Institute of Computer Technology
B. Tech Computer Science and Engineering
Sub: Artificial Intelligence (2CSE60E14)

PRACTICAL 6: STUDY MATERIAL RECOMMENDER SYSTEM

Quick Tutorial on Prolog -
https://www.dai.ed.ac.uk/groups/ssp/bookpages/quickprolog/quickprolog.html

List in Prolog

list is referred by the notation [A | B] in which, A is the first element, and whose tail is B.
For example, consider the following.
[first,second,third] = [A|B].
where A = first and B=[second,third]

Try Now:

Consider the following fact.
p([H|T], H, T).

Queries - p([a,b,c], X, Y).
p([a], X, Y).

List Searching

member(2, [1, 2, 3]).

Comparison Operator

Operator	Meaning
X > Y	X is greater than Y
X < Y	X is less than Y
X >= Y	X is greater than or equal to Y
X =< Y	X is less than or equal to Y
X =:= Y	the X and Y values are equal
X =\= Y	the X and Y values are not equal

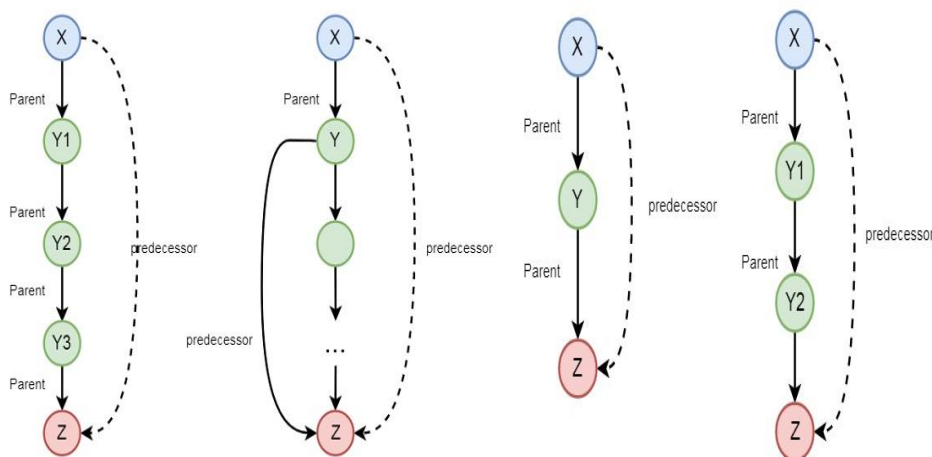**Loop**

count_to_10(10) :- write(10),nl.
count_to_10(X) :- write(X),nl,Y is X + 1,count_to_10(Y).
%count_to_10(X) :- write(X),nl,Y is X + 1,count_to_10(Y),count_to_10(10),write(10),nl.

Recursion

predecessor(X, Z) :- parent(X, Z).
predecessor(X, Z) :- parent(X, Y),predecessor(Y, Z).

read() Predicate

The read() predicate is used to read from console
cube :- write('Write a number: '),read(Number),process(Number).

process(stop) :- !.
process(Number) :- C is Number * Number * Number,write('Cube of'), write(Number), write(': '), write(C),nl, cube.

File Commands

tell,told,see,seen

Create a reading material recommendation system. Ask the user what he/she would like to learn and based on that recommended material. Do not create a hard-coded system. Create at least 3 rules.

Code:

%M: material
%S: subject
%L: level
%T: type

suggest :- write('Subject? '),read(S),write('Level? '),read(L),write('Type? '),read(T), material(M,S,L,T),write(M).

material('https://www.youtube.com/watch?v=4VROUIAF2Do', S, L, T):- S = ai, L=beginner, T=watching,!.
material('https://www.javatpoint.com/turing-test-in-ai', S, L, T):- S = ai, L=beginner, T=reading,!.
material('https://www.youtube.com/watch?v=U-yq3l9QugQ', S, L, T):- S = ai, L=intermediate, T=watching,!.

material('https://medium.com/analytics-vidhya/learn-prolog-language-by-creating-an-expert-system-d46a811c58e8', S, L, T):- S = ai, L=intermediate, T=reading,!.
material('https://www.youtube.com/watch?v=AWvsXxDtEkU', S, L, T):- S = ai, L=pro, T=watching,!.
material('https://www.cleveroad.com/blog/how-to-create-virtual-assistant-apps-like-siri-and-google-assistant#:~:text=How%20to%20make%20a%20virtual,like%20Wit.ai%20or%20Jasper.', S, L, T):- S = ai, L=pro, T=reading,!.

material('https://www.youtube.com/watch?v=goSc2LNxnil', S, L, T):- S = pm, L=beginner, T=watching,!.
material('https://www.actian.com/blog/the-six-steps-essential-for-data-preparation-and-analysis/', S, L, T):- S = pm, L=beginner, T=reading,!.
material('https://www.youtube.com/watch?v=gajUDdlBX3w', S, L, T):- S = pm, L=intermediate, T=watching,!.
material('https://en.wikipedia.org/wiki/Model_selection#:~:text=Model%20selection%20is%20the%20task,the%20problem%20of%20model%20selection.', S, L, T):- S = pm, L=intermediate, T=reading,!.
material('https://www.youtube.com/watch?v=dGkdOREAlpg', S, L, T):- S = pm, L=pro, T=watching,!.
material('https://link.springer.com/referenceworkentry/10.1007/978-1-4419-9863-7_233', S, L, T):- S = pm, L=pro, T=reading,!.

Output: