Read and Write in Prolog

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write(term) and read(term)

- Predicate write(term) causes a term to be written to the current output stream (the monitor screen by default)
- If term is uninstantiated, an underscore followed by a number unique to the variable will be output, eg, _64
- Predicate read(term) is used to read a term from the current input stream (the keyboard by default)

Read(term)

- The built in predicate read is used for reading terms from the current input stream.
- The goal read(X) will cause the next term ,T, to be read which match with X.
- If X is a variable then X will be instantiated to T.
- If matching does not succed then the goal read(X) fails.
- The predicate read is deterministic .

Write(term)

- The built in predicate write is used for output terms.
- The goal write(X) will cause the term X to output on the current output file.
- X will be output in the same standard syntactic form in which prolog normally displays values of variables .
- A useful feature of prolog is that the write procedure ‘knows’ to display any term.

Additional built – in predicates

- tab(N).
  - This goal causes N spaces to be output
- nl.
  - This goal causes the start of a new line at output.

task

- ?- write(likes(mary, pizza)).
- ?- write(23).
- ?- write('apple').
- ?- write("apple").
- [97, 112, 112, 108, 101]

Make a facts to test goal

- Goal
- likes(simona,X),liked(bibek,Y),write(X),write(Y).

Read task

- ?read(X).
  - 23
- ?read(X).
  - Ram.
- ?read(X).
  - likes(ram, biscuits).

task

- read(jane).
  - Bob.
- read(likes(jane, pizza)).
  - likes(jane, pizza)
- read(likes(jane, X)).
  - likes(jane, pizza).

Tab and nl

- write(hi), tab(1), write(there),nl
- write(hi), tab(15), write(there),nl.

Put

- writes the character C on the current output stream
- For example,
- ?- put(C).
- ?- put('f'), put('i'), put('d'), put('o'), nl.
- ?- put(102), put(105), put(100), put(111), nl

Get and getbyte

- read a single character from the current input stream use get_byte(C), where C is a variable.
- The result is in the form of an integer character code in the range 0 to 255.
- ?- get_byte(C)
- |: abcde
- C = 97

- Facts
- read_a_char(C) :-
- write('Type: '), flush_output,
- get_byte(C).
- Goals
- ?- read_a_char(X).
- Type: +
- X = 43

Read and write to cube example

- Facts.
  - cube(N ,C) :- C is N*N*N.
- ?-cube(2 ,X).
- ?cube(5,Y).
- How to take input from user ?

- Facts
- cube :- read(X), process(X).
- process (stop):-!.
- process(N) :- c is N * N* N, write(c),cube.

- Goal
- Cube.

- Facts
- cube :-
- write('next item,please:'),
- read(X), process(X).
- process (stop):-!.
- process(N) :- c is N * N* N,
- write('Cube of'),write(N),write('is),
- write(c), nl,
- cube.

Writing a list

- Facts.
  - writelist([]).
  - writelist([X | L]):-write(X),nl,writelist(L).
- Goals
  - writelist([1,2,3,4,5].

I/O in Prolog

- position('Spielberg', director).
- position('Allen', manager).
- position('Lee', supervisor).
- find_position:- write('Whose position do you wish to know?'),
- read(Input),
- position(Input, Output),
- write('The position of '),
- write(Input),
- write(' is '),
- write(Output),
- write('.').

Goal

- ?.find_position.

Assignment

- Enter the two numbers from the user and find the greatest among them
- Write the output of
  - put(65).
  - put(66).
  - put(67).
  - get0(c)
- Suppose Ashim is Cr of classs, Sachin is programmer , Prabina is librarian and john is hacker write a prolog program to find their speciality,

- Write a prolog program to find the position of the corresponding DWIT staff name.
- Write a prolog program to write a list of list program [hint[[a,b,c],[d,e.f]]]