18BECE30558
TITHI PATEL

PRACTICAL-4

Program (1): Program to implement factorial.


```
 Files          Edit          Run          Compile          Options          Setup
                       Editor                                    Dialog
  Line 1      Col 15    E:\PROLOG\PR4(I).PRO  Indent   Goal: factorial(6,X)
/*18BECE30558_TITHI PATEL*/                             X=720
domains
        n,f=integer
predicates
        factorial(n,f)
clauses
        factorial(0,1).
        factorial(N,F):-
                N1=N-1,factorial(N1,F1),
                F=N*F1.




                      Message                                    Trace
1002  Stack overflow. Re-configure wit
h Options if necessary.

Press the SPACE bar

F2-Save  F3-Load  F6-Switch  F9-Compile                            Alt-X-Exit
```

Program (2): Program to implement factorial using cut and fail predicates.

```
  Files          Edit          Run          Compile        Options          Setup
+------------------ Editor -------------------+    +------------- Dialog ------------+
| Line 1      Col 23     E:\PROLOG\PR4(I).PRO  Indent | Goal: factorial(6,X)        |
| /*18BECE30558_TITHI PATEL*/                 |    | X=720                          |
| domains                                     |    | Goal: factorial(8,X)           |
|        n,f=integer                          |    | X=-25216                       |
| predicates                                  |    | 1 Solution                     |
|        factorial(n,f)                       |    | Goal: _                        |
| clauses                                     |    |                                |
|        factorial(0,1) if !.                 |    |                                |
|        factorial(N,F):-                     |    |                                |
|                N1=N-1,factorial(N1,F1),     |    |                                |
|                F=N*F1.                       |    |                                |
|                                             |    |                                |
|                                             |    |                                |
|                                             |    |                                |
|                                             |    |                                |
+---------------------------------------------+    +--------------------------------+
+---------------- Message --------------------+    +-------------- Trace ------------+
| Press the SPACE bar                         |    |                                |
| Compiling E:\PROLOG\PR4(I).PRO              |    |                                |
| Compiling E:\PROLOG\PR4(I).PRO              |    |                                |
| factorial                                   |    |                                |
+---------------------------------------------+    +--------------------------------+
F2-Save  F3-Load  F5-Zoom  F6-Next  F8-Previous goal  Shift-F10-Resize  F10-End
```