

AI Lab Assignment03

Problem Statement: *Downloading and using PRolog (KB1 to KB5)*

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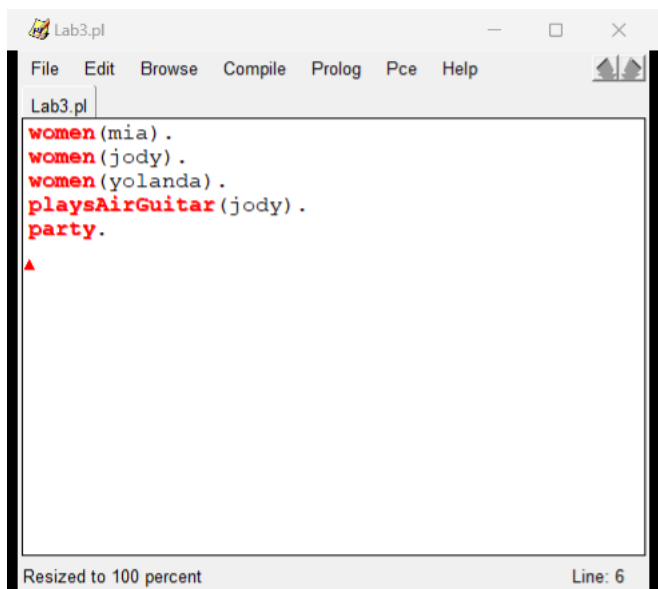
ROLLNO: **29**

CLASS: TY(IT)

BATCH: **02**

Knowledge Base 1

```
women(mia).  
women(jody).  
women(yolanda).  
playsAirGuitar(jody).  
party.
```

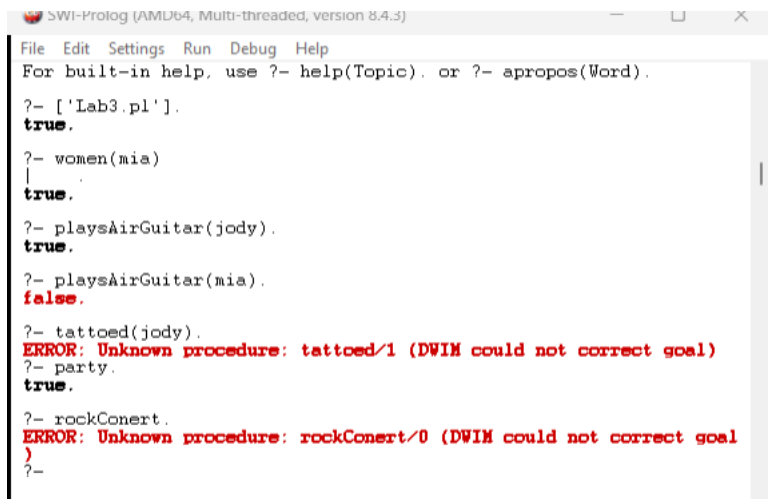


The screenshot shows a Prolog editor window titled 'Lab3.pl'. The menu bar includes 'File', 'Edit', 'Browse', 'Compile', 'Prolog', 'Pce', and 'Help'. The code area contains the following Prolog facts:

```
women(mia).  
women(jody).  
women(yolanda).  
playsAirGuitar(jody).  
party.
```

The status bar at the bottom indicates 'Resized to 100 percent' and 'Line: 6'.

OUTPUT After Running Queries:

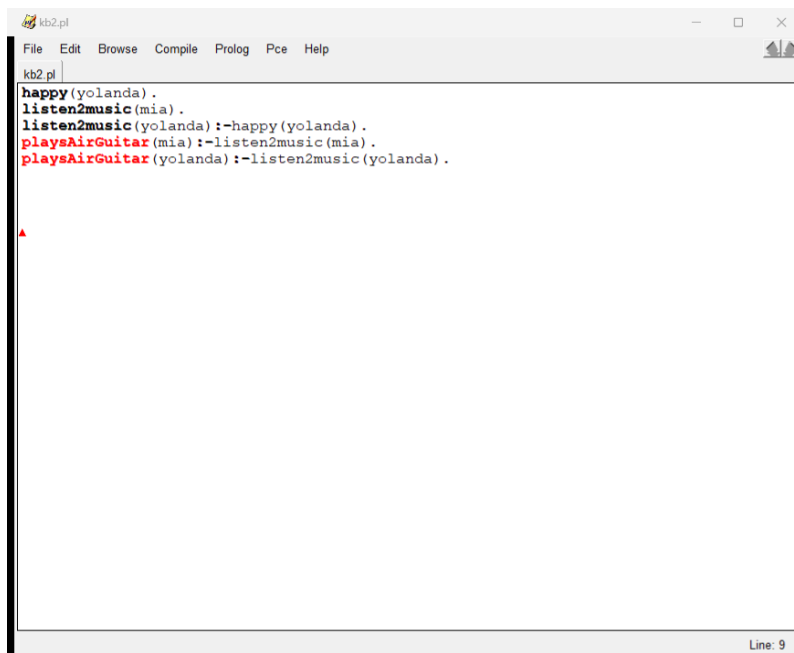


The screenshot shows a SWI-Prolog interpreter window titled 'SWI-Prolog (AMD64, Multi-threaded, version 8.4.3)'. The menu bar includes 'File', 'Edit', 'Settings', 'Run', 'Debug', and 'Help'. The output of several queries is displayed:

```
For built-in help, use ?- help(Topic). or ?- apropos(Word).  
?- ['Lab3.pl'].  
true.  
?- women(mia).  
true.  
?- playsAirGuitar(jody).  
true.  
?- playsAirGuitar(mia).  
false.  
?- tattooed(jody).  
ERROR: Unknown procedure: tattooed/1 (DWIM could not correct goal)  
?- party.  
true.  
?- rockConert.  
ERROR: Unknown procedure: rockConert/0 (DWIM could not correct goal)  
}  
?-
```

Knowledge Base 2

```
happy(yolanda).  
listen2music(mia).  
listen2music(yolanda):-happy(yolanda).  
playsAirGuitar(mia):-listen2music(mia).  
playsAirGuitar(yolanda):-listen2music(yolanda).
```

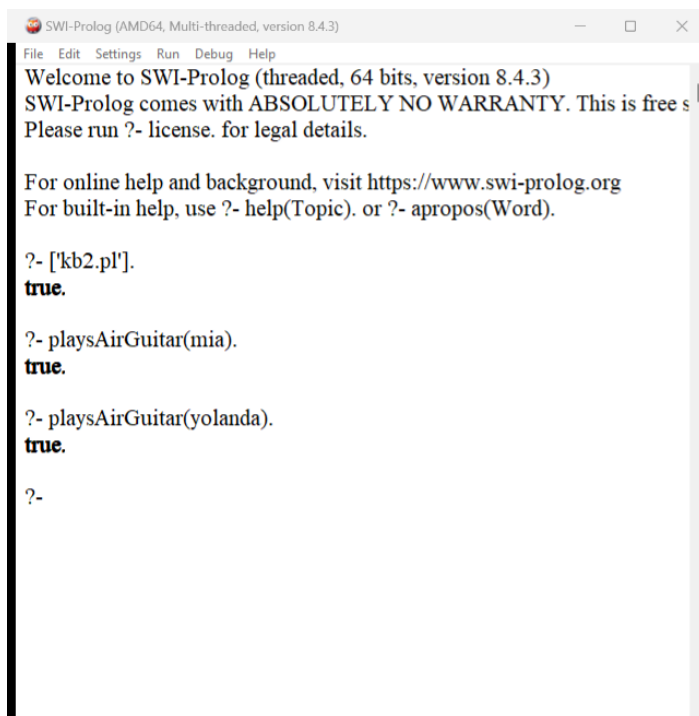


A screenshot of a Prolog IDE window titled 'kb2.pl'. The window has a menu bar with 'File', 'Edit', 'Browse', 'Compile', 'Prolog', 'Pce', and 'Help'. The main text area contains the following Prolog code:

```
happy(yolanda).  
listen2music(mia).  
listen2music(yolanda):-happy(yolanda).  
playsAirGuitar(mia):-listen2music(mia).  
playsAirGuitar(yolanda):-listen2music(yolanda).
```

The status bar at the bottom right indicates 'Line: 9'.

OUTPUT After Running Queries:

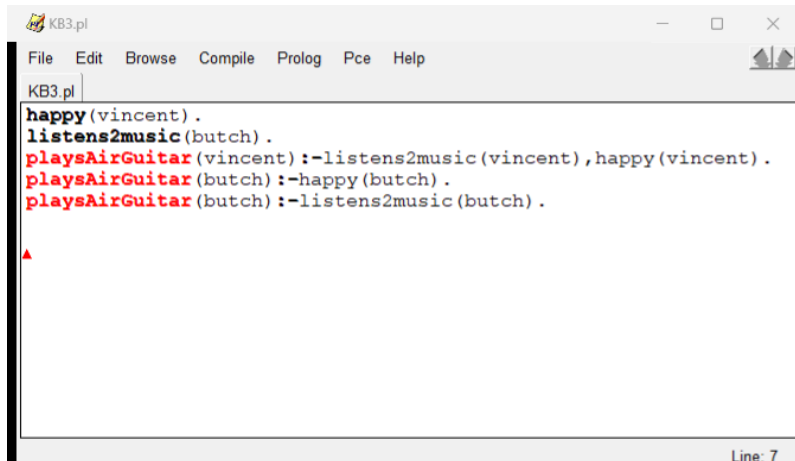


A screenshot of the SWI-Prolog console window titled 'SWI-Prolog (AMD64, Multi-threaded, version 8.4.3)'. The window has a menu bar with 'File', 'Edit', 'Settings', 'Run', 'Debug', and 'Help'. The console displays the following text:

```
Welcome to SWI-Prolog (threaded, 64 bits, version 8.4.3)  
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free s  
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).  
  
?- ['kb2.pl'].  
true.  
  
?- playsAirGuitar(mia).  
true.  
  
?- playsAirGuitar(yolanda).  
true.  
  
?-
```

Knowledge Base 3

```
happy(vincent).  
listens2music(butch).  
playsAirGuitar(vincent):-listens2music(vincent),happy(vincent).  
playsAirGuitar(butch):-happy(butch).  
playsAirGuitar(butch):-listens2music(butch).
```

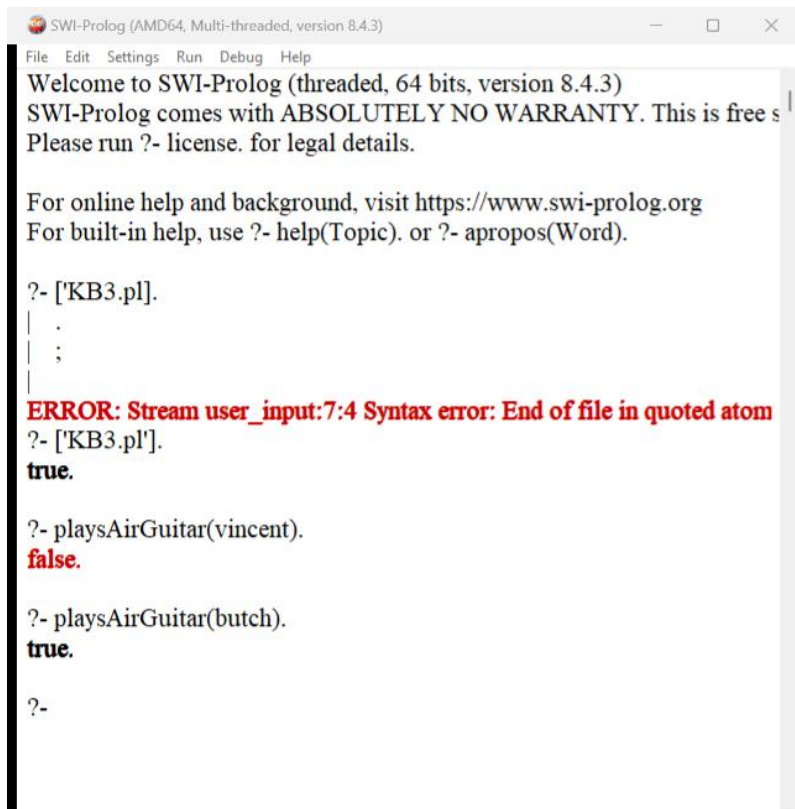


The screenshot shows a Prolog editor window titled 'KB3.pl'. The menu bar includes 'File', 'Edit', 'Browse', 'Compile', 'Prolog', 'Pce', and 'Help'. The code area contains the following rules:

```
happy(vincent).  
listens2music(butch).  
playsAirGuitar(vincent):-listens2music(vincent),happy(vincent).  
playsAirGuitar(butch):-happy(butch).  
playsAirGuitar(butch):-listens2music(butch).
```

The status bar at the bottom right indicates 'Line: 7'.

OUTPUT After Running Queries:

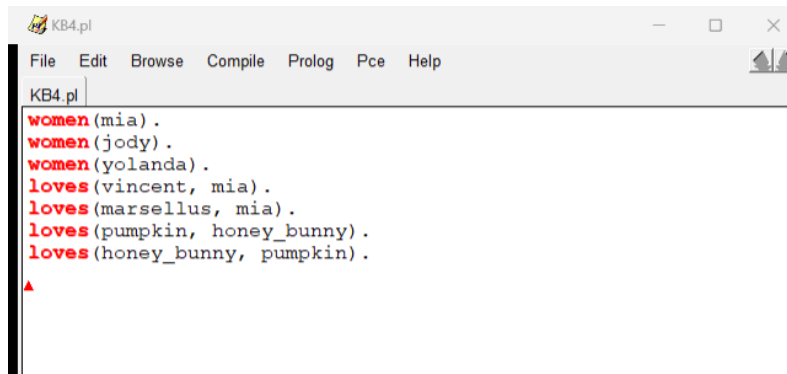


The screenshot shows the SWI-Prolog console window. The title bar reads 'SWI-Prolog (AMD64, Multi-threaded, version 8.4.3)'. The menu bar includes 'File', 'Edit', 'Settings', 'Run', 'Debug', and 'Help'. The console output is as follows:

```
Welcome to SWI-Prolog (threaded, 64 bits, version 8.4.3)  
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free s  
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).  
  
?- ['KB3.pl'].  
| .  
| ;  
|  
ERROR: Stream user_input:7:4 Syntax error: End of file in quoted atom  
?- ['KB3.pl'].  
true.  
  
?- playsAirGuitar(vincent).  
false.  
  
?- playsAirGuitar(butch).  
true.  
  
?-
```

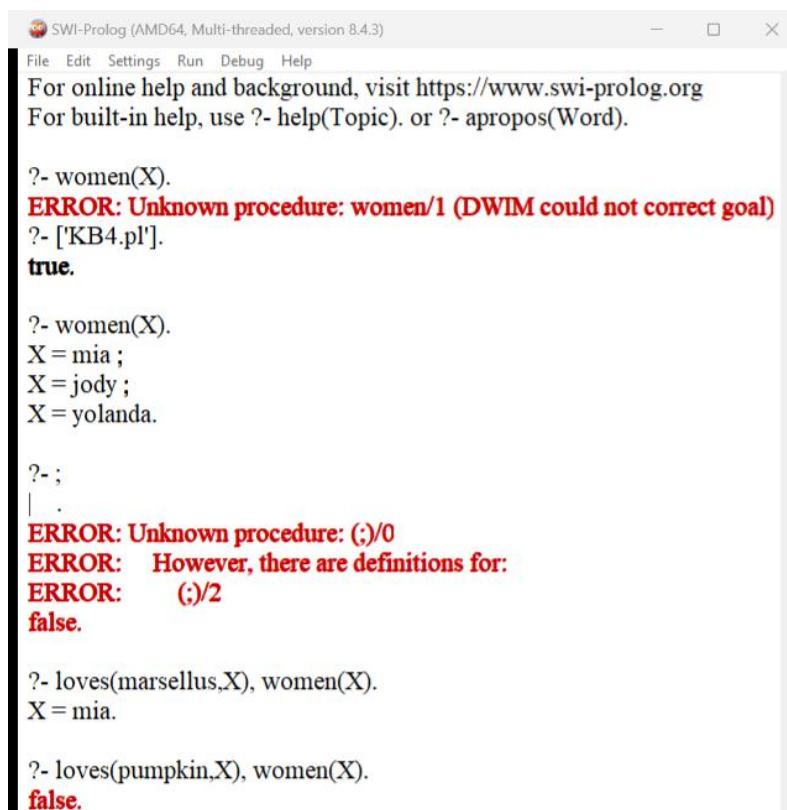
Knowledge Base 4

```
women(mia).
women(jody).
women(yolanda).
loves(vincent, mia).
loves(marsellus, mia).
loves(pumpkin, honey_bunny).
loves(honey_bunny, pumpkin).
```



```
KB4.pl
File Edit Browse Compile Prolog Pce Help
women(mia).
women(jody).
women(yolanda).
loves(vincent, mia).
loves(marsellus, mia).
loves(pumpkin, honey_bunny).
loves(honey_bunny, pumpkin).
```

OUTPUT After Running Queries:



```
SWI-Prolog (AMD64, Multi-threaded, version 8.4.3)
File Edit Settings Run Debug Help
For online help and background, visit https://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

?- women(X).
ERROR: Unknown procedure: women/1 (DWIM could not correct goal)
?- ['KB4.pl'].
true.

?- women(X).
X = mia ;
X = jody ;
X = yolanda.

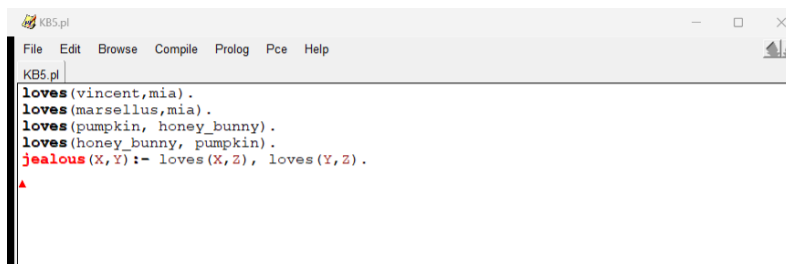
?- ;
| .
ERROR: Unknown procedure: (;)/0
ERROR: However, there are definitions for:
ERROR:      (;)/2
false.

?- loves(marsellus,X), women(X).
X = mia.

?- loves(pumpkin,X), women(X).
false.
```

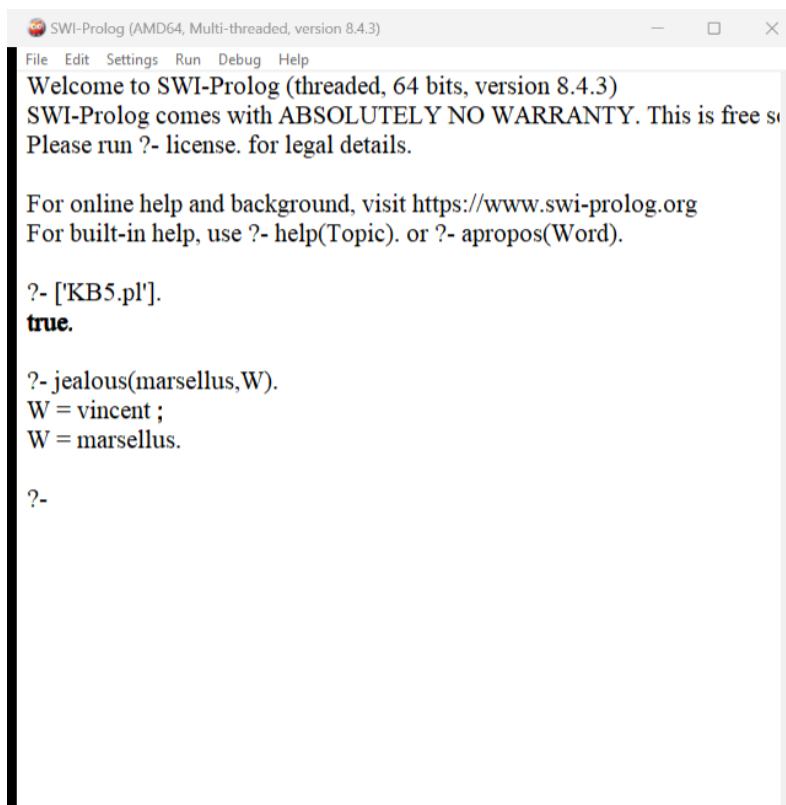
Knowledge Base 5

```
loves(vincent,mia).
loves(marsellus,mia).
loves(pumpkin, honey_bunny).
loves(honey_bunny, pumpkin).
jealous(X,Y):- loves(X,Z), loves(Y,Z).
```

A screenshot of a Prolog editor window titled 'KB5.pl'. The window has a menu bar with 'File', 'Edit', 'Browse', 'Compile', 'Prolog', 'Pce', and 'Help'. The code from the previous block is pasted into the editor, with the 'jealous' rule highlighted in red. A red cursor is at the end of the last line.

```
KB5.pl
loves(vincent,mia).
loves(marsellus,mia).
loves(pumpkin, honey_bunny).
loves(honey_bunny, pumpkin).
jealous(X,Y):- loves(X,Z), loves(Y,Z).
```

OUTPUT After Running Queries:

A screenshot of the SWI-Prolog REPL window. It shows the welcome message and the results of three queries: loading the file, a general query, and a specific query.

```
SWI-Prolog (AMD64, Multi-threaded, version 8.4.3)
File Edit Settings Run Debug Help
Welcome to SWI-Prolog (threaded, 64 bits, version 8.4.3)
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).

?- ['KB5.pl'].
true.

?- jealous(marsellus,W).
W = vincent ;
W = marsellus.

?-
```