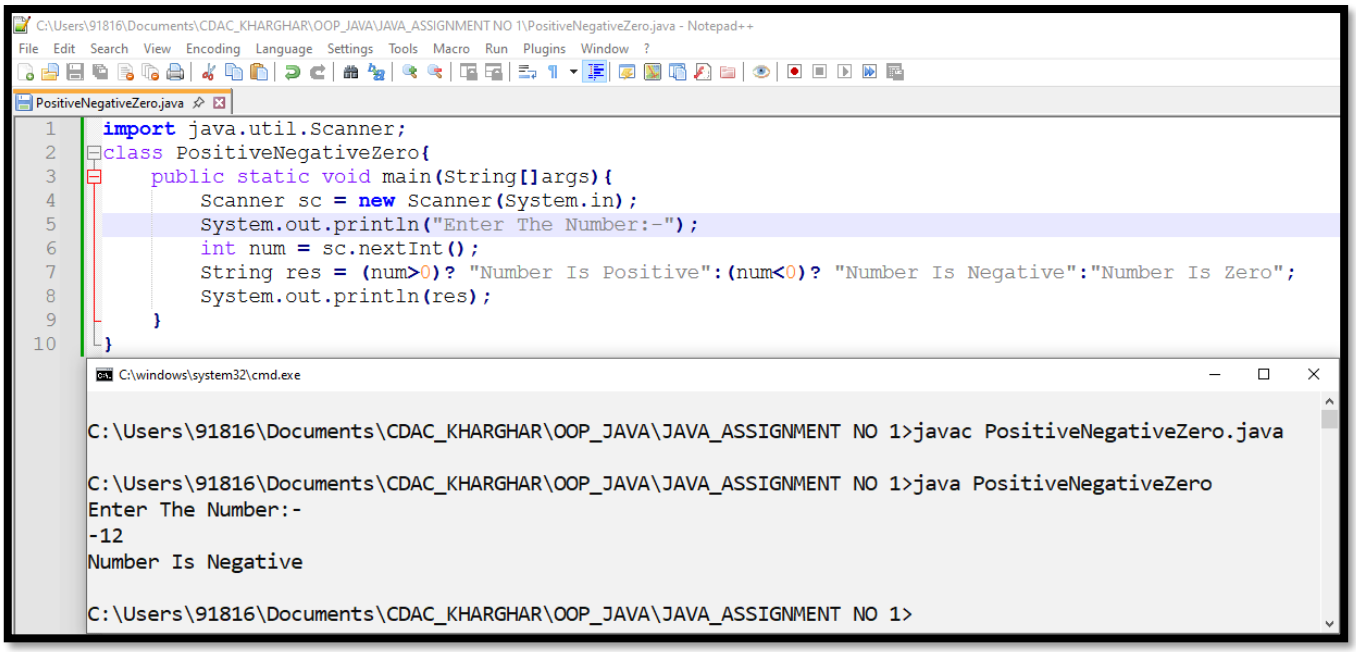
31. Greatest of Two Numbers (Ternary) Scenario: You want to quickly compare two numbers. Take two numbers as input and print the greatest using a ternary operator.



```
import java.util.Scanner;
class GreatestNumByTernary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The 1st Number:-");
        int num1 = sc.nextInt();
        System.out.println("Enter The 2nd Number:-");
        int num2 = sc.nextInt();
        int res = (num1>num2)? num1:num2;
        System.out.println("Greatest Number:- "+res);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac GreatestNumByTernary.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java GreatestNumByTernary
Enter The 1st Number:-
30
Enter The 2nd Number:-
45
Greatest Number:- 45
```

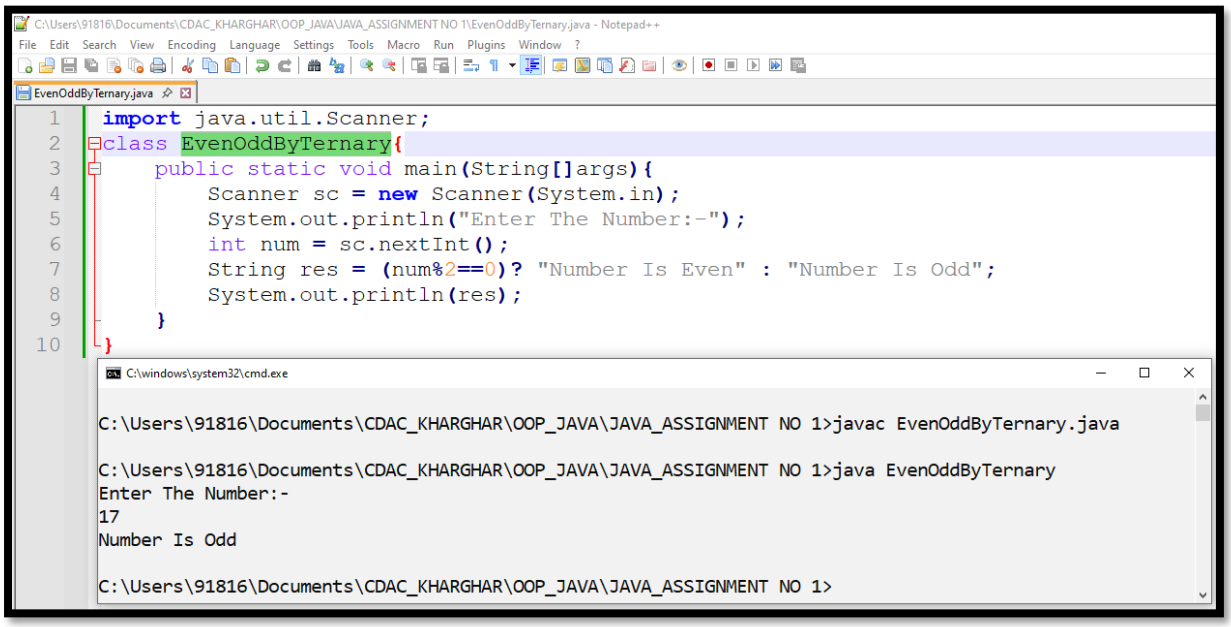
32. Positive, Negative, or Zero (Ternary) Scenario: Take a number and determine if it is positive, negative, or zero using ternary operator.



```
import java.util.Scanner;
class PositiveNegativeZero{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Number:-");
        int num = sc.nextInt();
        String res = (num>0)? "Number Is Positive":(num<0)? "Number Is Negative":"Number Is Zero";
        System.out.println(res);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac PositiveNegativeZero.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java PositiveNegativeZero
Enter The Number:-
-12
Number Is Negative

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

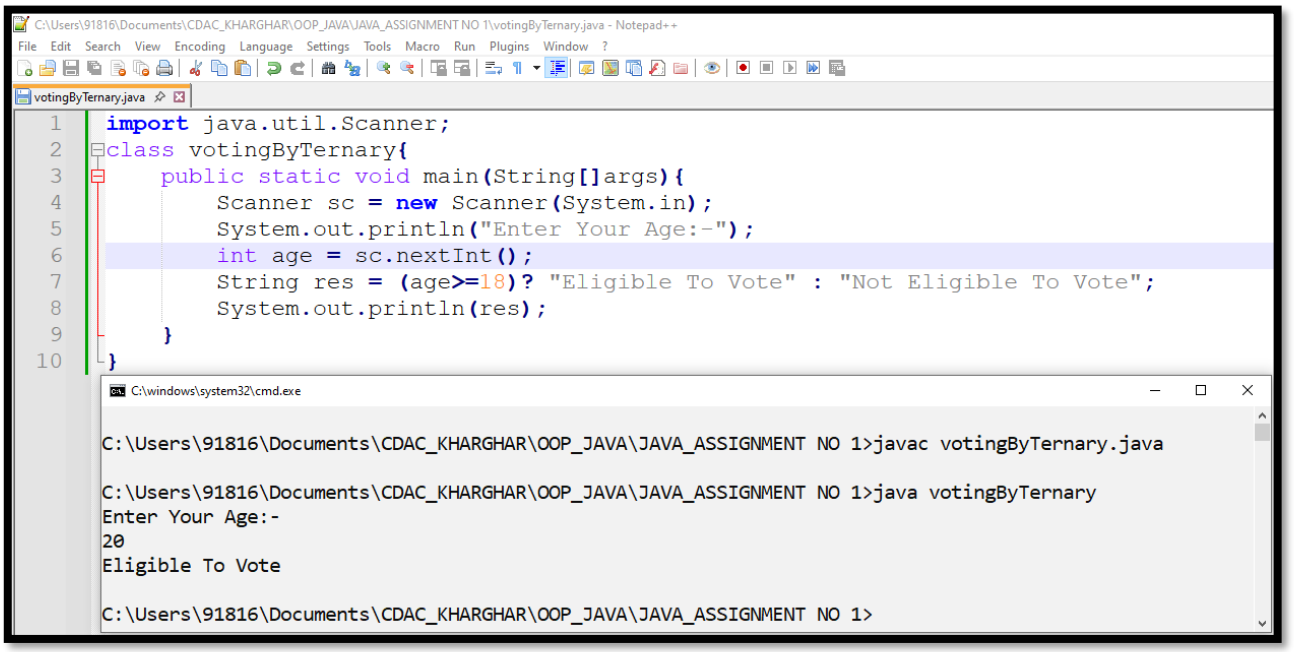
33. Even or Odd (Ternary) Scenario: Take a number and check if it is even or odd using ternary operator.



```
import java.util.Scanner;
class EvenOddByTernary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Number:-");
        int num = sc.nextInt();
        String res = (num%2==0)? "Number Is Even" : "Number Is Odd";
        System.out.println(res);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac EvenOddByTernary.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java EvenOddByTernary
Enter The Number:-
17
Number Is Odd

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

34. Voting Eligibility (Ternary) Scenario: Ask user age and print “Eligible” or “Not Eligible” to vote using ternary operator.



```
import java.util.Scanner;
class votingByTernary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Your Age:-");
        int age = sc.nextInt();
        String res = (age>=18)? "Eligible To Vote" : "Not Eligible To Vote";
        System.out.println(res);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac votingByTernary.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java votingByTernary
Enter Your Age:-
20
Eligible To Vote

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

35. Pass/Fail Check (Ternary) Scenario: Take marks as input and print Pass or Fail using ternary operator (Pass if >=35).

```java
import java.util.Scanner;
class PassFailByTernary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Your Marks:-");
        int marks = sc.nextInt();
        if (marks>100 || marks<0){
            System.out.println("INVALID INPUT !");
        }
        else{
            String res = (marks>=35)? "PASS !" : "FAIL !";
            System.out.println(res);
        }
    }
}
```

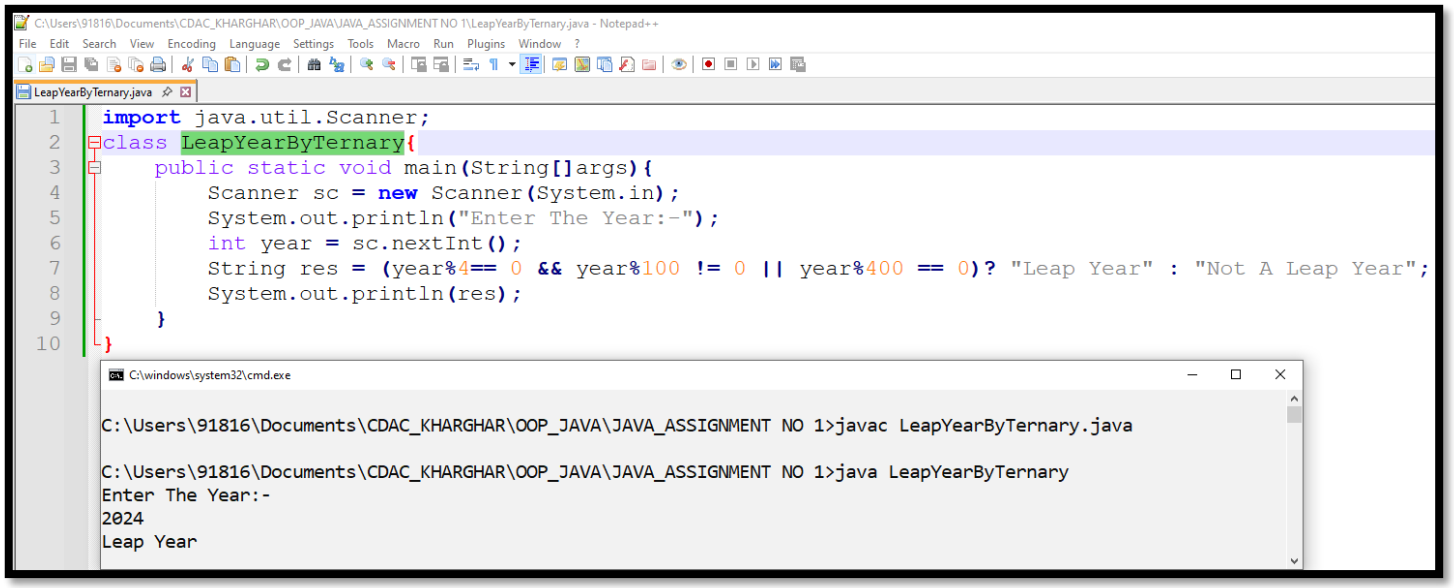
```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac PassFailByTernary.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java PassFailByTernary
Enter Your Marks:-
28
FAIL !

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

36. Smallest of Three Numbers (Nested Ternary) Scenario: Take three numbers as input and print the smallest using nested ternary operator.

```java
import java.util.Scanner;
class SmallestOfThreeNumsByTernary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter 1st Number:-");
        int num1 = sc.nextInt();
        System.out.println("Enter 2nd Number:-");
        int num2 = sc.nextInt();
        System.out.println("Enter 3rd Number:-");
        int num3 = sc.nextInt();
        int res = (num1<num2 && num1<num3)? num1 : (num2<num3)? num2 : num3;
        System.out.println("Smallest Number:- "+res);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac SmallestOfThreeNumsByTernary.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java SmallestOfThreeNumsByTernary
Enter 1st Number:-
12
Enter 2nd Number:-
8
Enter 3rd Number:-
9
Smallest Number:- 8
```

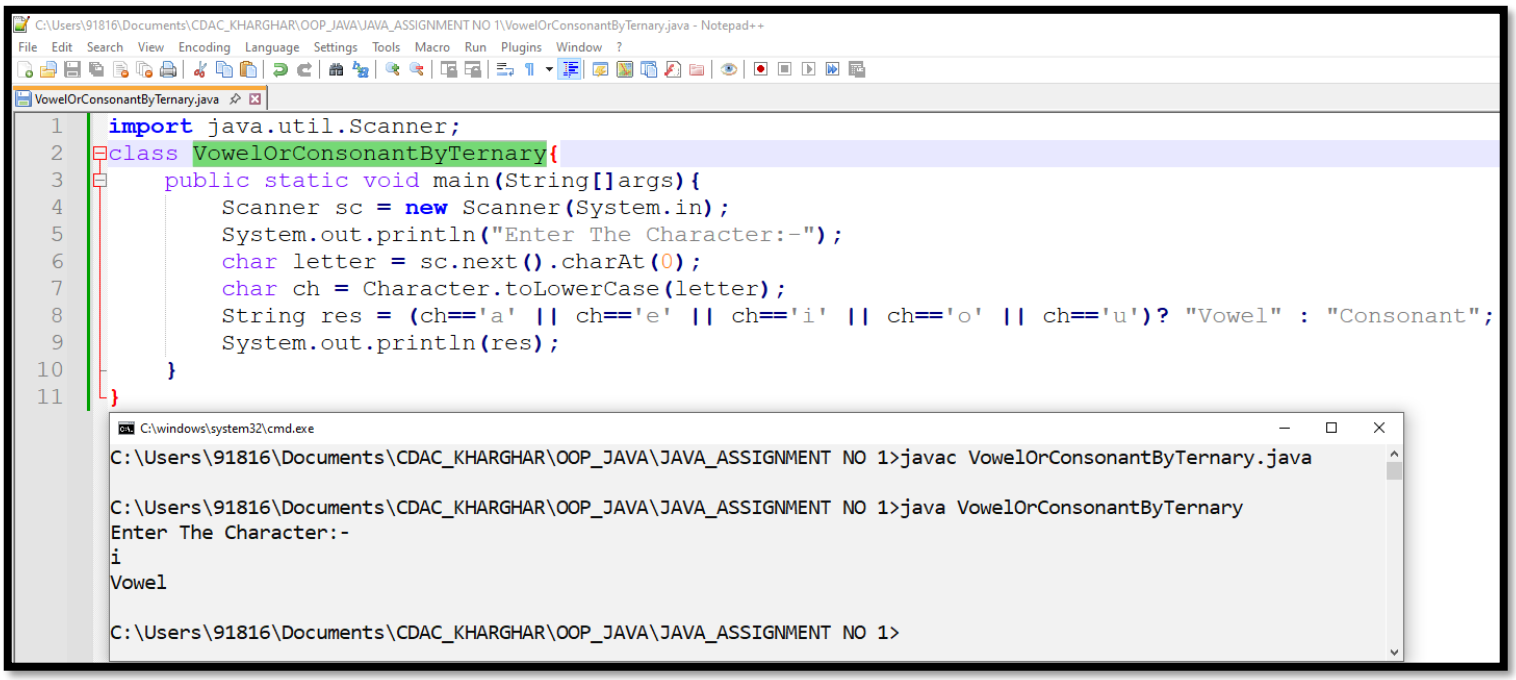
37. Leap Year Check (Ternary) Scenario: Take a year as input and check if it is a leap year using ternary operator.



```java
import java.util.Scanner;
class LeapYearByTernary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Year:-");
        int year = sc.nextInt();
        String res = (year%4== 0 && year%100 != 0 || year%400 == 0)? "Leap Year" : "Not A Leap Year";
        System.out.println(res);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac LeapYearByTernary.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java LeapYearByTernary
Enter The Year:-
2024
Leap Year
```

38. Vowel or Consonant (Ternary) Scenario: Take a character and check if it is a vowel or consonant using ternary operator.



```java
import java.util.Scanner;
class VowelOrConsonantByTernary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Character:-");
        char letter = sc.next().charAt(0);
        char ch = Character.toLowerCase(letter);
        String res = (ch=='a' || ch=='e' || ch=='i' || ch=='o' || ch=='u')? "Vowel" : "Consonant";
        System.out.println(res);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac VowelOrConsonantByTernary.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java VowelOrConsonantByTernary
Enter The Character:-
i
Vowel

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

39. Bonus Eligibility (Ternary) Scenario: A company gives 5% bonus if years of service > 5. Take salary and years of service, print bonus eligibility using ternary.

```
import java.util.Scanner;
class SalaryBonusByTernary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Your Salary:-");
        int sal = sc.nextInt();
        System.out.println("Enter Your Years Of Experience:-");
        int year = sc.nextInt();
        int bonus = (int)(sal*0.05);
        String res = (year>5)? "Bonus:- "+bonus : "Your Experience Is Less !";
        System.out.println(res);
    }
}
```

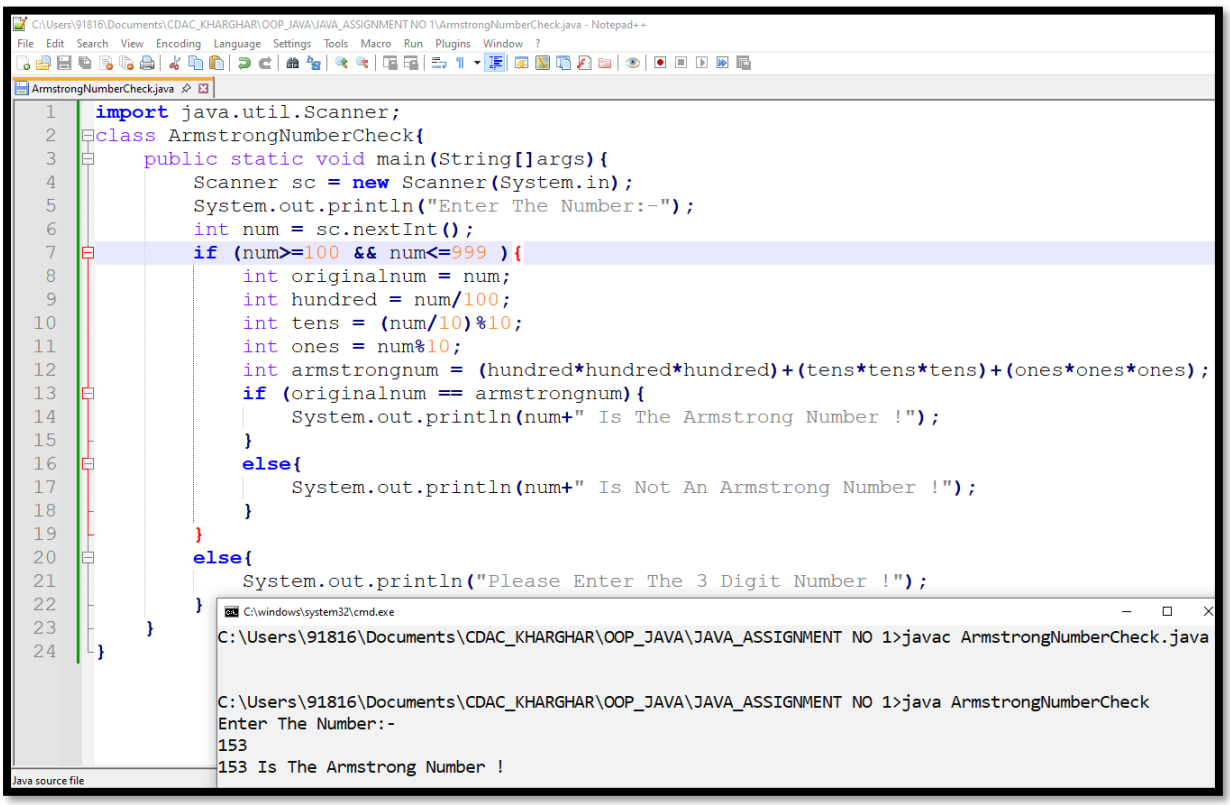
```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac SalaryBonusByTernary.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java SalaryBonusByTernary
Enter Your Salary:-
50000
Enter Your Years Of Experience:-
6
Bonus:- 2500

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

40. Discount on Purchase (Ternary) Scenario: A shop gives 10% discount if purchase amount > 1000. Take purchase amount and print total cost using ternary.

```
import java.util.Scanner;
class DiscountOrPurchaseByTernary{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter Purchase Amount:-");
        int amount = sc.nextInt();
        int discount = (int)(amount-amount*0.1);
        String res = (amount>1000)? "Total Cost After Discount:-"+discount : "Total Cost:- "+amount;
        System.out.println(res);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac DiscountOrPurchaseByTernary.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java DiscountOrPurchaseByTernary
Enter Purchase Amount:-
1200
Total Cost After Discount:-1080

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

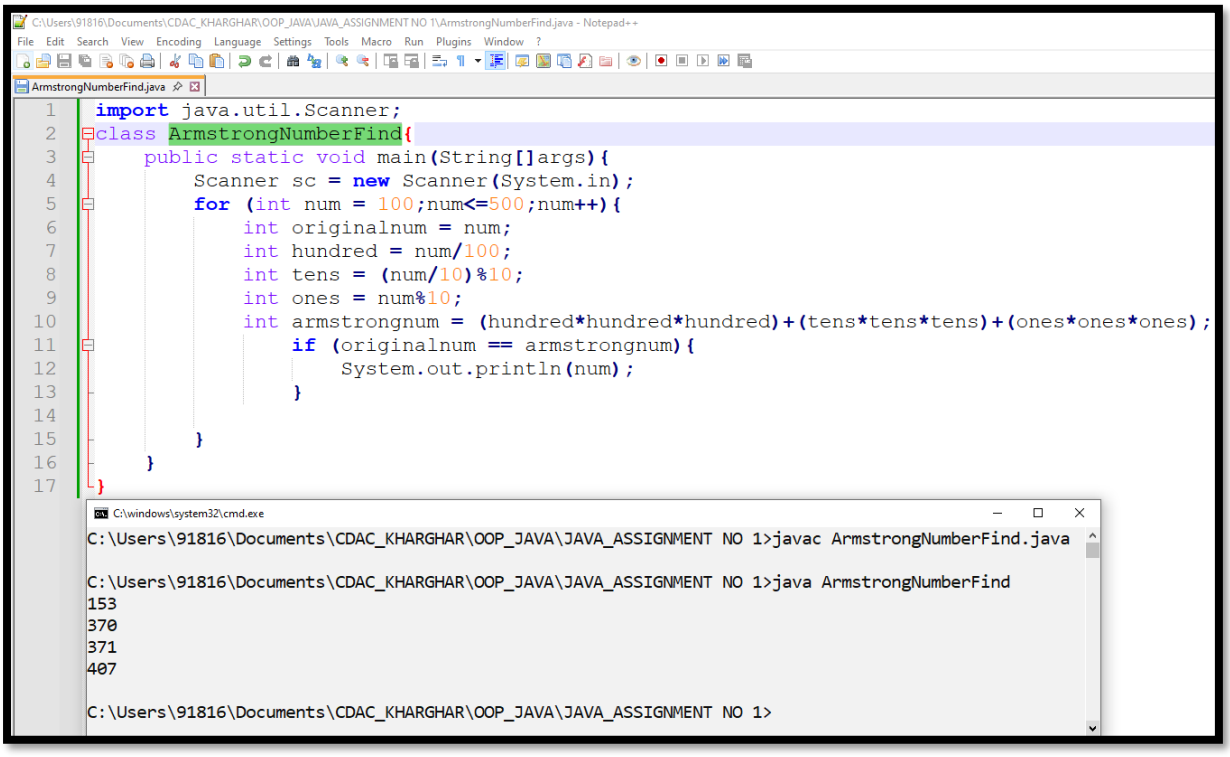
41. Check Armstrong Number (3-Digit) Scenario: Take a 3-digit number and check if it is an Armstrong number (sum of cubes of digits = number).



```java
import java.util.Scanner;
class ArmstrongNumberCheck{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Number:-");
        int num = sc.nextInt();
        if (num>=100 && num<=999 ){
            int originalnum = num;
            int hundred = num/100;
            int tens = (num/10)%10;
            int ones = num%10;
            int armstrongnum = (hundred*hundred*hundred)+(tens*tens*tens)+(ones*ones*ones);
            if (originalnum == armstrongnum){
                System.out.println(num+" Is The Armstrong Number !");
            }
            else{
                System.out.println(num+" Is Not An Armstrong Number !");
            }
        }
        else{
            System.out.println("Please Enter The 3 Digit Number !");
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac ArmstrongNumberCheck.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java ArmstrongNumberCheck
Enter The Number:-
153
153 Is The Armstrong Number !
```

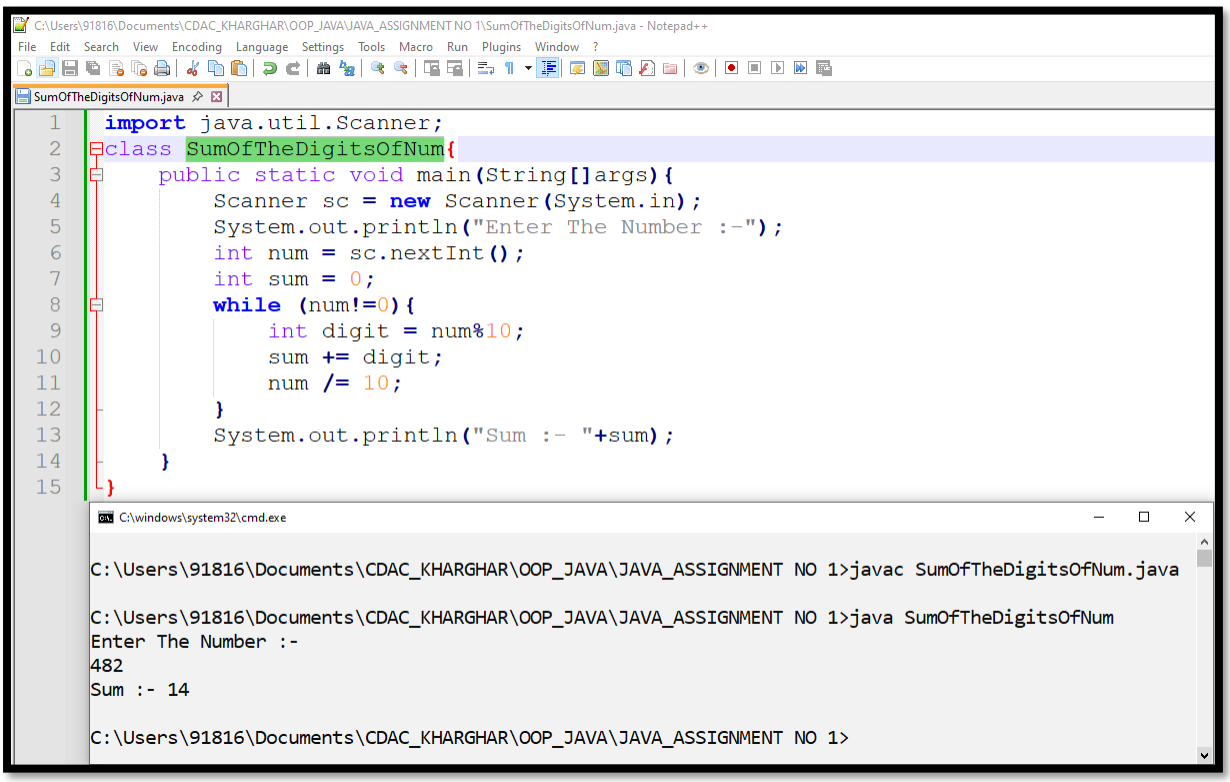
42. Armstrong Numbers Between 100–500 Scenario: Print all Armstrong numbers between 100 and 500. Output: 153 370 371 407



```java
import java.util.Scanner;
class ArmstrongNumberFind{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        for (int num = 100;num<=500;num++){
            int originalnum = num;
            int hundred = num/100;
            int tens = (num/10)%10;
            int ones = num%10;
            int armstrongnum = (hundred*hundred*hundred)+(tens*tens*tens)+(ones*ones*ones);
                if (originalnum == armstrongnum){
                    System.out.println(num);
                }

        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac ArmstrongNumberFind.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java ArmstrongNumberFind
153
370
371
407

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

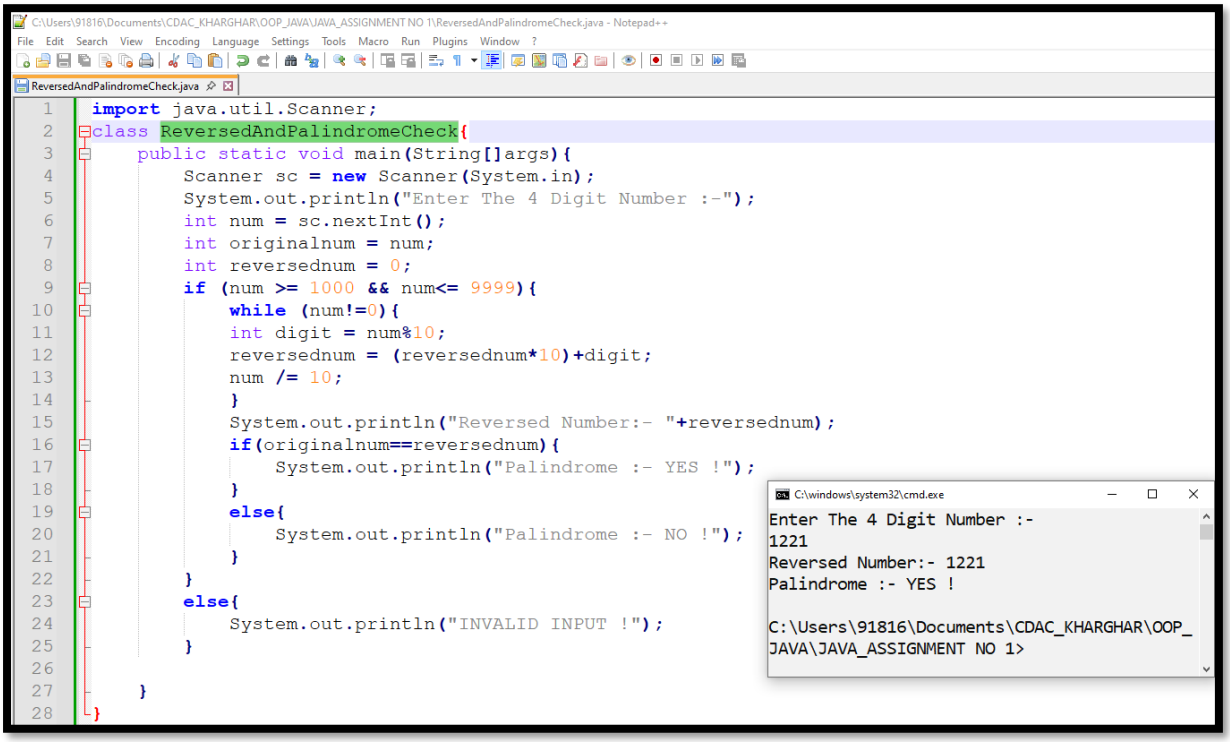
43. Sum of Digits of a Number Scenario: Take a number as input and print the sum of its digits.



```java
import java.util.Scanner;
class SumOfTheDigitsOfNum{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The Number :-");
        int num = sc.nextInt();
        int sum = 0;
        while (num!=0){
            int digit = num%10;
            sum += digit;
            num /= 10;
        }
        System.out.println("Sum :- "+sum);
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac SumOfTheDigitsOfNum.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java SumOfTheDigitsOfNum
Enter The Number :-
482
Sum :- 14

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

44. Reverse 4-Digit Number and Palindrome Check Scenario: Take a 4-digit number, reverse it, and check if it is a palindrome.



```java
import java.util.Scanner;
class ReversedAndPalindromeCheck{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The 4 Digit Number :-");
        int num = sc.nextInt();
        int originalnum = num;
        int reversednum = 0;
        if (num >= 1000 && num<= 9999){
            while (num!=0){
            int digit = num%10;
            reversednum = (reversednum*10)+digit;
            num /= 10;
            }
            System.out.println("Reversed Number:- "+reversednum);
            if(originalnum==reversednum){
                System.out.println("Palindrome :- YES !");
            }
            else{
                System.out.println("Palindrome :- NO !");
            }
        }
        else{
            System.out.println("INVALID INPUT !");
        }

    }
}
```

```
Enter The 4 Digit Number :-
1221
Reversed Number:- 1221
Palindrome :- YES !

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_
JAVA\JAVA_ASSIGNMENT NO 1>
```

45. Sort Three Numbers in Ascending Order Scenario: Take three numbers and print them in ascending order.

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1\SortThreeNums.java - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

SortThreeNums.java

```java
import java.util.Scanner;
public class SortThreeNums{
    public static void main(String[]args){
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter The 1st Number:-");
        int num1 = sc.nextInt();
        System.out.println("Enter The 2nd Number:-");
        int num2 = sc.nextInt();
        System.out.println("Enter The 3rd Number:-");
        int num3 = sc.nextInt();
        int smallest,middle,largest;
        if (num1<=num2 && num1<=num3){
            smallest = num1;
            if(num2<=num3){
                middle = num2;
                largest = num3;
            }
            else{
                middle = num3;
                largest = num2;
            }
        }
        else if (num2<=num1 && num2<= num3){
            smallest = num2;
            if(num1<=num3){
                middle = num1;
                largest = num3;
            }
            else{
```

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1\SortThreeNums.java - Notepad++

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

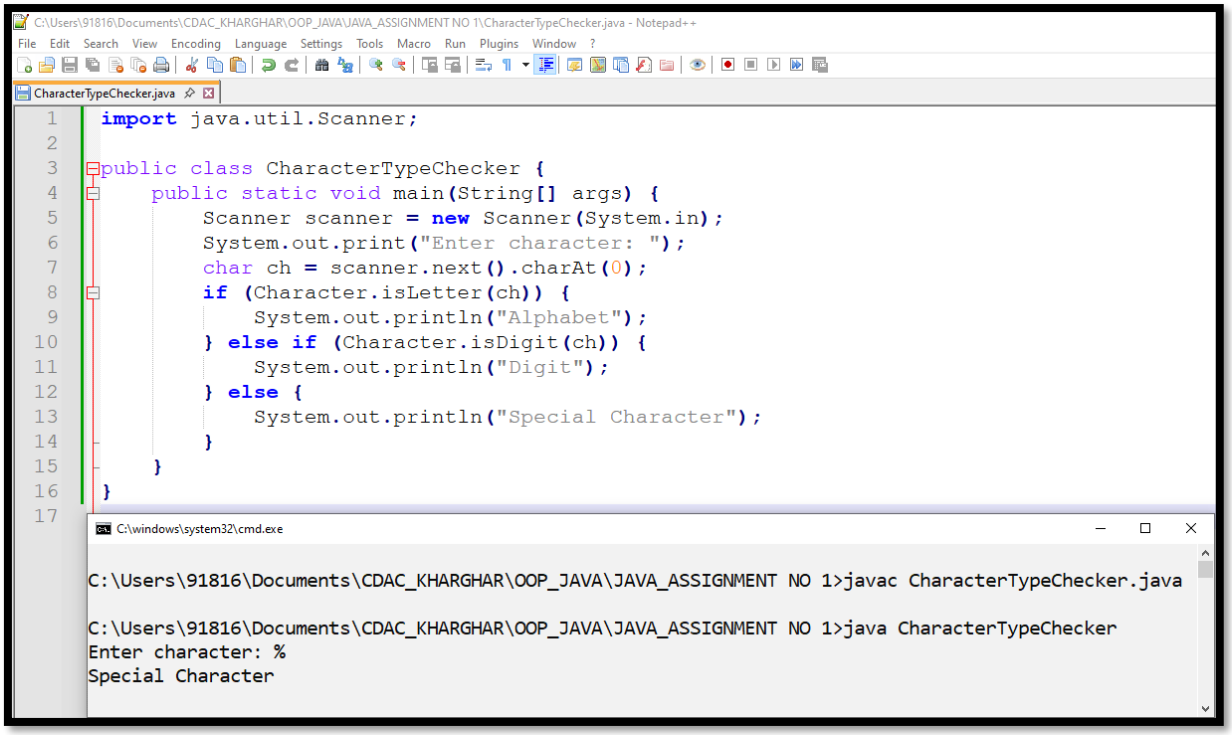
SortThreeNums.java

```java
                middle = num3;
                largest = num2;
            }
        }
        else if (num2<=num1 && num2<= num3){
            smallest = num2;
            if(num1<=num3){
                middle = num1;
                largest = num3;
            }
            else{
                middle = num3;
                largest = num1;
            }
        }
        else{
            smallest = num3;
            if(num1<=num2){
                middle = num1;
                largest = num2;
            }
            else{
                middle = num2;
                largest = num1;
            }
        }
        System.out.println("Numbers In Acsending Order:- "+smallest+", "+middle+", "+largest);
    }
}
```

C:\windows\system32\cmd.exe

```
Enter The 1st Number:-
45
Enter The 2nd Number:-
12
Enter The 3rd Number:-
78
Numbers In Acsending Order:- 12, 45, 78
```

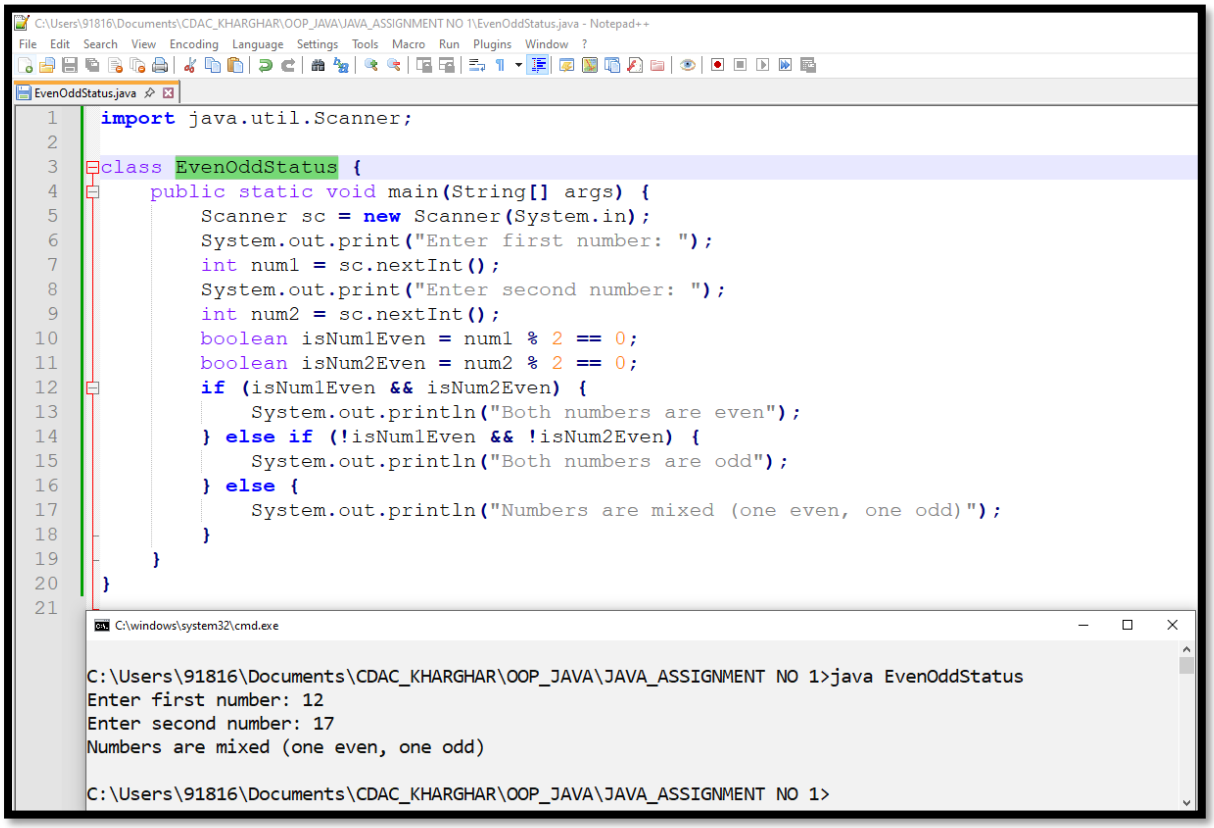
46. Character Type Checker Scenario: Take a character as input and print whether it is an alphabet, digit, or special character.



```
import java.util.Scanner;

public class CharacterTypeChecker {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter character: ");
        char ch = scanner.next().charAt(0);
        if (Character.isLetter(ch)) {
            System.out.println("Alphabet");
        } else if (Character.isDigit(ch)) {
            System.out.println("Digit");
        } else {
            System.out.println("Special Character");
        }
    }
}
```

```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>javac CharacterTypeChecker.java

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java CharacterTypeChecker
Enter character: %
Special Character
```

47. Even/Odd Status of Two Numbers Scenario: Take two numbers and print if both are even, both odd, or mixed.



```
import java.util.Scanner;

class EvenOddStatus {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter first number: ");
        int num1 = sc.nextInt();
        System.out.print("Enter second number: ");
        int num2 = sc.nextInt();
        boolean isNum1Even = num1 % 2 == 0;
        boolean isNum2Even = num2 % 2 == 0;
        if (isNum1Even && isNum2Even) {
            System.out.println("Both numbers are even");
        } else if (!isNum1Even && !isNum2Even) {
            System.out.println("Both numbers are odd");
        } else {
            System.out.println("Numbers are mixed (one even, one odd)");
        }
    }
}
```

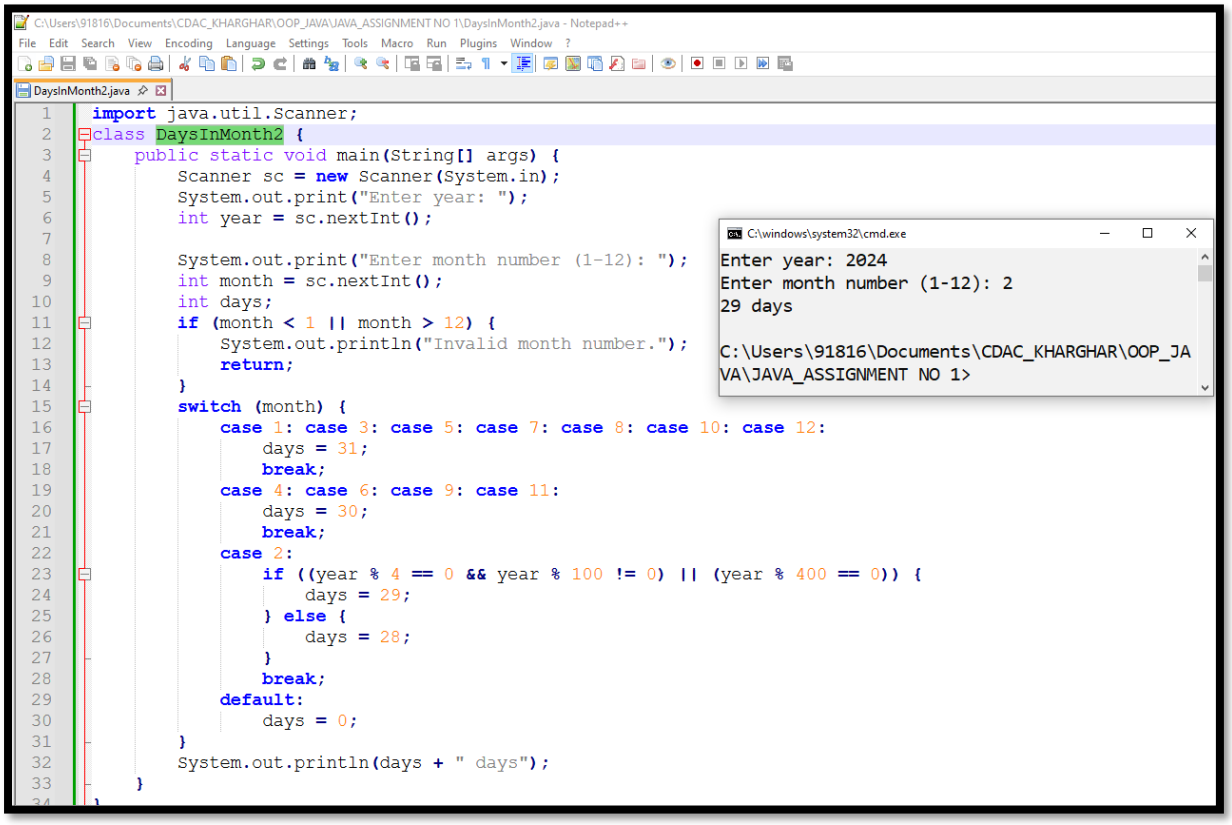
```
C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>java EvenOddStatus
Enter first number: 12
Enter second number: 17
Numbers are mixed (one even, one odd)

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

48. Grade with Plus/Minus Scenario: Take marks and print grade with plus/minus (e.g., 85 → A, 78 → A−).

```java
import java.util.Scanner;
public class GradeWithPlusMinus {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter marks: ");
        int marks = scanner.nextInt();
        String grade;
        if (marks >= 90 && marks <= 100) {
            grade = "A+";
        } else if (marks >= 80 && marks <= 89) {
            grade = "A";
        } else if (marks >= 75 && marks <= 79) {
            grade = "A-";
        } else if (marks >= 70 && marks <= 74) {
            grade = "B+";
        } else if (marks >= 60 && marks <= 69) {
            grade = "B";
        } else if (marks >= 50 && marks <= 59) {
            grade = "C";
        } else if (marks >= 40 && marks <= 49) {
            grade = "D";
        } else if (marks >= 0 && marks < 40) {
            grade = "F";
        } else {
            grade = "Invalid marks";
        }
        System.out.println("Grade: " + grade);
    }
}
```

```
C:\windows\system32\cmd.exe
Enter marks: 85
Grade: A

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

49. Days in Month Considering Leap Year Scenario: Take a year and month number, print days in that month considering leap years.



```java
import java.util.Scanner;
class DaysInMonth2 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter year: ");
        int year = sc.nextInt();

        System.out.print("Enter month number (1-12): ");
        int month = sc.nextInt();
        int days;
        if (month < 1 || month > 12) {
            System.out.println("Invalid month number.");
            return;
        }
        switch (month) {
            case 1: case 3: case 5: case 7: case 8: case 10: case 12:
                days = 31;
                break;
            case 4: case 6: case 9: case 11:
                days = 30;
                break;
            case 2:
                if ((year % 4 == 0 && year % 100 != 0) || (year % 400 == 0)) {
                    days = 29;
                } else {
                    days = 28;
                }
                break;
            default:
                days = 0;
        }
        System.out.println(days + " days");
    }
}
```

```
C:\windows\system32\cmd.exe
Enter year: 2024
Enter month number (1-12): 2
29 days

C:\Users\91816\Documents\CDAC_KHARGHAR\OOP_JAVA\JAVA_ASSIGNMENT NO 1>
```

50. Divisibility by 2, 3, 5 with Custom Messages Scenario: Take a number and check divisibility by 2, 3, and 5, printing custom messages for each.