CONDITIONAL_STATEMENT_LEVEL_1

1. **Given a year, check whether it is a leap year.**

```
import java.util.*;
class Leap_year
{
  public static void main(String args[])
  {
    Scanner obj = new Scanner(System.in);
    int year = obj.nextInt();
    if((year%4==0 && year%100!=0) || year%400==0)
    {
      System.out.println("Leap year");
    }
    else
    {
      System.out.println("Not a Leap year");
    }
  }
}
```

2. **Write a program to print corresponding day based on given input.**

```
import java.util.*;
class Days
{
  public static void main(String args[])
  {
    Scanner sc = new Scanner(System.in);
    int day = sc.nextInt();
    String s="";
    switch(day)
    {
      case 0:
        s= "Sunday";
        break;
      case 1:
        s = "Monday";
        break;
      case 2:
        s  = "Tuesday";
        break;
      case 3:
        s = "Wednesday";
        break;
      case 4:
        s = "Thursday";
        break;
```

```
      case 5:
         s = "Friday";
         break;
      case 6:
         s = "Saturday";
         break;
      default:
         s = "Invalid";
         break;
   }
   System.out.println(s);
}
```

3. **Write a program to print the respective month name based on given input.**

```
import java.util.*;
class Month
{
  public static void main(String args[])
  {
    Scanner sc = new Scanner(System.in);
    int month = sc.nextInt();
    String s = "";
    switch(month)
    {
      case 1:
        s = "January";
        break;
      case 2:
        s = "February";
        break;
      case 3:
        s  = "March";
        break;
      case 4:
        s = "April";
        break;
      case 5:
        s = "May";
        break;
```

```
        case 6:
          s = "June";
          break;
        case 7:
          s = "July";
          break;
        case 8:
          s = "August";
          break;
        case 9:
          s = "September";
          break;
        case 10:
          s = "October";
          break;
        case 11:
          s = "November";
          break;
        case 12:
          s = "December";
          break;
        default:
          s = "Invalid";
          break;
      }
      System.out.println(s);
   }
}
```

4. **Check whether the given character is in upper case or lower case or none.**

```
import java.util.*;
class Lower_Upper
{
  public static void main(String args[])
  {
  Scanner sc = new Scanner(System.in);
  char ch = sc.next().charAt(0);
  if(ch >= 'a' && ch <= 'z' )
  {
    System.out.println("LOWERCASE");
  }
  else if(ch>='A' && ch<='Z')
  {
    System.out.println("UPPERCASE");
  }
  else
  {
    System.out.println("NONE");
  }
  }
}
```

5. **20000 : HRA = 30%, DA=95%"}'>Given basic Salary of an employee,calculate its gross salary according to the following condition:**

   Basic Salary <= 10000 : HRA = 20%, DA=80%

   Basic Salary <= 20000 : HRA = 25%, DA=90%

   Basic Salary > 20000 : HRA = 30%, DA=95%

```java
import java.util.Scanner;
public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int num = scanner.nextInt();
        double ans;
        if (num <= 10000) {
            ans = num + (num * 0.2 + num * 0.8);
        } else if (num <= 20000) {
            ans = num + (num * 0.25) + (num * 0.9);
        } else {
            ans = num + (num * 0.3) + (num * 0.95);
        }

        System.out.printf("Rs.%.2f", ans);
    }
}
```

6. **Check whether the given character is an alphabet or a number or special character.**

```
import java.util.*;
class Alpha
{
  public static void main(String args[])
  {
  Scanner sc =new Scanner(System.in);
  char c = sc.next().charAt(0);
  if((c>='A' && c<='Z') || (c>='a' && c<='z'))
  {
    System.out.println("ALPHABET");
  }
  else if(c>='0' && c<='9')
  {
    System.out.println("NUMBER");
  }
  else
  {
    System.out.println("SPECIAL CHARACTER");
  }
  }
}
```

7. **Based on the given marks, print the corresponding grade according to the following conditions Given a particular marks, a grade is calculated as per the following table:**

Score	Grade
1. marks>=91	A
2. 76<=marks<=90	B
3. 61<=marks<=75	C
4. marks<=60	D

```
import java.util.*;
class Grade
{
  public static void main(String args[])
  {
    Scanner sc = new Scanner(System.in);
    int mark = sc.nextInt();
    if(mark>=91)
    {
      System.out.println("Grade A");
    }
    else if(mark<=90 && mark>=76)
    {
      System.out.println("Grade B");
    }
    else if(mark>=61 && mark<=75)
    {
      System.out.println("Grade C");
    }
    else
    // if(mark<=60)
    {
      System.out.println("Grade D");
    }
  }
}
```

8. **Get three inputs in the format-integer, character, integer. The inputs are all separated by spaces. Perform the operation with the integer values based on the character(+,-,*,/). Display the calculated value as the output.**
   Ex : 23 + 45
   o/p : 68

```
import java.util.*;
class Calci
{
  public static void main(String args[])
  {
    Scanner sc = new Scanner(System.in);
    int n1 = sc.nextInt();
    char c = sc.next().charAt(0);
    int n2 =  sc.nextInt();
    switch(c)
    {
      case '+':
        System.out.println(n1+n2);
        break;
      case '-':
        System.out.println(n1-n2);
        break;
      case '*':
        System.out.println(n1*n2);
        break;
      case '/':
        System.out.println(n1/n2);
        break;
      default:
        System.out.println("Invalid");
        break;
    }
  }
}
```

9. **Write a C program to input electricity unit charge and calculate the total electricity bill according to the given condition:**

   For First 50 Units Rs.0.50/unit
   For next 100 Units Rs.0.75/unit
   For next 100 Units Rs.1.20/unit
   For unit above 250 Rs.1.50/unit
   An additional surcharge of 20% is added to the bill.

```
import java.util.Scanner;
public class Main {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int number = scanner.nextInt();
        double ans;
        if (number > 250)
        {
            ans = (50 * 0.50) + (100 * 0.75) + (100 * 1.20) + (number -
        }
        else if (number > 150)
        {
            ans = (50 * 0.50) + (100 * 0.75) + (number - 150) * 1.20;
        }
        else if (number > 50)
        {
            ans = (50 * 0.50) + (number - 50) * 0.75;
        }
        else
        {
            ans = number * 0.5;
        }
        ans = ans + (ans * 0.2);
        System.out.printf("%.2f", ans);
    }
}
```

10. Write a program to check whether the given three sides can form a triangle or not.

```
import java.util.*;
class Triangle
{
  public static void main(String args[])
  {
    Scanner sc =new Scanner(System.in);
    long a1 = sc.nextLong();
    long a2 =  sc.nextLong();
    long a3 = sc.nextLong();
    if((a1+a2)>a3 && (a1+a3)>a2 && (a2+a3)>a1)
    {
      System.out.println("Valid");
    }
    else
    {
      System.out.println("Not Valid");
    }
  }
}
```