

Java_Assignment_01

```
/*
    1)Write a program that takes a numerical grade as input and outputs
    the corresponding letter
    grade using if-else statements.
*/
```

```
import java.util.Scanner;
public class Q1
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the Grade: ");
        int n = sc.nextInt();

        if(n >90 && n<=100)
            System.out.println("A");
        else if(n>80 && n<=90)
            System.out.println("B");
        else if(n>70 && n<=80)
            System.out.println("C");
        else if(n>60 && n<=70)
            System.out.println("D");
        else if(n>50 && n<=60)
            System.out.println("E");
        else if(n>40 && n<=50)
            System.out.println("F");
        else
            System.out.println("Invalid number");

    }
}
```

```
/*
    2)Write a program that checks if a given year is a leap year or not
    using both if-else and
    switch-case.
*/
```

```
import java.util.Scanner;

public class Q2 {

    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the year: ");
        int year = sc.nextInt();

        if( year%400 == 0 || year%4 == 0 && year%100 != 0 )
```

```

        System.out.println(year+" is leap year");
    else
        System.out.println(year+" is not leap year");

}

}

/*
3)Implement a simple calculator program that takes two numbers and an
operator (+, -, *, /) as
input and performs the operation using switch-case.
*/

import java.util.Scanner;

public class Q3 {

    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the num1: ");
        int n1 = sc.nextInt();
        System.out.println("Enter the num2: ");
        int n2 = sc.nextInt();
        System.out.println("Enter the choice: ");
        int choice = sc.nextInt();

        switch(choice)
        {
            case 1: System.out.println("Addition : "+(n1+n2));
                    break;
            case 2: System.out.println("Subtraction : "+(n1-n2));
                    break;
            case 3: System.out.println("Multiplication : "+(n1*n2));
                    break;
            case 4: System.out.println("Division : "+(n1/n2));
                    break;
            default: System.out.println("Invalid Input");
        }

    }

}

/*
4)Write a program that takes a number representing a weekday (1-7) and
prints the name of the

```

```
weekday using switch-case.  
*/
```

```
import java.util.Scanner;  
public class Q4  
{  
    public static void main(String[] args)  
    {  
        Scanner sc = new Scanner(System.in);  
        System.out.println("Enter the choice :");  
        int choice = sc.nextInt();  
  
        switch(choice)  
        {  
            case 1: System.out.println("January");  
                    break;  
            case 2: System.out.println("February");  
                    break;  
            case 3: System.out.println("March");  
                    break;  
            case 4: System.out.println("April");  
                    break;  
            case 5: System.out.println("May");  
                    break;  
            case 6: System.out.println("June");  
                    break;  
            case 7: System.out.println("July");  
                    break;  
            case 8: System.out.println("August");  
                    break;  
            case 9: System.out.println("September");  
                    break;  
            case 10: System.out.println("October");  
                    break;  
            case 11: System.out.println("November");  
                    break;  
            case 12: System.out.println("December");  
                    break;  
            default:  
                System.out.println("Invalid Choice....");  
  
        }  
  
        sc.close();  
    }  
}  
  
/*  
    Enter the choice :  
    4  
    April  
*/
```

```

/*
5)Write a program that takes a character as input and determines whether
it's a vowel or a
consonant using if-else.
*/

```

```

import java.util.Scanner;

```

```

public class Q5 {

```

```

    public static void main(String[] args)

```

```

    {

```

```

        Scanner sc = new Scanner(System.in);

```

```

        System.out.println("Enter the Single character: ");

```

```

        String str = sc.nextLine().toUpperCase();

```

```

        char ch = str.charAt(0);

```

```

        if(ch == 'A' || ch == 'E' || ch == 'I' || ch == 'O' || ch ==

```

```

        'U')

```

```

            System.out.println("It is an Vowel");

```

```

        else

```

```

            System.out.println("It is a Consonent");

```

```

    }

```

```

}

```

```

/*
6)Implement a program that calculates the Body Mass Index (BMI) based on
height and weight
input using if-else to classify the BMI int categories(underweight,
normal weight, overweight,
etc.)
*/

```

```

import java.util.Scanner;

```

```

public class Q6

```

```

{

```

```

    static public void main(String args[]){

```

```

        Scanner sc= new Scanner(System.in);

```

```

        System.out.println("Enter height in meters");

```

```

        float h= sc.nextFloat();

```

```

        System.out.println("Enter weight in Kg");

```

```

        float w= sc.nextFloat();

```

```

        float BMI= w/(h*h);

```

```

        if(BMI <=18.4)

```

```

        {

```

```
System.out.println("UnderWeight");
}
else if (BMI<=24.9 && BMI>=18.5)
{
    System.out.println("Normal");
}
else if (BMI<=39.9 && BMI>=25.0)
{
    System.out.println("Normal");
}
else if (BMI>=40.0)
{
    System.out.println("Obese");
}
else
    System.out.println("Invalid");
}

}
```