PARVATHAM RAM CHARAN

ASSIGNMENT -2

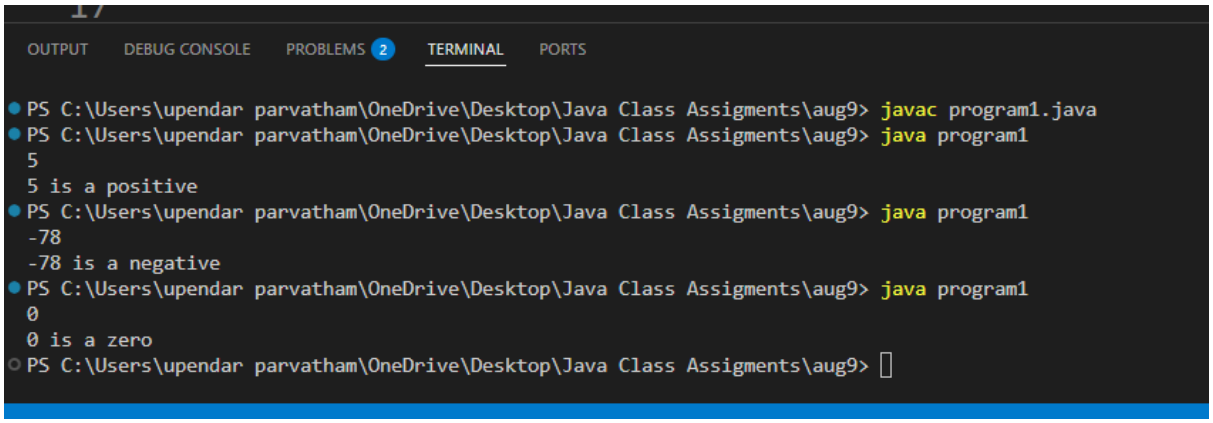
1. Write a program to check if a given number is positive, negative, or zero.

```
import java.util.*;

public class program1 {
   public static void main(String[] args) {
      Scanner sc = new Scanner(System.in);
      int num = sc.nextInt();
      if (num > 0) {
         System.out.println(num + " is a positive");
      } else if (num < 0) {
         System.out.println(num + " is a negative");
      } else {
         System.out.println(num + " is a zero");
      }

   }
}
```

Output:



2.

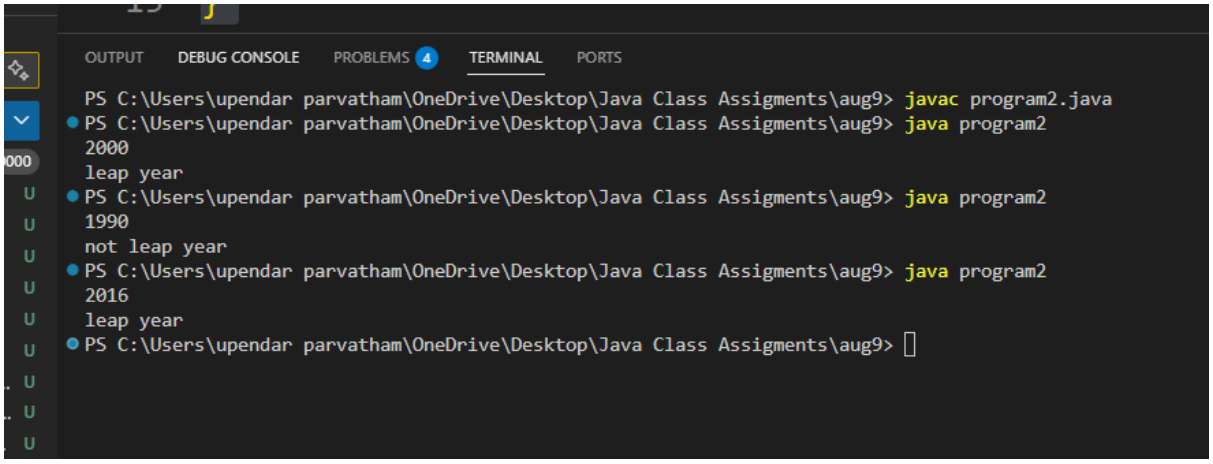
```
//2. Write a program to determine whether a given year is a leap year or not.

import java.util.*;


public class program2 {
```

```
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int year = sc.nextInt();
        if ((year % 400 == 0) || (year % 4 == 0 && year % 100 != 0)) {
            System.out.println("leap year");
        } else {
            System.out.println("not leap year");
        }
    }
}
```

Output:

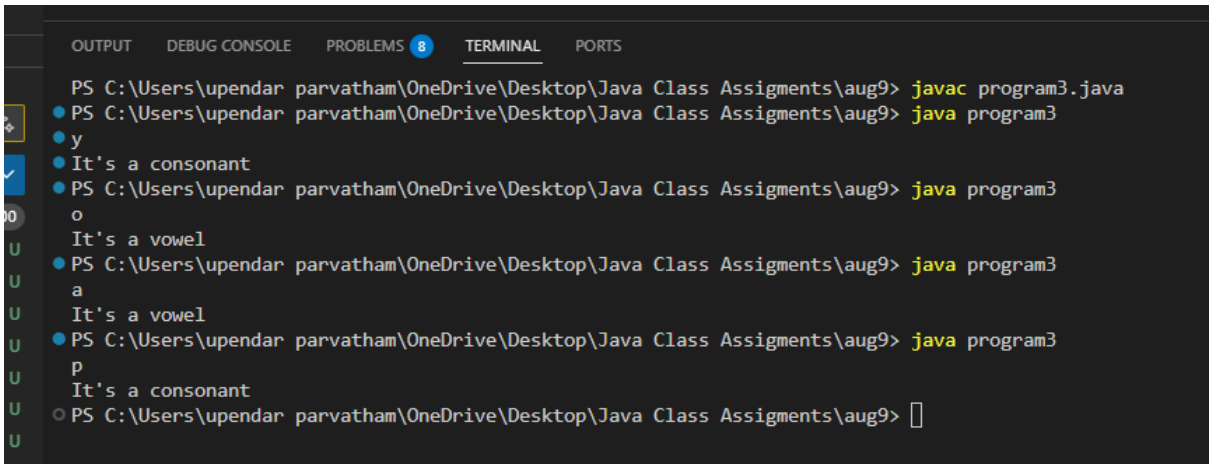


3. Write a program to check if a given character is a vowel or a consonant.

```
import java.util.*;
public class program3 {
    public static void main(String[] args){
        Scanner sc = new Scanner(System.in);
        char ch = sc.next().charAt(0);
        if ((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z')) {  // check alphabet
            if (ch == 'a' || ch == 'e' || ch =='i' || ch =='o' || ch =='u' ||
                ch == 'A' || ch == 'E' || ch=='I' || ch =='O' || ch=='U') {
                System.out.println("It's a vowel");
            } else {
```

```
            System.out.println("It's a consonant");
        }
    } else {
        System.out.println("Not an alphabet");
    }
  }
}
```

Output:



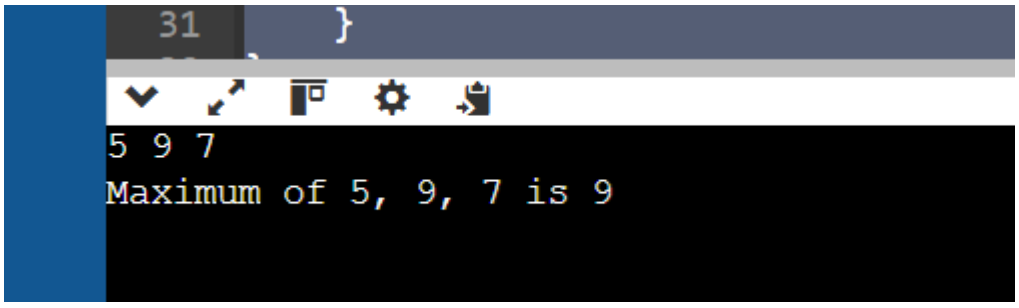
4.. Write a program to find the largest of three numbers entered by the user.

```
package aug9;
import java.util.*;
public class program4 {
   public static int result(int num1 ,int num2, int num3){
      if(num1 > num2){
         if(num1 > num3){
            return num1;
         }
         else{
            return num3;
         }
      }
      else{
```

```
        if(num2 > num3){
            return num2;
        }
        else{
            return num3;
        }
    }

  }
  public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    int a = sc.nextInt();
    int b = sc.nextInt();
    int c = sc.nextInt();
    int large = result(a,b,c);
     System.out.println("Maximum of " + a + ", " + b + ", " + c + " is " + large);
  }
}
```

Output:

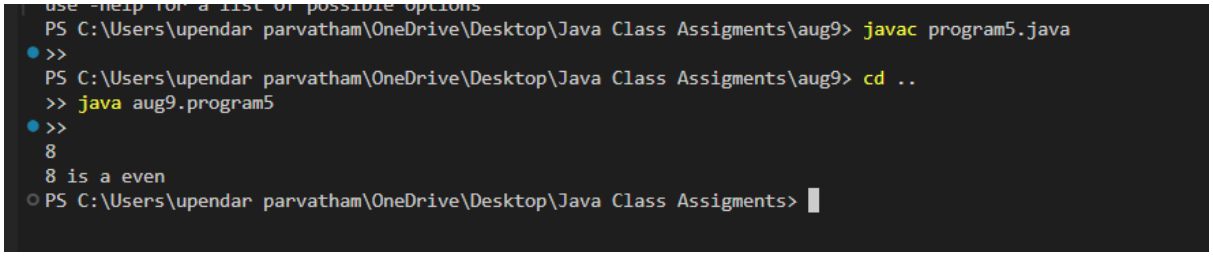


5. Write a program to check if a given number is even or odd.

```
import java.util.*;
public class program5 {
  public static void main(String[] args) {
    Scanner sc= new Scanner(System.in);
```

```
        int num = sc.nextInt();
        if(num%2==0){
            System.out.println(num+" is a even");
        }
        else{
            System.out.println(num+" is a odd");
        }
    }
}
```

Output:



Problem 1: Days of the Week

Task: Write a program that takes an integer input (1-7) from the user and prints the corresponding day of the week using a switch statement.

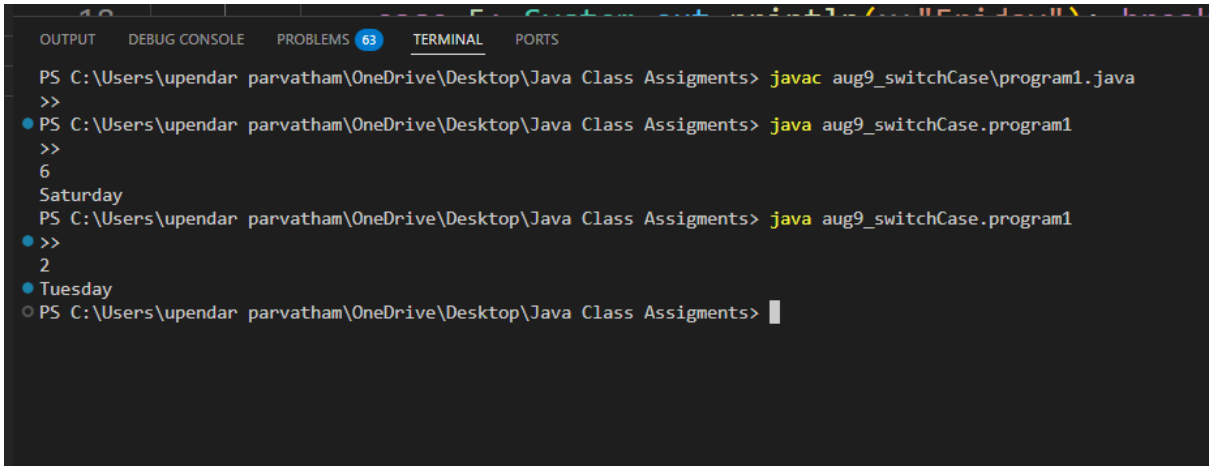
```
import java.util.*;

public class program1 {
    public static void main(String[] args) {
        Scanner sc  = new Scanner(System.in);
        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! Please enter a number between 1 and 7.");
        }
    }
}
```

Output:



Problem 2: Simple Calculator

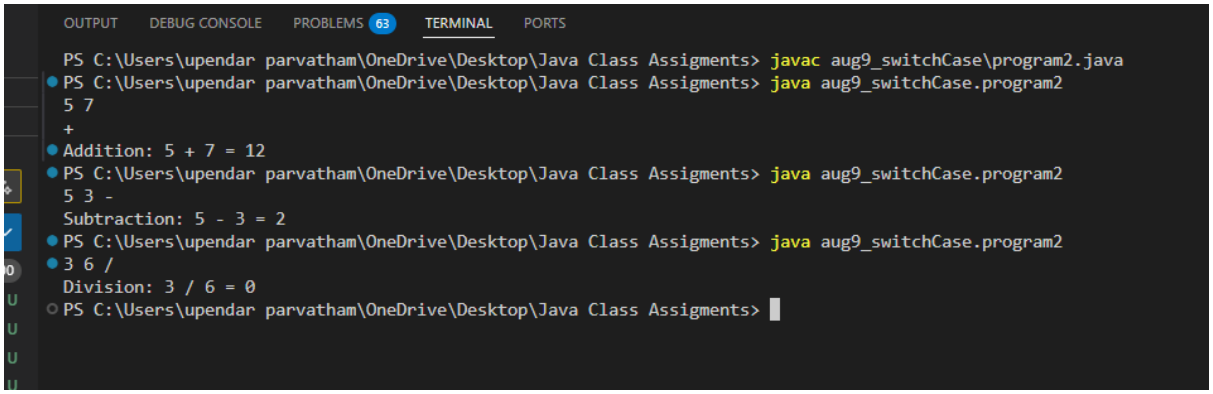
Write a program that takes two integers and an operator (+, -, *, /) as input

and performs the corresponding operation using a switch statement.

```
import java.util.*;
public class program2 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int num1 = sc.nextInt();
        int num2 = sc.nextInt();
        char ch = sc.next().charAt(0);
```

```
        switch (ch) {
            case '+':
                System.out.println("Addition: " + num1 + " + " + num2 + " = " + (num1 + num2));
                break;
            case '-':
                System.out.println("Subtraction: " + num1 + " - " + num2 + " = " + (num1 - num2));
                break;
            case '*':
                System.out.println("Multiplication: " + num1 + " * " + num2 + " = " + (num1 * num2));
                break;
            case '/':
                if (num2 != 0) {
                    System.out.println("Division: " + num1 + " / " + num2 + " = " + (num1 / num2));
                } else {
                    System.out.println("Error: Division by zero is not allowed!");
                }
                break;
            default:
                System.out.println("Invalid operator! Please enter one of (+, -, *, /).");
        }
    }
}
```

Output:



Problem 3: Traffic Light System

Write a program that takes a character input (R, Y, G) and prints the corresponding traffic light action (Stop, Wait, Go). Use a switch statement to handle the conversion.

```
package aug9_switchCase;
import java.util.*;
public class program3 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        char ch = sc.next().charAt(0);
        ch = Character.toUpperCase(ch);
        switch(ch){
            case 'R' : System.out.println("Stop"); break;
            case 'Y' :System.out.println("Wait"); break;
            case 'G' : System.out.println("Go"); break;
            default : System.out.println("enter valid symbol");
        }
    }
}
```

Output:

```
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assigments> java aug9_switchCase.program3
g
Go
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assigments> java aug9_switchCase.program3
R
Stop
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assigments> java aug9_switchCase.program3
V
enter valid symbol
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assigments>
```

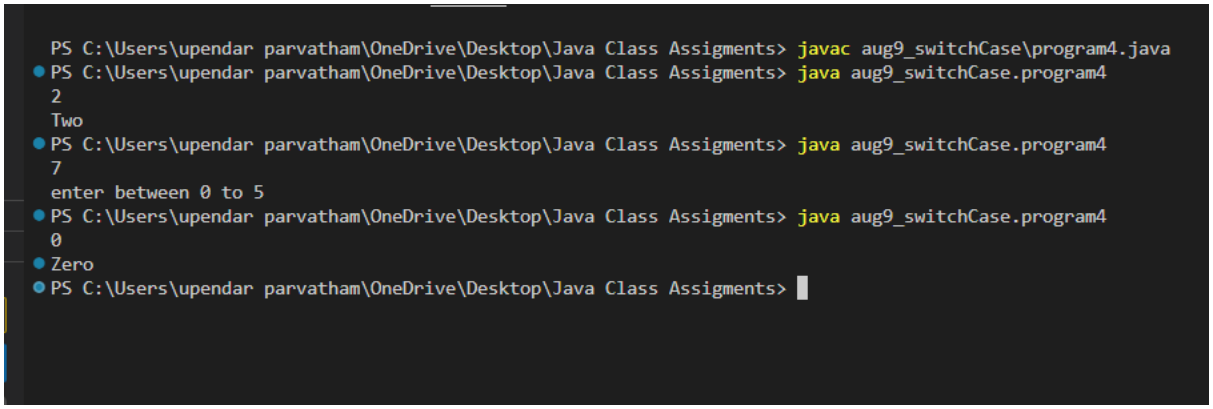
Problem 4: Number to Word Conversion

Write a program that takes an integer input (0-5) from the user and prints the corresponding word (e.g., 0 -> "Zero", 1 -> "One"). Use a switch statement to handle the conversion.

```
package aug9_switchCase;
import java.util.*;
```

```
public class program4 {
   public static void main(String[] args) {
     Scanner sc= new Scanner(System.in);
     int num = sc.nextInt();
     switch (num) {
      case 0 : System.out.println("Zero"); break;
      case 1 : System.out.println("One"); break;
      case 2 : System.out.println("Two"); break;
      case 3 : System.out.println("Three"); break;
      case 4 : System.out.println("Four"); break;
      case 5 : System.out.println("Five"); break;
      default :System.out.println("enter between 0 to 5");
     }
   }
}
```

Output:




```
// Problem 5: Month Days
// Write a program that takes an integer input (1-12) representing a month
// and prints the number of days in that month (not a leap year).


import java.util.*;
```

```
public class program5 {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        int month = sc.nextInt();

        switch(month) {
            case 1: System.out.println("January has 31 days"); break;
            case 2: System.out.println("February has 28 days"); break; // not leap year
            case 3: System.out.println("March has 31 days"); break;
            case 4: System.out.println("April has 30 days"); break;
            case 5: System.out.println("May has 31 days"); break;
            case 6: System.out.println("June has 30 days"); break;
            case 7: System.out.println("July has 31 days"); break;
            case 8: System.out.println("August has 31 days"); break;
            case 9: System.out.println("September has 30 days"); break;
            case 10: System.out.println("October has 31 days"); break;
            case 11: System.out.println("November has 30 days"); break;
            case 12: System.out.println("December has 31 days"); break;
            default: System.out.println("Invalid month! Please enter a number between 1 and 12.");
        }
    }
}
```

Output: