

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 {

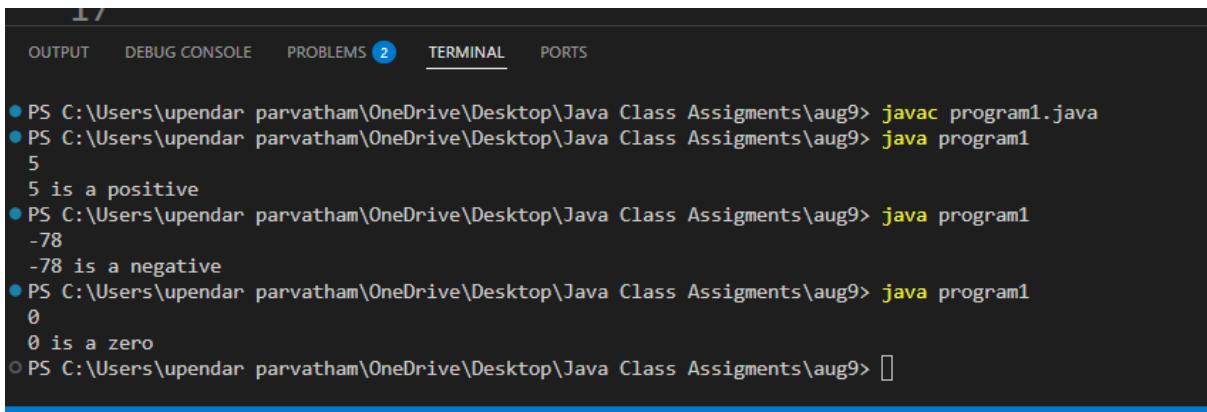
            System.out.println(num + " is a zero");

        }

    }

}
```

Output:



```
17
OUTPUT  DEBUG CONSOLE  PROBLEMS 2  TERMINAL  PORTS
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> javac program1.java
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> java program1
5
5 is a positive
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> java program1
-78
-78 is a negative
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> java program1
0
0 is a zero
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> 
```

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:

```

OUTPUT  DEBUG CONSOLE  PROBLEMS 4  TERMINAL  PORTS
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> javac program2.java
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> java program2
2000
leap year
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> java program2
1990
not leap year
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> java program2
2016
leap year
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> 

```

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:

```

PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assigments\aug9> javac program3.java
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assigments\aug9> java program3
y
It's a consonant
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assigments\aug9> java program3
o
It's a vowel
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assigments\aug9> java program3
a
It's a vowel
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assigments\aug9> java program3
p
It's a consonant
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assigments\aug9> 

```

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{


```

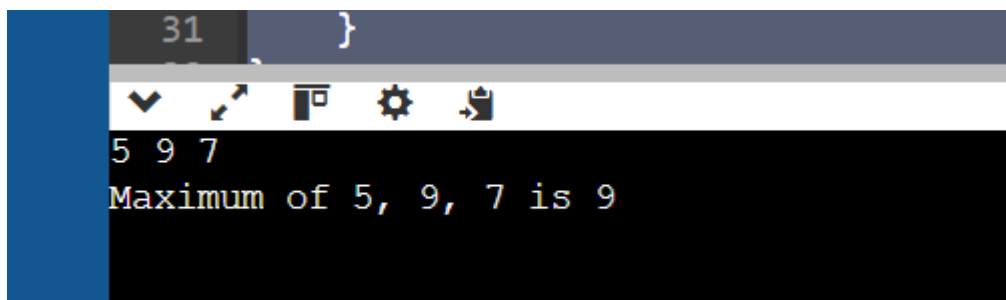
```

        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:



The screenshot shows a Java IDE window. The top part displays the code being executed, with the line `Maximum of 5, 9, 7 is 9` highlighted. Below the code, the output of the program is shown in a black console window. The output is `Maximum of 5, 9, 7 is 9`, which matches the expected result for the input values 5, 9, and 7.

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:

```

PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> javac program5.java
>>
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments\aug9> cd ..
>> java aug9.program5
>>
8
8 is a even
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments>

```

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;

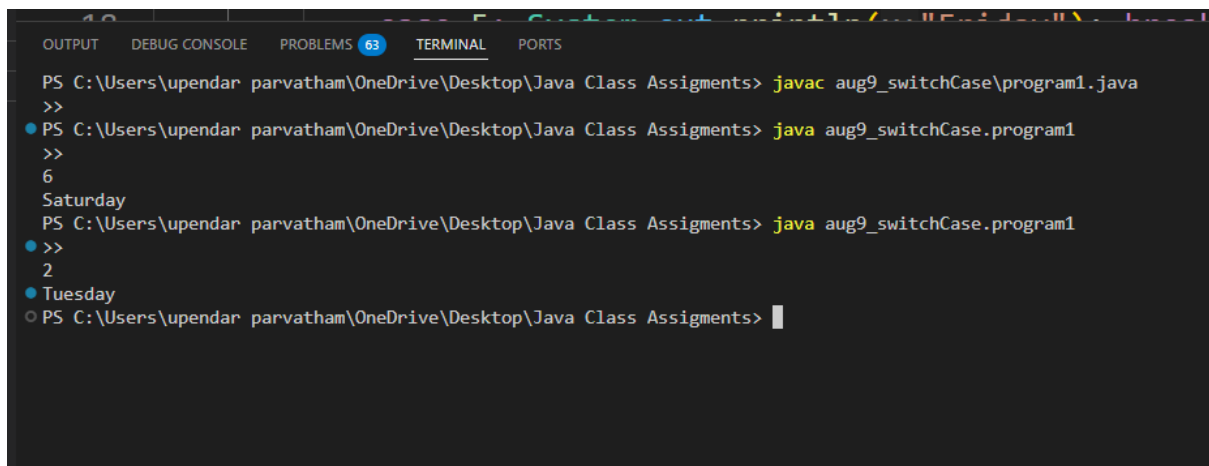
```

```

        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:



```

OUTPUT  DEBUG CONSOLE  PROBLEMS 63  TERMINAL  PORTS
PS C:\Users\upendar\parvatham\OneDrive\Desktop\Java Class Assignments> javac aug9_switchCase\program1.java
>>
PS C:\Users\upendar\parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program1
>>
6
Saturday
PS C:\Users\upendar\parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program1
>>
2
Tuesday
PS C:\Users\upendar\parvatham\OneDrive\Desktop\Java Class Assignments>

```

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:

```

OUTPUT  DEBUG CONSOLE  PROBLEMS 63  TERMINAL  PORTS
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> javac aug9_switchCase\program2.java
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program2
5 7
+
Addition: 5 + 7 = 12
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program2
5 3 -
Subtraction: 5 - 3 = 2
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program2
3 6 /
Division: 3 / 6 = 0
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments>

```

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;

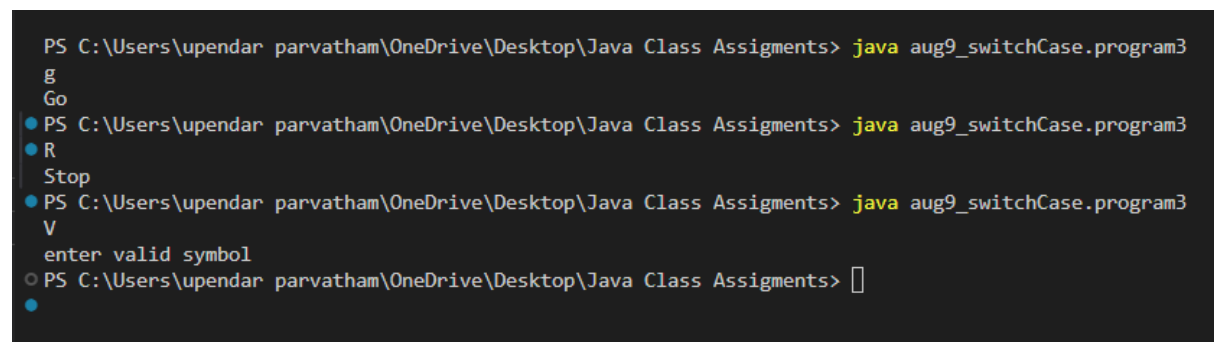
            default : System.out.println("enter valid symbol");

        }

    }

}
```

Output:



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

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:

```

PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> javac aug9_switchCase\program4.java
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program4
2
Two
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program4
7
enter between 0 to 5
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program4
0
Zero
PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments>

```

// 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:

```

PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program5
2
February has 28 days
● PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program5
● 9
September has 30 days
● PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program5
12
December has 31 days
● PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments> java aug9_switchCase.program5
● 14
Invalid month! Please enter a number between 1 and 12.
○ PS C:\Users\upendar parvatham\OneDrive\Desktop\Java Class Assignments>

```

