

**School of Computer Science and Engineering**

**CZ3005 - Artificial Intelligence**

Lab 2 TSP4

Done By:

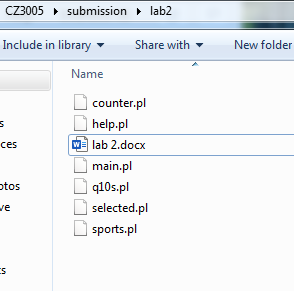
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Setup:

1. Add all files, “counter.pl, help.pl, main.pl, q10s.pl, selected.pl and sports.pl”, to a folder.

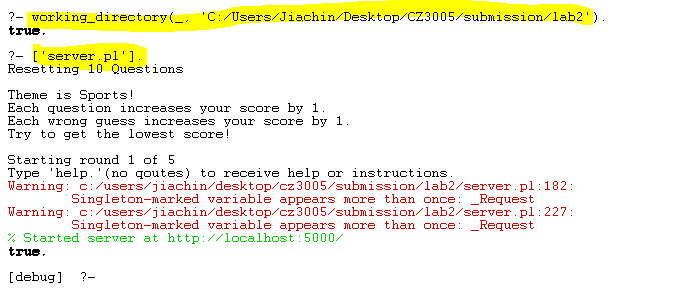


Files inside lab2 folder

1. Inside Prolog, change working directory to folder.

**Using WebGUI**

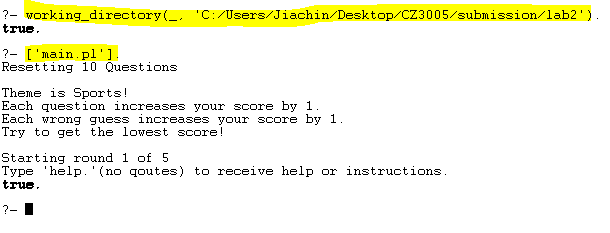
1. Inside Prolog, type “[‘server.pl’].”
2. Open <http://localhost:5000/> on your browser. Refer to Appendix A below to see a screenshot of web GUI.



Loading server.pl

**Using Prolog CMD line**

1. Inside Prolog, type “[‘main.pl’].”

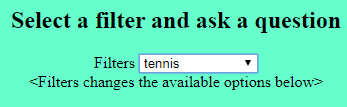


Loading main.pl

How to play (Web GUI):

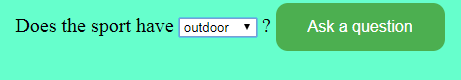
**Asking a question**

1. Select a filter. It shows what are the attributes of each sport and filters the questions you can ask. Refer to step 2 below.



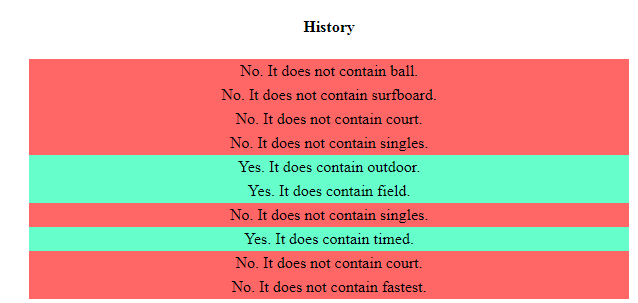
Select a filter

1. Choose a question to ask. Options are determined by the filter you select above. For example, outdoor is an attribute of tennis, so it appears in the question.



Select a question

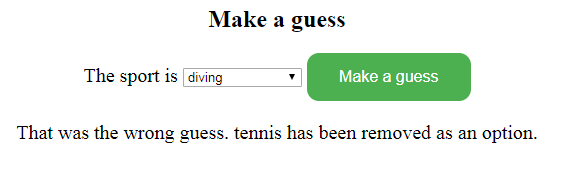
1. Your results will be shown in the history table.



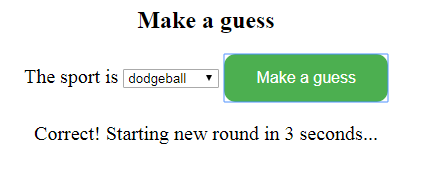
History table

**Making a guess**

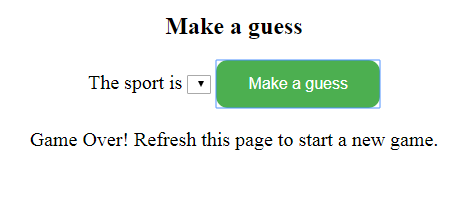
1. Choose a sport and make a guess. Wrong guesses are automatically removed. Refer to below.



Wrong Guess



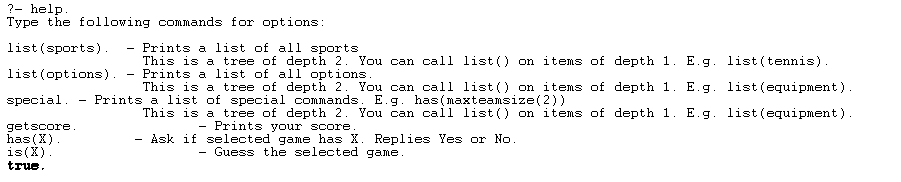
Correct Guess



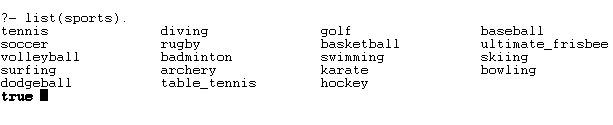
Game over <5 rounds are complete>

How to play (Using Prolog CMD line):

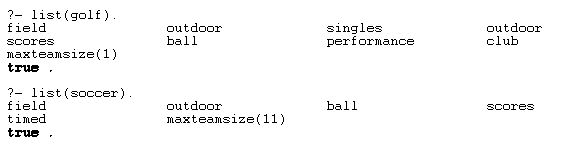
1. Type “help.” to see available commands.



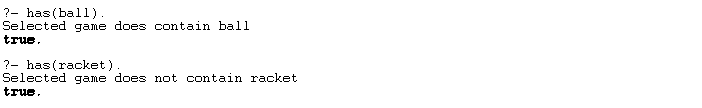
* 1. Type “list(sports).” To see a list of sports.



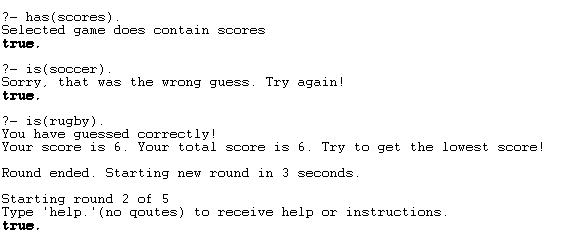
* 1. Type “list(soccer)” to see the contents of soccer.



1. Use “has(myquestion).” to ask a question.



1. Use “is(myguess).” to guess the answer.



How it works:

Counters

Since prolog is a declarative language, it does not have variables. Instead, counters must be implemented in a declarative way. Counters was implemented by declaring counters as 1 initially. Every time increment is called, the following happens:

1. The current value of counter is incremented by 1
2. Retract previous declaration that counter equals <old value>
3. Declare counter as <new value>

This repeats each time increment is called. The other counters such as rounds and scores are implemented the same way.

Has()

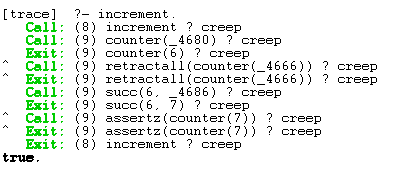
Has(X) was implemented by comparing X with every item in the selected sport. If X matches an item, it will return true. This is done in Prolog by recursively checking every item in a list in sequence. If the end of the list is reached without finding a match, it returns false.

Is()

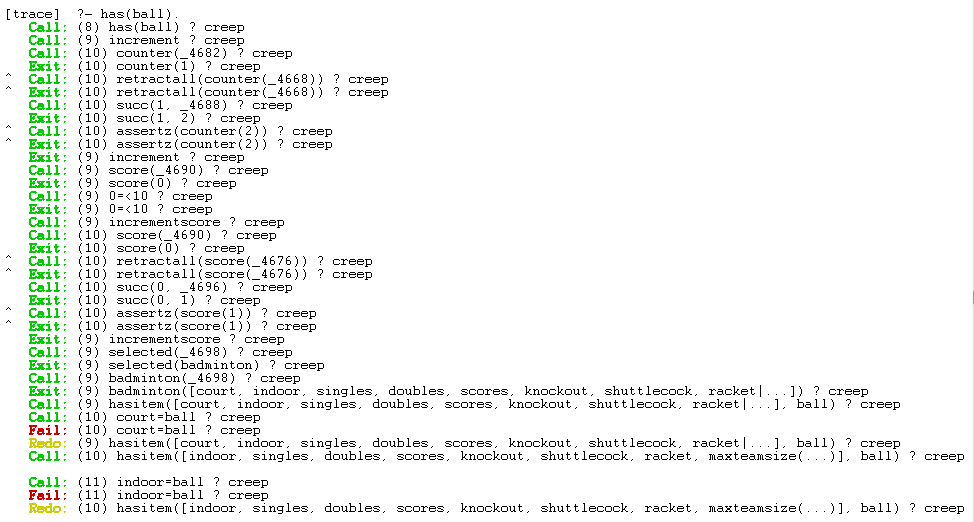
Is(X) was implemented by comparing X with the selected game. If they are the same, return true.

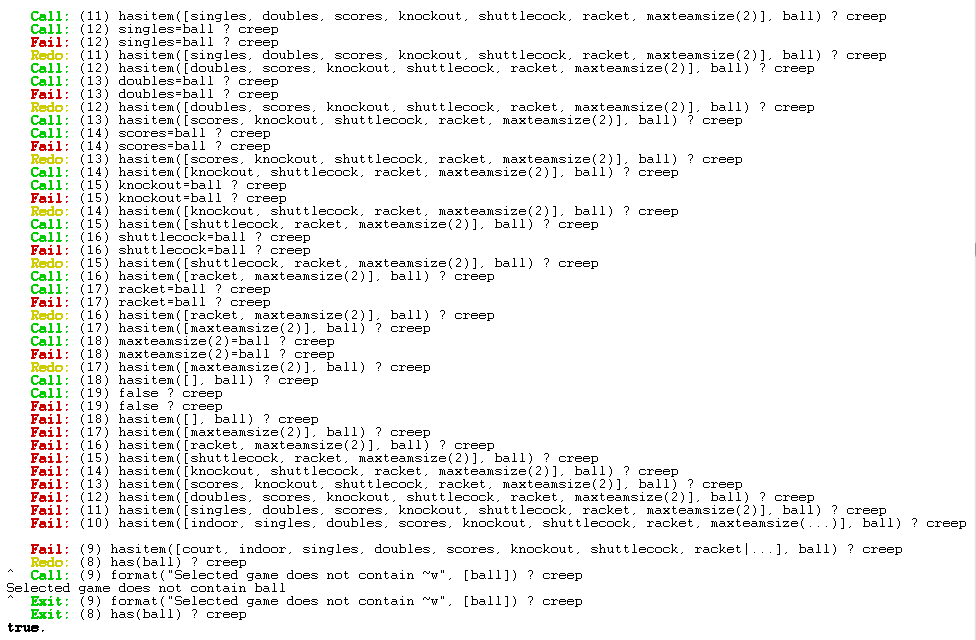
Traces:

Counter()

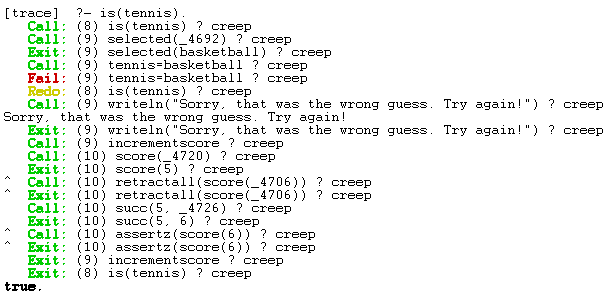


Has()

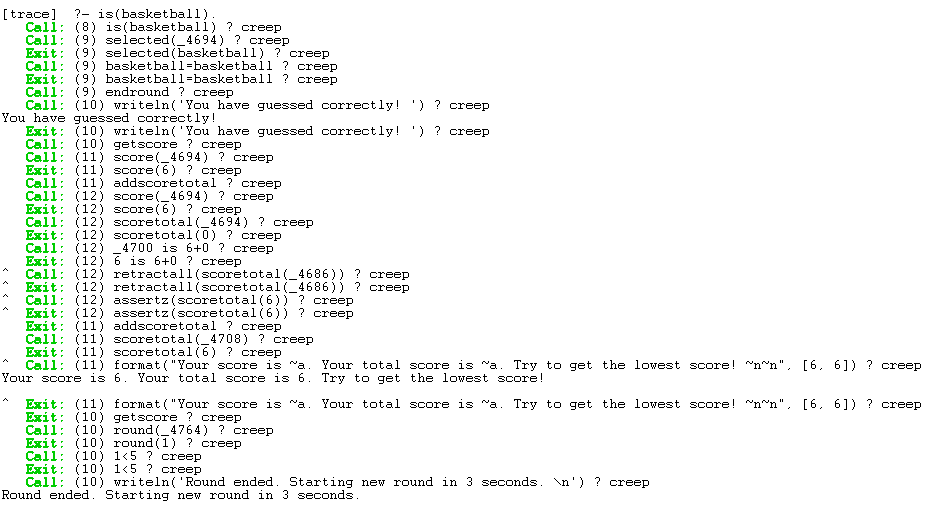




Is()

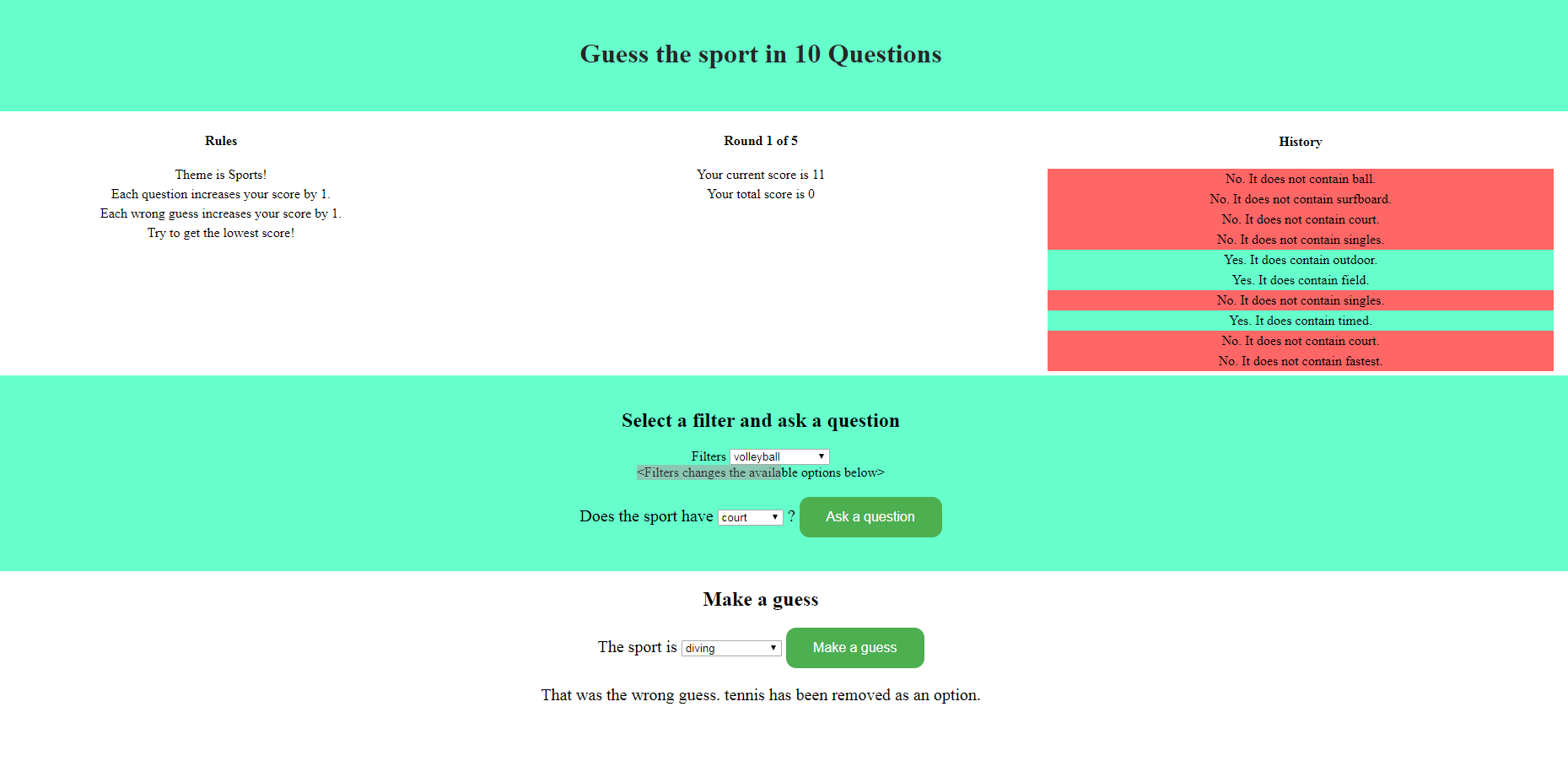


Failed Is()



Successful is()

Appendix:



Web GUI