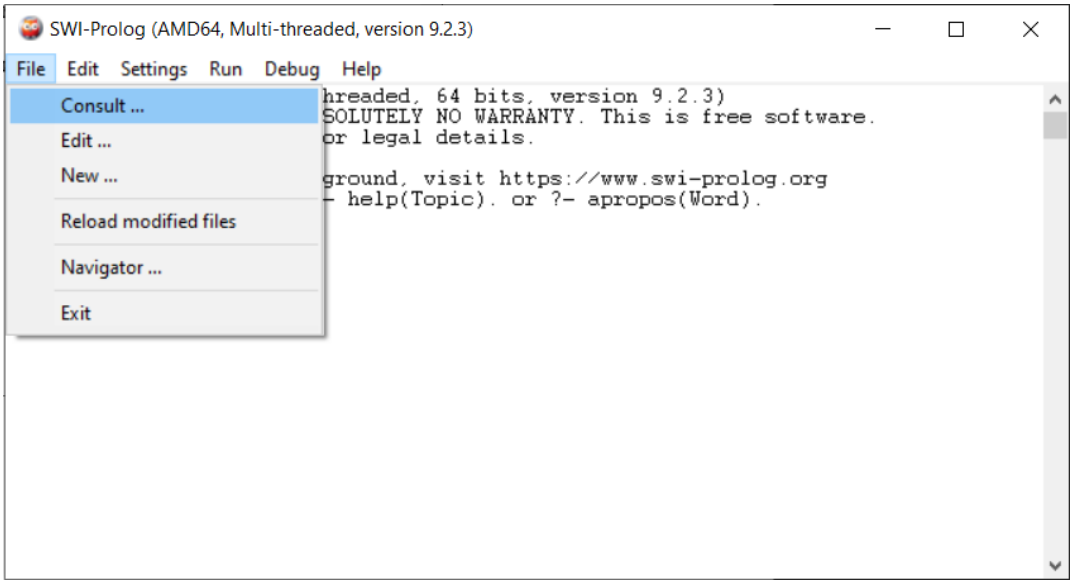
!!! INSTALL SWI-PROLOG IF NOT INSTALLED, DO THIS BY RUNING FOLLOWING COMMAND IN TERMINAL:
snap install swi-prolog

Experiment 9a – Factorial code in PROLOG.

1. Open a text editor and paste following code within it:
   factorial(0,1).
   factorial(N,X):-
   factorial(N1,X1),
   N is N1+1,
   X is X1*N.
2. Save this code as **fact.pl**
3. Launch SWI-Prolog application.
4. Look for **File > Consult** on toolbar.

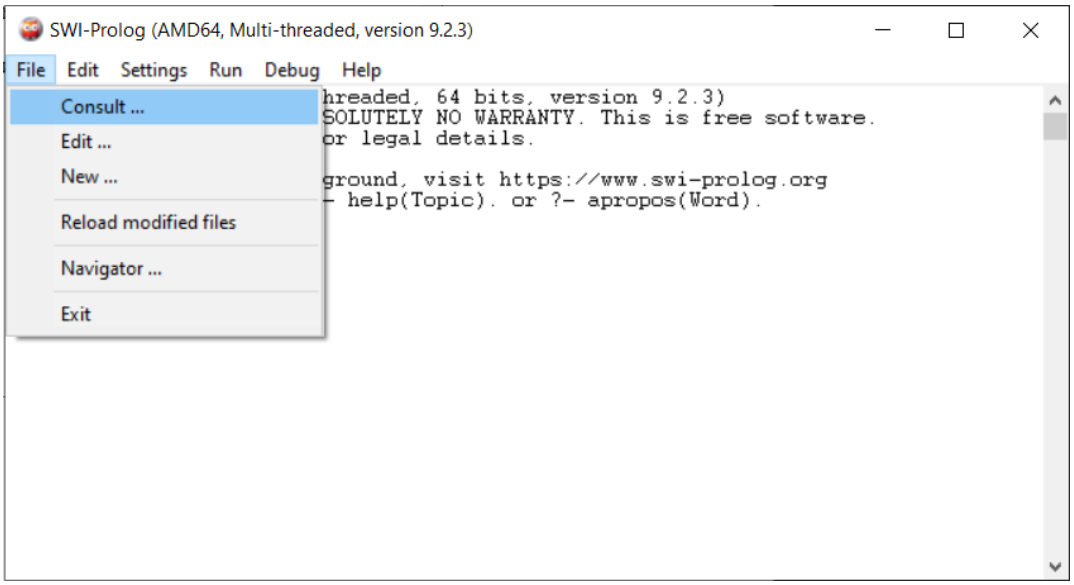


5. Select the **fact.pl** file you saved earlier.
6. Run **factorial(7,X).** within SWI-Prolog terminal like so.

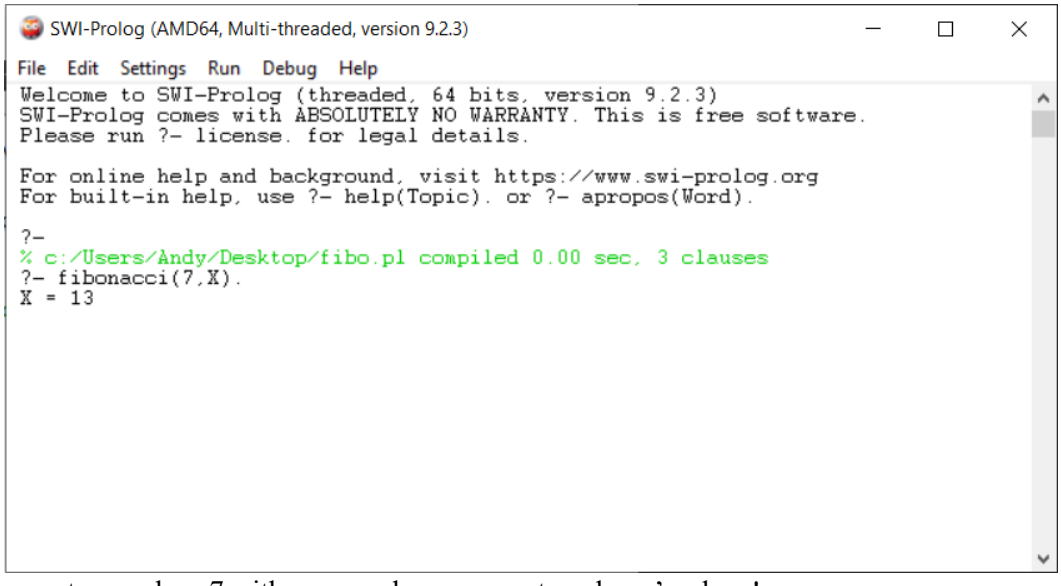
7. From above step, replace 7 with any number you want, and you're done!

Experiment 9b – Fibonacci code in PROLOG.

1. Open a text editor and paste following code within it:
   ```
   fibonacci(1,1).
   fibonacci(2,1).
   fibonacci(N,X):-
   N>=3,
   N1 is N-1,
   N2 is N-2,
   fibonacci(N1,X1),
   fibonacci(N2,X2),
   X is X1+X2.
   ```
2. Save this code as **fibo.pl**
3. Launch SWI-Prolog application.
4. Look for **File > Consult** on toolbar.



5. Select the **fibo.pl** file you saved earlier.
6. Run **fibonacci(7,X).** within SWI-Prolog terminal like so.



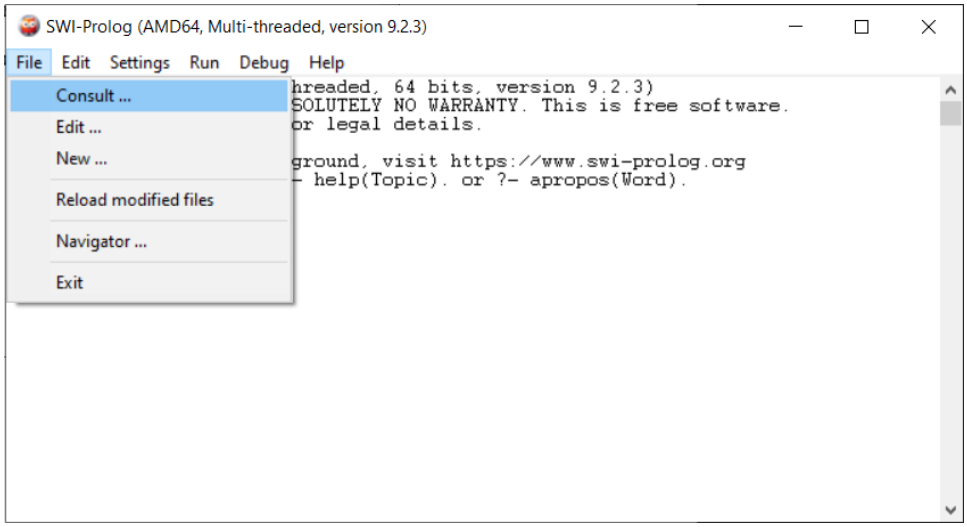
7. From above step, replace 7 with any number you want, and you're done!

Experiment 10 – Tower of Hanoi in PROLOG.

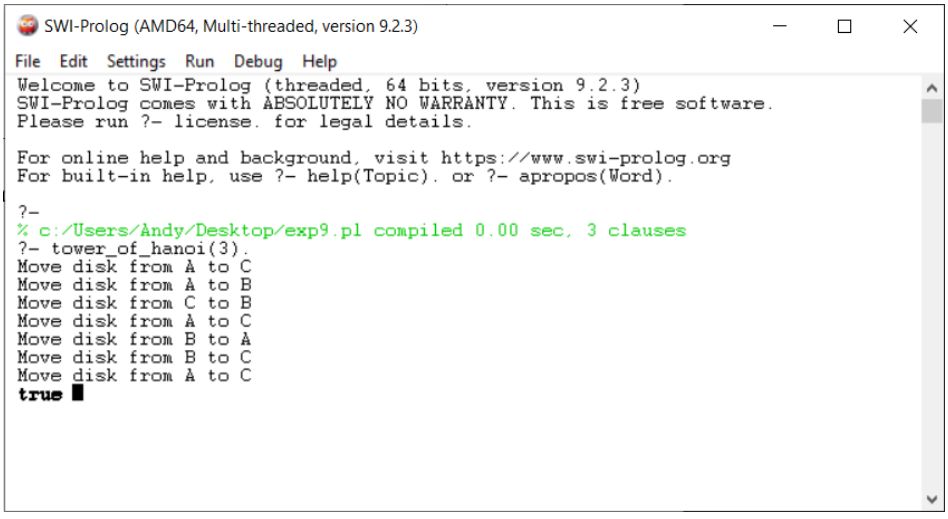
1. Open a text editor and paste following code within it:

```
move(1,X,Y,_) :-
   write('Move disk from '), write(X), write(' to '), write(Y), nl.
move(N,X,Y,Z) :-
   N > 1,
   M is N-1,
   move(M,X,Z,Y),
   move(1,X,Y,_),
   move(M,Z,Y,X).
tower_of_hanoi(N) :-
   move(N,'A','C','B').fibonacci(N1,X1),
fibonacci(N2,X2),
X is X1+X2.
```

2. Save this code as **tower.pl**
3. Launch SWI-Prolog application.
4. Look for **File > Consult** on toolbar.



5. Select the **tower.pl** file you saved earlier.
6. Run **tower_of_hanoi(3).** within SWI-Prolog terminal like so.



7. From above step, replace 3 with any number you want, and you're done!