1. **Implement a Prolog program to**

**i.To find Factorial of a number**

**iiTo find Fibonacci series**

**iii Perform basic arithmetic operation**

% Factorial of a number

factorial(0, 1).

factorial(N, Result) :-

N > 0,

N1 is N - 1,

factorial(N1, Result1),

Result is N \* Result1.

% Fibonacci series

fib(0, 0).

fib(1, 1).

fib(N, Result) :-

N > 1,

N1 is N - 1,

N2 is N - 2,

fib(N1, Result1),

fib(N2, Result2),

Result is Result1 + Result2.

% Arithmetic operations

add(X, Y, Result) :- Result is X + Y.

subtract(X, Y, Result) :- Result is X - Y.

multiply(X, Y, Result) :- Result is X \* Y.

divide(X, Y, Result) :- Y \= 0, Result is X / Y.