```java
1 /*5)Write a program that takes a character as input and determines whether it's a vowel or a
2 consonant using if-else. */
3 package in.acts.cdac;
4 import java.util.Scanner;
5 public class program {
6
7-    public static void main(String[] args) {
8        System.out.println("Enter the char:");
9        Scanner sc=new Scanner(System.in);
10        char ch;
11        ch=sc.next().charAt(0);
12        if(ch=='a' || ch=='e' || ch=='o' || ch=='u' || ch=='i') {
13            System.out.println("vowel");
14        }
15        else {
16            System.out.println("constsnt");
17        }
18    }
19
20 }
21
```

```java
1 /*2)Write a program that checks if a given year is a leap year or not using both if-else and
2 switch-case.*/
3 package in.acts.cdac;
4 import java.util.Scanner;
5 public class pgrogram {
6
7     public static void main(String[] args) {
8         int year;
9         int choice;
10        System.out.println("enter your choice");
11        Scanner sc=new Scanner(System.in);
12        choice=sc.nextInt();
13        System.out.println("enter the year");
14        year=sc.nextInt();
15        switch(choice) {
16        case 1:
17            if(year%4==0) {
18                System.out.println("Given year is leap year");
19            }
20            else {
21                System.out.println("Given year is not leap year");
22            }
23            break;
24        default:
25            System.out.println("invalid choice");
26        }
    }
}
```

terminated> pgrogram [Java Application] C:\Users\hp\Downloads\eclipse-jee-2023-12-R-win32-x86_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win...
enter your choice

enter the year

Given year is leap year

```java
/*Write a program that takes a numerical grade as input and outputs the corresponding letter
grade using if-else statements.*/
package in.acts.cdac;
import java.util.Scanner;

public class program1 {
    public static void main(String[]args) {
        int grade;
        System.out.println("Enter the grade:");
        Scanner s =new Scanner(System.in);
        grade=s.nextInt();
        if(grade>=60) {
            System.out.println("A");
        }
        else if(grade<=45) {
            System.out.println("B");
        }
        else{
            System.out.println("c");
        }
    }
}
```

```java
1 /*4)Write a program that takes a number representing a weekday (1-7) and prints the name of the
2 weekday using switch-case. */
3 package in.acts.cdac;
4 import java.util.Scanner;
5 public class program {
6
7  public static void main(String[] args) {
8      System.out.println("Enter the number:");
9      Scanner sc=new Scanner(System.in);
10     int num;
11     num=sc.nextInt();
12     if(num==1) {
13         System.out.println("Sunday");
14     }
15     else if(num==2) {
16         System.out.println("Monday");
17     }
18     else if(num==3) {
19         System.out.println("Tuesday");
20     }
21     else if(num==4) {
22         System.out.println("Wednesday");
23     }
24     else if(num==5) {
25         System.out.println("Thursday");
26     }
27     else if(num==6) {
28         System.out.println("friday");
29     }
30     else if(num==2) {
31         System.out.println("Saturlday");
```

Problems   Javadoc   Declaration   Console ×
<terminated> program [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (16-Mar-2024, 4:56:10pm – 4:56:17pm [pid: 5868]
Enter the number:

Sunday

```java
1  /*6)Implement a program that calculates the Body Mass Index (BMI) based on height and weight
2  input using if-else to classify the BMI int categories (underweight, normal weight, overweight,
3  etc.)*/
4  package in.acts.cdac;
5  import java.util.Scanner;
6  public class program {
7
8      public static void main(String[] args) {
9          System.out.println("Enter the weight:");
10         Scanner sc=new Scanner(System.in);
11         int w;
12         w=sc.nextInt();
13         System.out.println("Enter the hight:");
14         int h;
15         h=sc.nextInt();
16         int BMI=w/h;
17         System.out.println("BMI is:"+BMI);
18         if(BMI<18.5) {
19             System.out.println("underweight");
20         }
21         else if(BMI>=24.9 &&BMI<30)  {
22             System.out.println("overweight");
23         }
24         else{
25             System.out.println("Normal weight");
26         }
27     }
28
29 }
30
```

Enter the weight:
50
Enter the hight:

BMI is:10
underweight