

## Task :

1. Write a prolog program to show the use of following operators in prolog.

Operator	Meaning
+	Addition
-	Subtraction
*	Multiplication
/	Division
**	Power
//	Integer Division
mod	Modulus

## Objective:

The objective of this task is to write a Prolog program that demonstrates the use of various operators to the console.

## Code:

```
cal:- X is 100+10,write(X),nl,  
      Y is 100-10,write(Y),nl,  
      A is 100*10,write(A),nl,  
      B is 100/10,write(B),nl,  
      C is 100//10,write(C),nl,  
      D is 100 mod 10,write(D).
```

## Output:

```
GNU Prolog console
File Edit Terminal Prolog Help
Compiled Jul  8 2021, 12:47:53 with gcc
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| ?- change_directory('C:/Users/Lenovo/Desktop').

yes
| ?- [calc].
compiling C:/Users/Lenovo/Desktop/calc.pl for byte code...
C:/Users/Lenovo/Desktop/calc.pl compiled, 5 lines read - 1578 bytes written, 7 ms

(16 ms) yes
| ?- listing
.

% file: C:/Users/Lenovo/Desktop/calc.pl

cal :-
    A is 100 + 10,
    write(A),
    nl,
    B is 100 - 10,
    write(B),
    nl,
    C is 100 * 10,
    write(C),
    nl,
    D is 100 / 10,
    write(D),
    nl,
    E is 100 // 10,
    write(E),
    nl,
    F is 100 mod 10,
    write(F),
    nl.

yes
| ?- cal.
110
90
1000
10.0
10
0
```

## Task :

2. Write a prolog program to show comparison operators:

Operator	Meaning
>	greater than
<	less than
>=	greater than or equal to
=<	less than or equal to
==	values are equal
!=	values are not equal

## Objective:

The objective of the task typically involves demonstrating how comparison operators work within the Prolog programming language.

## Code:

```
gt(X,Y):- X>Y,write('X IS GREATER THAN Y').
```

```
gtt(X,Y):- X<Y,write('X IS LESS THAN Y').
```

```
gttt(X,Y):- X>=Y,write('X IS GREATER OR EQUAL TO Y').
```

```
gtttt(X,Y):- X<=Y,write('X IS LESS OR EQUAL TO Y').
```

```
gttttt(X,Y):- X==Y,write('X IS EQUAL TO Y').
```

```
gtttttt(X,Y):- X!=Y,write('X IS NOT EQUAL TO Y').
```

## Output:

```
GNU Prolog console
File Edit Terminal Prolog Help
GNU Prolog 1.5.0 (32 bits)
Compiled Jul  8 2021, 12:47:53 with gcc
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| ?- change_directory('C:/Users/Lenovo/Desktop').

yes
| ?- [calc].
compiling C:/Users/Lenovo/Desktop/calc.pl for byte code...
C:/Users/Lenovo/Desktop/calc.pl compiled, 6 lines read - 1573 bytes written, 9 ms

yes
| ?- listing.

% file: C:/Users/Lenovo/Desktop/calc.pl

gt(A, B) :-
    A > B,
    write('X IS GREATER THAN Y').

gtt(A, B) :-
    A < B,
    write('X IS LESS THAN Y').

gttt(A, B) :-
    A >= B,
    write('X IS GREATER OR EQUAL TO Y').

gtttt(A, B) :-
    A <= B,
    write('X IS LESS OR EQUAL TO Y').

gttttt(A, B) :-
    A == B,
    write('X IS EQUAL TO Y').

gtttttt(A, B) :-
    A \== B,
    write('X IS NOT EQUAL TO Y').

(63 ms) yes
| ?- gt(20,10).
X IS GREATER THAN Y

yes
| ?- gtt(10,20).
X IS LESS THAN Y

yes
| ?- gt(20,20).

no
| ?- gttt(20,20).
X IS GREATER OR EQUAL TO Y

yes
| ?- gtttt(10,20).
X IS LESS OR EQUAL TO Y

yes
| ?- gttttt(5,5).
X IS EQUAL TO Y

yes
| ?- gtttttt(10,20).
X IS NOT EQUAL TO Y
```