```
Script started on Tue Mar  6 20:58:16 2012
bash-3.2$ cat -n fac\007torial.pl
     1  % $Id: factorial.pl,v 1.2 2011-05-19 19:53:59-07 - - $ */
     2
     3  %
     4  % Factorial, the old intro to recursion standby.
     5  %
     6
     7  factorial( 0, 1 ) :-
     8          !.
     9
    10  factorial( N, Nfac ) :-
    11          M is N - 1,
    12          factorial( M, Mfac ),
    13          Nfac is N * Mfac.
    14
    15  % TEST: factorial(5,N).
    16  % TEST: factorial(20,N).
bash-3.2$ gprolog
GNU Prolog 1.3.1
By Daniel Diaz
Copyright (C) 1999-2009 Daniel Diaz
| ?- [factorial].
compiling /afs/cats.ucsc.edu/courses/cmps112-wm/Languages/prolog/Examples/factorial.pl for byte code...
/afs/cats.ucsc.edu/courses/cmps112-wm/Languages/prolog/Examples/factorial.pl compiled, 16 lines read - 916 bytes written, 10 ms

yes
| ?- trace.
The debugger will first creep -- showing everything (trace)

yes
{trace}
| ?- factorial(5,N).
      1    1  Call: factorial(5,_16) ?
      2    2  Call: _88 is 5-1 ?
      2    2  Exit: 4 is 5-1 ?
      3    2  Call: factorial(4,_113) ?
      4    3  Call: _140 is 4-1 ?
      4    3  Exit: 3 is 4-1 ?
      5    3  Call: factorial(3,_165) ?
      6    4  Call: _192 is 3-1 ?
      6    4  Exit: 2 is 3-1 ?
      7    4  Call: factorial(2,_217) ?
      8    5  Call: _244 is 2-1 ?
      8    5  Exit: 1 is 2-1 ?
      9    5  Call: factorial(1,_269) ?
     10    6  Call: _296 is 1-1 ?
     10    6  Exit: 0 is 1-1 ?
     11    6  Call: factorial(0,_321) ?
     11    6  Exit: factorial(0,1) ?
     12    6  Call: _349 is 1*1 ?
     12    6  Exit: 1 is 1*1 ?
      9    5  Exit: factorial(1,1) ?
     13    5  Call: _378 is 2*1 ?
     13    5  Exit: 2 is 2*1 ?
      7    4  Exit: factorial(2,2) ?
     14    4  Call: _407 is 3*2 ?
     14    4  Exit: 6 is 3*2 ?
      5    3  Exit: factorial(3,6) ?
     15    3  Call: _436 is 4*6 ?
     15    3  Exit: 24 is 4*6 ?
      3    2  Exit: factorial(4,24) ?
     16    2  Call: _16 is 5*24 ?
     16    2  Exit: 120 is 5*24 ?
      1    1  Exit: factorial(5,120) ?

N = 120

(1 ms) yes
{trace}
| ?-






bash-3.2$ exit

Script done on Tue Mar  6 21:00:48 2012
```