Artificial Intelligence

**Practical - 6: Write a PROLOG program on lists i. To find whether given element is a member of list**

**ii. Inserting an element at a) beginning b) end c) desired position**

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**CODE:**

**%is present in list**

**list\_member(X,[X|\_]):-!.**

**list\_member(X,[\_|T]):-list\_member(X,T).**

**%find length**

**list\_length([],0):-!.**

**list\_length([\_|T],N):-list\_length(T,N1), N is N1+1.**

**%concatenate two lists**

**list\_concat([],L,L):-!.**

**list\_concat([X1|L1],L2,[X1|L3]):-list\_concat(L1,L2,L3).**

**%delete an element from list**

**list\_delete(X,[X|L1],L1):-!.**

**list\_delete(X,[Y|L2],[Y|L1]):-list\_delete(X,L2,L1).**

**%insert at the begining**

**insert\_start(X,T,[X|T]).**

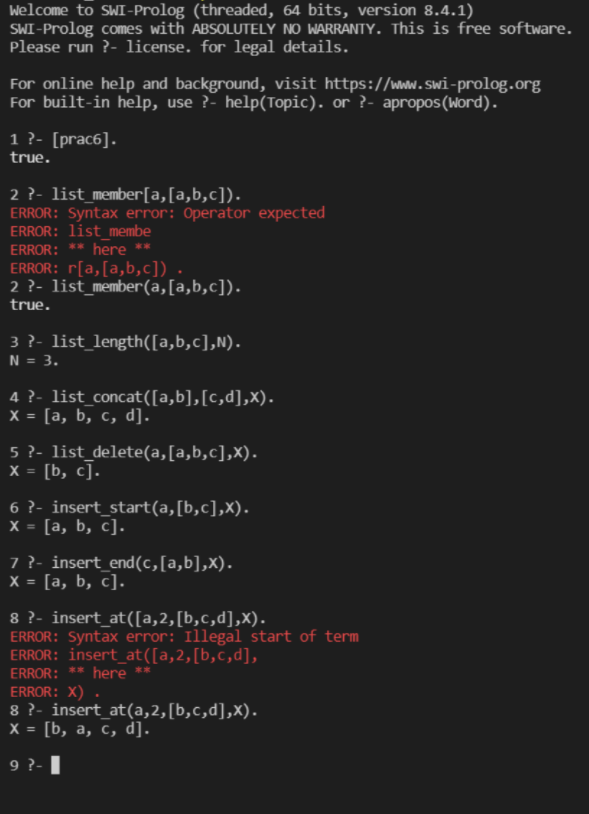
**%insert at the end**

**insert\_end(X,T,L):-list\_concat(T,[X],L).**

**%incser at position**

**insert\_at(X,1,L,[X|L]):-!.**

**insert\_at(X,P,[Y|L],[Y|L1]):- P1 is P-1,insert\_at(X,P1,L,L1).**

**Input and Output: **