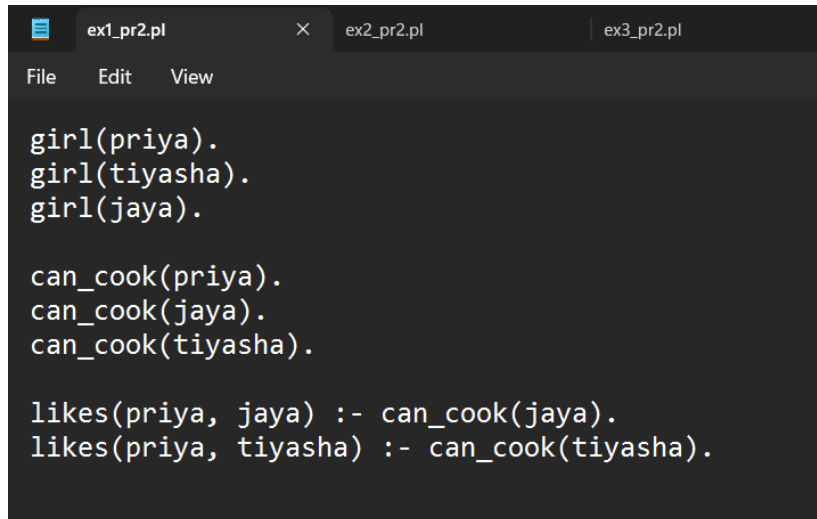


PRACTICAL – 2

EXAMPLE 1 :

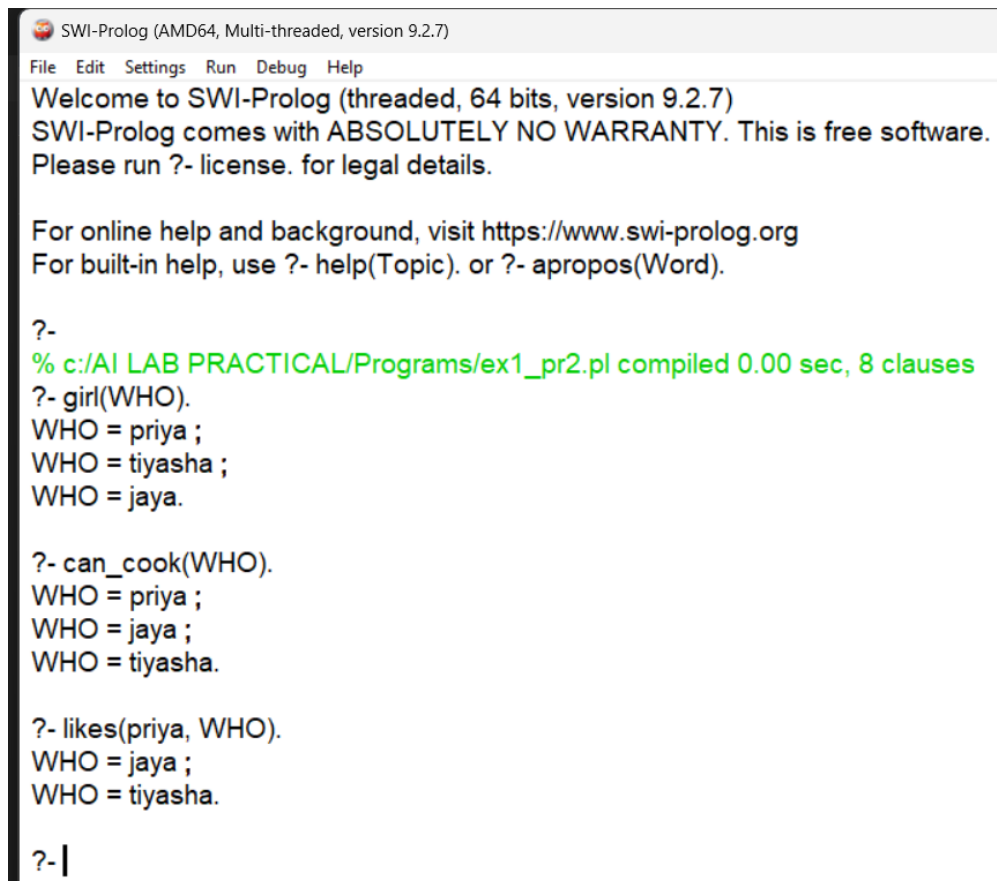


```
girl(priya).
girl(tiyasha).
girl(jaya).

can_cook(priya).
can_cook(jaya).
can_cook(tiyasha).

likes(priya, jaya) :- can_cook(jaya).
likes(priya, tiyasha) :- can_cook(tiyasha).
```

QUERY :



```
SWI-Prolog (AMD64, Multi-threaded, version 9.2.7)
File Edit Settings Run Debug Help
Welcome to SWI-Prolog (threaded, 64 bits, version 9.2.7)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
Please run ?- license. for legal details.

For online help and background, visit https://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

?-
% c:/AI LAB PRACTICAL/Programs/ex1_pr2.pl compiled 0.00 sec, 8 clauses
?- girl(WHO).
WHO = priya ;
WHO = tiyasha ;
WHO = jaya.

?- can_cook(WHO).
WHO = priya ;
WHO = jaya ;
WHO = tiyasha.

?- likes(priya, WHO).
WHO = jaya ;
WHO = tiyasha.

?- |
```

EXAMPLE 2 :

```
ex1_pr2.pl  ex2_pr2.pl  ex3_pr2.pl
File Edit View

sing_a_song(ananya).
listens_to_music(rohit).

listens_to_music(ananya) :- sing_a_song(ananya).
happy(ananya) :- sing_a_song(ananya).
happy(rohit) :- listens_to_music(rohit).
plays_guitar(rohit) :- listens_to_music(rohit).
```

QUERY :

```
SWI-Prolog (AMD64, Multi-threaded, version 9.2.7)
File Edit Settings Run Debug Help
Welcome to SWI-Prolog (threaded, 64 bits, version 9.2.7)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
Please run ?- license. for legal details.

For online help and background, visit https://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

?-
% c:/AI LAB PRACTICAL/Programs/ex2_pr2.pl compiled 0.00 sec, 6 clauses
?- happy(rohit).
true.

?- sing_a_song(rohit).
false.

?- sing_a_song(ananya).
true.

?- plays_guitar(ananya).
false.

?- listens_to_music(ananya).
true.

?- |
```

EXAMPLE 3 :

```
ex1_pr2.pl  ex2_pr2.pl  ex3_pr2.pl
File Edit View

dog(rottweiler).
cat(sphynx).
dog(bulldog).
dog(dobermann).
cat(himalayan).
dog(poodle).
cat(bengal).
cat(singapura).
```

QUERY :

```
SWI-Prolog (AMD64, Multi-threaded, version 9.2.7)
File Edit Settings Run Debug Help

?- cat(A).
A = sphynx ;
A = himalayan ;
A = bengal ;
A = singapura.

?- dog(dobermann).
true.

?- cat(A),dog(B).
A = sphynx,
B = rottweiler ;
A = sphynx,
B = bulldog ;
A = sphynx,
B = dobermann ;
A = sphynx,
B = poodle ;
A = himalayan,
B = rottweiler ;
A = himalayan,
B = bulldog ;
A = himalayan,
B = dobermann ;
A = himalayan,
B = poodle ;
A = bengal,
B = rottweiler ;
A = bengal,
B = bulldog ;
A = bengal,
B = dobermann ;
A = bengal,
```

```
SWI-Prolog (AMD64, Multi-threaded, version 9.2.7)
File Edit Settings Run Debug Help

A = bengal,
B = poodle ;
A = singapura,
B = rottweiler ;
A = singapura,
B = bulldog ;
A = singapura,
B = dobermann ;
A = singapura,
B = poodle.

?- cat(A),dog(A).
false.

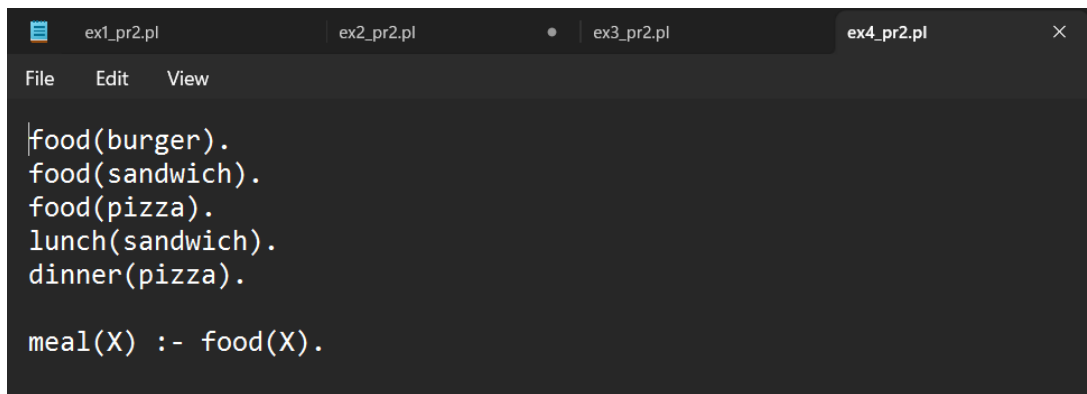
?- dog(A),cat(B).
A = rottweiler,
B = sphynx ;
A = rottweiler,
B = himalayan ;
A = rottweiler,
B = bengal ;
A = rottweiler,
B = singapura ;
A = bulldog,
B = sphynx ;
A = bulldog,
B = himalayan ;
A = bulldog,
B = bengal ;
A = bulldog,
B = singapura ;
A = dobermann,
B = sphynx ;
```

```
SWI-Prolog (AMD64, Multi-threaded, version 9.2.7)
File Edit Settings Run Debug Help

A = dobermann,
B = sphynx ;
A = dobermann,
B = himalayan ;
A = dobermann,
B = bengal ;
A = dobermann,
B = singapura ;
A = poodle,
B = sphynx ;
A = poodle,
B = himalayan ;
A = poodle,
B = bengal ;
A = poodle,
B = singapura.

?-
```

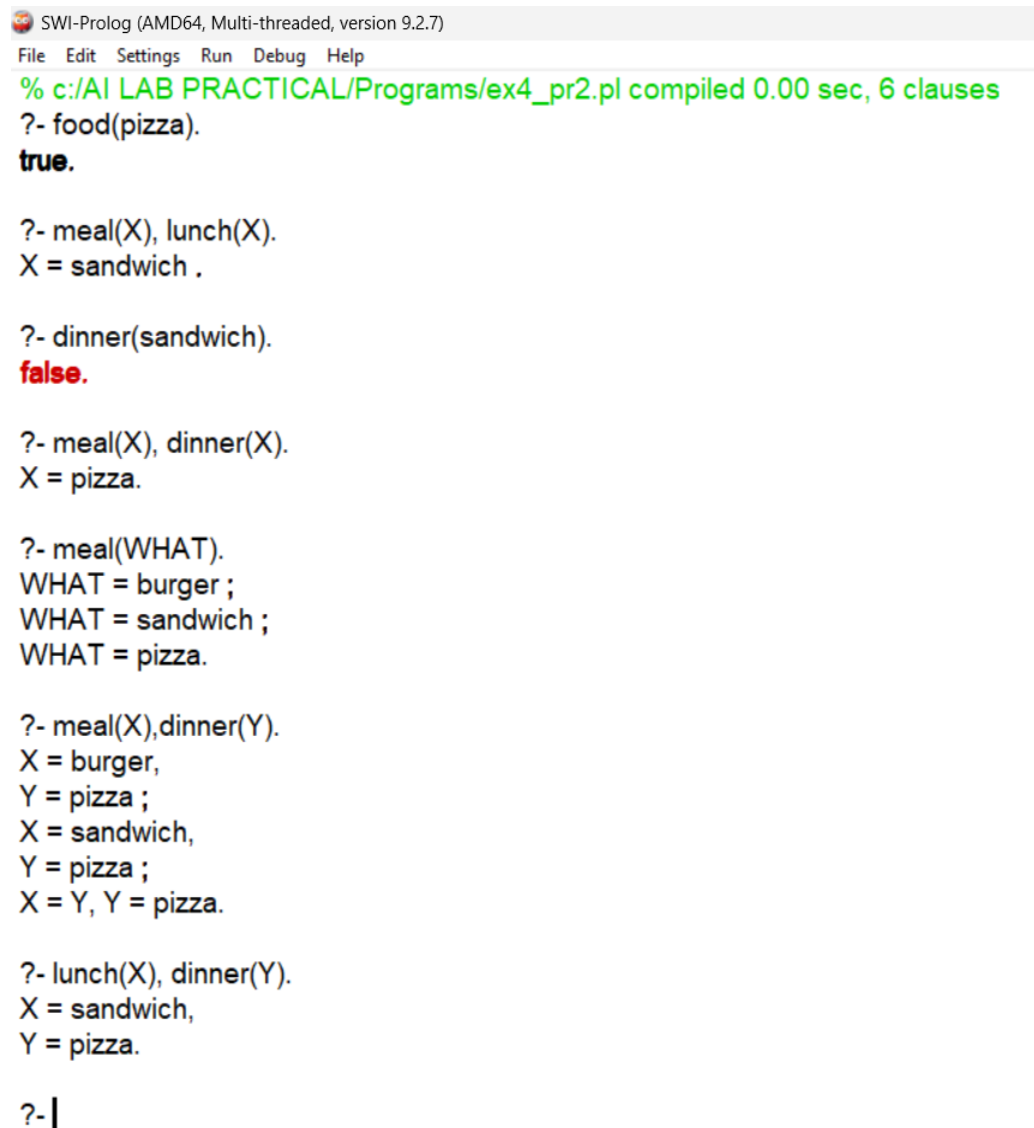
EXAMPLE 4 :



```
food(burger).
food(sandwich).
food(pizza).
lunch(sandwich).
dinner(pizza).

meal(X) :- food(X).
```

QUERY :



```
SWI-Prolog (AMD64, Multi-threaded, version 9.2.7)
File Edit Settings Run Debug Help
% c:/AI LAB PRACTICAL/Programs/ex4_pr2.pl compiled 0.00 sec, 6 clauses
?- food(pizza).
true.

?- meal(X), lunch(X).
X = sandwich .

?- dinner(sandwich).
false.

?- meal(X), dinner(X).
X = pizza.

?- meal(WHAT).
WHAT = burger ;
WHAT = sandwich ;
WHAT = pizza.

?- meal(X),dinner(Y).
X = burger,
Y = pizza ;
X = sandwich,
Y = pizza ;
X = Y, Y = pizza.

?- lunch(X), dinner(Y).
X = sandwich,
Y = pizza.

?- |
```

EXAMPLE 5 :

```
ex1_pr2.pl  ex2_pr2.pl  ex3_pr2.pl  ex4_pr2.txt  ex5_pr2.pl
File Edit View

studies(charlie, csc135).
studies(olivia, csc135).
studies(jack, csc131).
studies(arthur, csc134).

teaches(kirke, csc135).
teaches(collins, csc131).
teaches(collins, csc171).
teaches(juniper, csc134).

professor(X,Y) :- teaches(X, C), studies(Y, C).
```

QUERY :

```
SWI-Prolog (AMD64, Multi-threaded, version 9.2.7)
File Edit Settings Run Debug Help
% c:/AI LAB PRACTICAL/Programs/ex5_pr2.pl compiled 0.00 sec, 9 clauses
?- studies(charlie, What).
What = csc135.

?- professor(kirke, Studens).
Studens = charlie ;
Studens = olivia.

?- studies(Who, csc135).
Who = charlie ;
Who = olivia.

?- professor(kirke, Students).
Students = charlie ;
Students = olivia.

?- |
```