**Experiment - 7**

**Aim:**

**Write program to study usage of recursion in prolog.**

* **Write predicate fact(n) ,which finds and display factorial of a given Number.**

**Solution:-**

Prolog Code:

domains

number=integer

predicates

go

fact(number,number)

clauses

go:-

write("---------------------"),nl,

write("\*\*\*\*\*\*FACTORIAL\*\*\*\*\*\*"),nl,

write("---------------------"),nl,

write("Enter Number: "),

readint(N),

fact(1,N).

fact(N,0):-

write("Factorial is: ",N),nl,

write("---------------------"),nl.

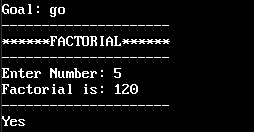
fact(N,X):-

R=N\*X,

S=X-1,

fact(R,S).

Output Screenshots:



* **Write predicate fibbonacci (n) ,which finds the series for first “n” values .**

**Solution:-**

Prolog Code:

domains

number=integer

predicates

go

fibo(number,number,number)

clauses

go:-

write("--------------------------"),nl,

write("\*\*\*\*\*FIBONACCI SERIES\*\*\*\*\*"),nl,

write("--------------------------"),nl,

write("Enter the Number: "),

readint(N),

write("Fibonacci series is: "),nl,

write("--------------------------"),nl,

fibo(0,1,N).

fibo(A,B,1):-

write(B),nl.

fibo(X,Y,M):-

N1=X+Y,

2=Y,

N3=M-1,

write(N2," "),

fibo(N2,N1,N3).

Output Screenshots:

