Module 02

Arithmetic Operators

Operators are:

+ → Addition
− → Subtraction
* → Multiplication
/ → Division
% → Modulus
++ → Increment
-- → Decrement

int / int → int
int / float → float
float / float → float

Q1. Take two integers from user and then print summation, subtraction, division and modulus of them.

Relational Operators

Operators are:

== → Equal to
!= → Not equal
> → Greater than
< → Less than
>= → Greater than or equal to
<= → Less than or equal to

*= → Assignment Operator

Q2. Take two numbers from user and test all the relational operators (True/False).

Logical Operators

Operators are:

&& → And → Returns True if both statements are true.
|| → OR → " " " one statement is ".
! → Not → Reverse the result.

Conditionals in C

Syntax(if Else):

```
if (condition){
  //block of code
}
else{
  //block of code
}
```

Syntax(If Else ladder):

```
If (cond. 1){
  //block of code
}
Else if (cond. 2){
  //block of code
}else{
  //block of code
}
```

Syntax(Nested If Else):

```
if (condition 1){
    //block of code
    if (condition 2){
        //block of code
    }
}
```

Q3. Write a C program that takes a student's test score as input and determines their grade based on the following rules:

- Score >= 90: Grade is 'A'
- 80 <= Score <= 89: Grade is 'B'
- 70 <= Score <= 79: Grade is 'C'
- 60 <= Score <= 69: Grade is 'D'
- Score < 60: Grade is 'F'

Q4.

Problem: Write a C program to determine if a year is a leap year. The program should follow these rules:

- If the year is divisible by 4, go to the next step; otherwise, it's not a leap year.
- If the year is divisible by 100, go to the next step; otherwise, it's a leap year.
- If the year is divisible by 400, it's a leap year; otherwise, it's not a leap year.