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## **Assignment 5**

**This code was run in a Linux environment.**

Instructions to run the code:

### **Question 1:**

**\$ swipl -s Q1.pl**

This will start SWI-Prolog. Square root function can be called as

**?- squareroot( X, result, accuracy).**

X is the number whose square root has to be found, the result is the square root value which is initialised as X/2, and accuracy is used where  $| \text{result} * \text{result} - X | < \text{accuracy}$ .

A screenshot of sample testing is shown in the below screenshot:

```
ask@ask:~/Desktop$ cd 180101037/
ask@ask:~/Desktop/180101037$ swipl -s Q1.pl
Welcome to SWI-Prolog (threaded, 64 bits, version 7.6.4)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
Please run ?- license. for legal details.

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

?- squareroot( 45, 22.5, 0.000001).
Square root of the number is 6.708203971385956
true.

?- 
```

## Question 2:

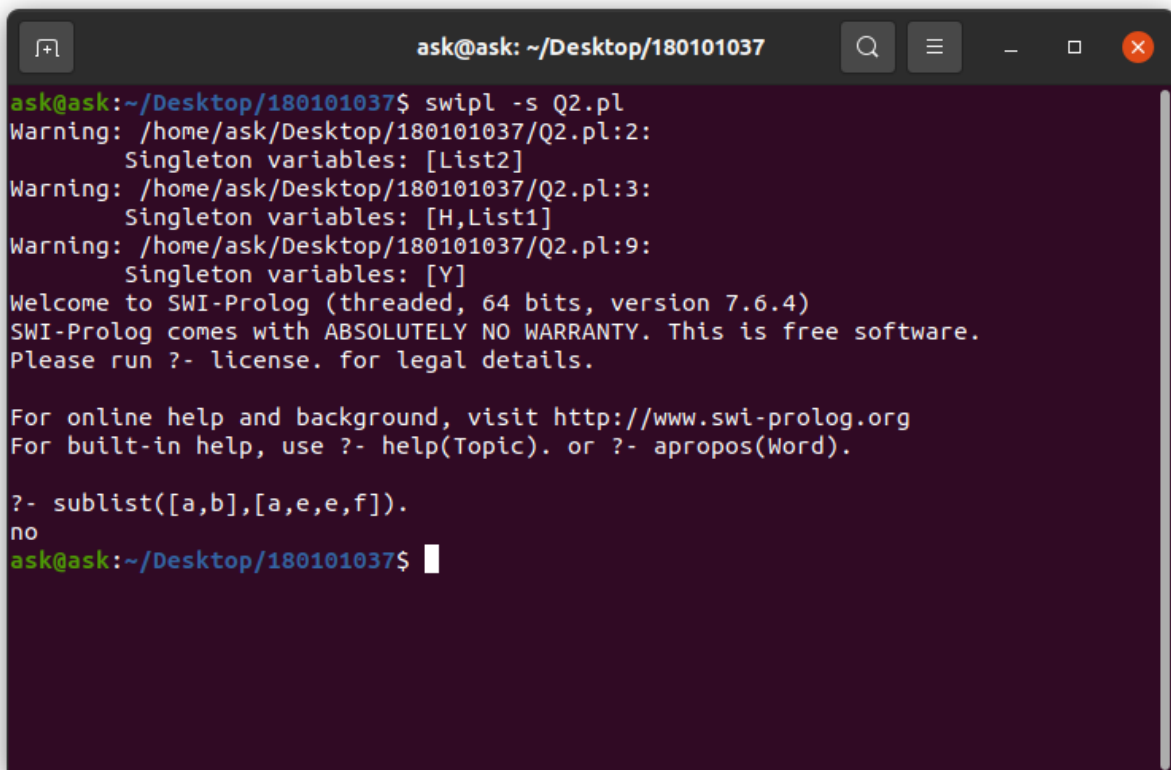
**\$ swipl -s Q2.pl**

This will start SWI-Prolog. Sublist function can be called as

**?- sublist( list1, list2 ).**

List1 and list2 are the input lists where this program checks if list1 is the sublist of list2 or not.

A screenshot of sample testing is shown in the below screenshot:



```
ask@ask: ~/Desktop/180101037
ask@ask:~/Desktop/180101037$ swipl -s Q2.pl
Warning: /home/ask/Desktop/180101037/Q2.pl:2:
Singleton variables: [List2]
Warning: /home/ask/Desktop/180101037/Q2.pl:3:
Singleton variables: [H,List1]
Warning: /home/ask/Desktop/180101037/Q2.pl:9:
Singleton variables: [Y]
Welcome to SWI-Prolog (threaded, 64 bits, version 7.6.4)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
Please run ?- license. for legal details.

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

?- sublist([a,b],[a,e,e,f]).
no
ask@ask:~/Desktop/180101037$
```