

GTU Department of Computer Engineering
CSE341 - Fall 2020
Homework 5(Midterm) Report

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1) Parts or properties you have implemented and you did not implemented.

In this homework I implemented everything.

2) Assumptions about the parts you have implemented. Ambiguities and how you handled them.

I said I implemented everything by looking at the example but query types is not clear in homework pdf.

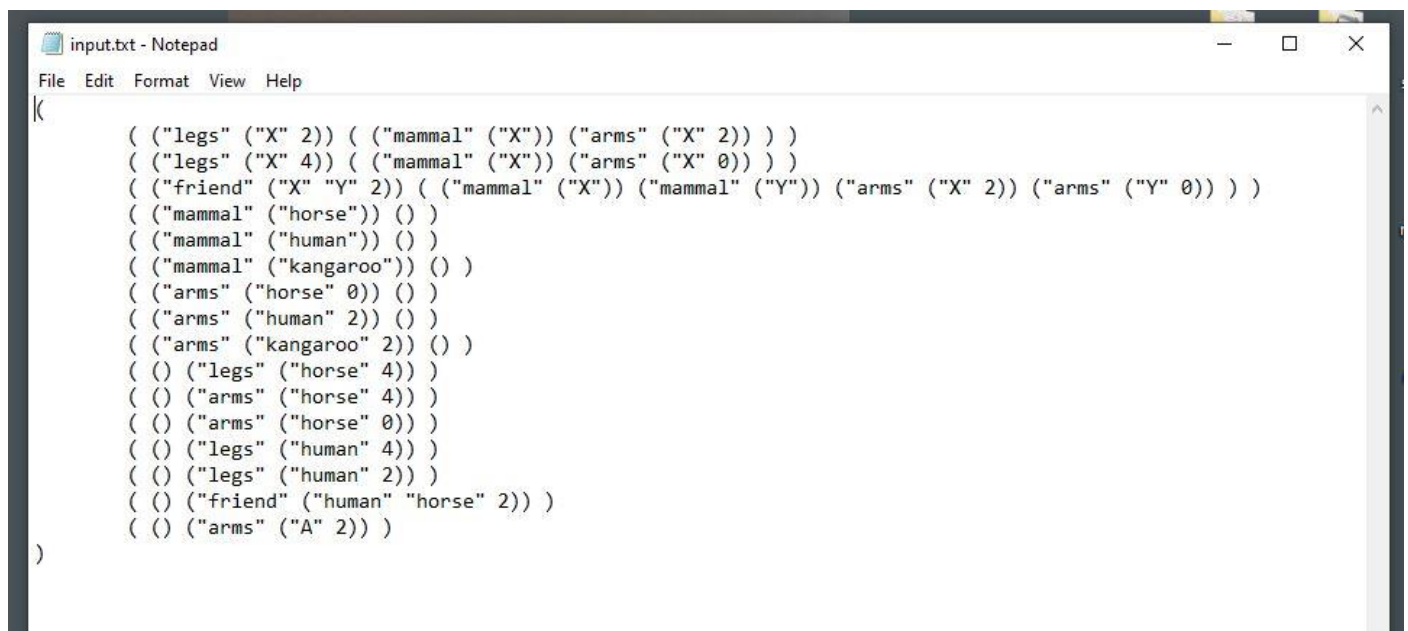
Simply What I did?

- 1) If query don't have a variable(starting with capital letters) the result will be found anyway as true or false.
- 2) If query have a variable(starting with capital letters) only fact results will be found predicate results will be ignored.

Note that while evaluating queries I used **resolution and unification methods** in my algorithm.

Test Results

input.txt



```
(
  ( ("legs" ("X" 2)) ( ("mammal" ("X")) ("arms" ("X" 2)) ) )
  ( ("legs" ("X" 4)) ( ("mammal" ("X")) ("arms" ("X" 0)) ) )
  ( ("friend" ("X" "Y" 2)) ( ("mammal" ("X")) ("mammal" ("Y")) ("arms" ("X" 2)) ("arms" ("Y" 0)) ) )
  ( ("mammal" ("horse")) () )
  ( ("mammal" ("human")) () )
  ( ("mammal" ("kangaroo")) () )
  ( ("arms" ("horse" 0)) () )
  ( ("arms" ("human" 2)) () )
  ( ("arms" ("kangaroo" 2)) () )
  ( () ("legs" ("horse" 4)) )
  ( () ("arms" ("horse" 4)) )
  ( () ("arms" ("horse" 0)) )
  ( () ("legs" ("human" 4)) )
  ( () ("legs" ("human" 2)) )
  ( () ("friend" ("human" "horse" 2)) )
  ( () ("arms" ("A" 2)) )
)
```

*As you see there are 7 queries in input file.

*Also in input.txt, string elements must be encapsulated with double-quote(" ") not these ones(“”).

output.txt



```
output.txt - Notepad
File Edit Format View Help
|-----Query: ?-legs(horse 4).-----
(true)
-----Query: ?-arms(horse 4).-----
()
-----Query: ?-arms(horse 0).-----
(true)
-----Query: ?-legs(human 4).-----
()
-----Query: ?-legs(human 2).-----
(true)
-----Query: ?-friend(human horse 2).-----
(true)
-----Query: ?-arms(A 2).-----
(kangaroo human)
```