EX.NO: 6 **DATE: 27 - 09 -2024**

INTRODUCTION TO PROLOG

AIM:

To learn PROLOG terminologies and write basic programs.

TERMINOLOGIES:

1. Atomic Terms:

   Atomic terms are usually strings made up of lower- and uppercase letters, digits, and the underscore, starting with alowercase letter.

   Ex:

   dog
   ab_c_321

2. Variables:

   Variables are strings of letters, digits, and the underscore,starting with a capital letter or an underscore.

   Ex:

   Dog
   Apple_420

3. Compound Terms:

   Compound terms are made up of a PROLOG atom and a number of arguments (PROLOG terms, i.e., atoms, numbers, variables, or other compound terms) enclosed in parentheses and separated by commas.

   Ex:

   is_bigger(elephant,X)
   f(g(X,_),7)

4. Facts:

   A fact is a predicate followed by a dot.

   Ex:

   bigger_animal(whale).
   life_is_beautiful.

5. Rules:

   A rule consists of a head (a predicate) and a body (a sequenceof predicates separated by commas).

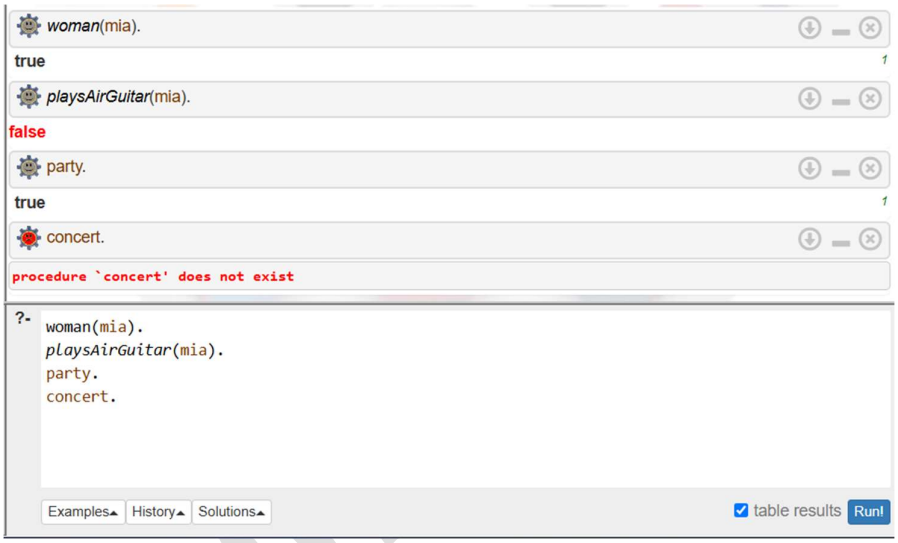
   Ex:

   is_smaller(X,Y):-is_bigger(Y,X).
   aunt(Aunt,Child):-sister(Aunt,Parent),parent(Parent,Child).

SOURCE CODE:

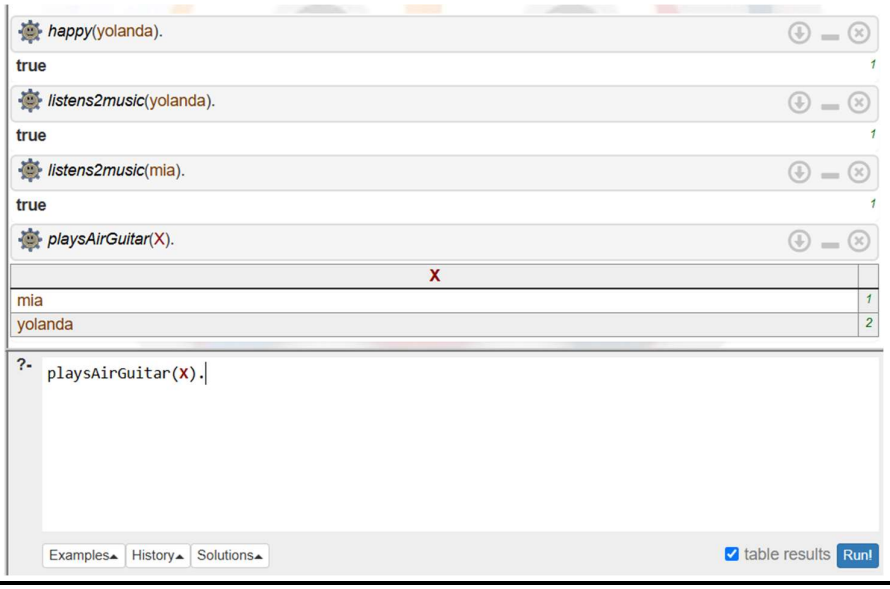
KB1:

woman(mia).
woman(jody).
woman(yolanda).
playsAirGuitar(jody).
party.
Query 1: ?-woman(mia).
Query 2: ?-playsAirGuitar(mia).
Query 3: ?-party.
Query 4: ?-concert.



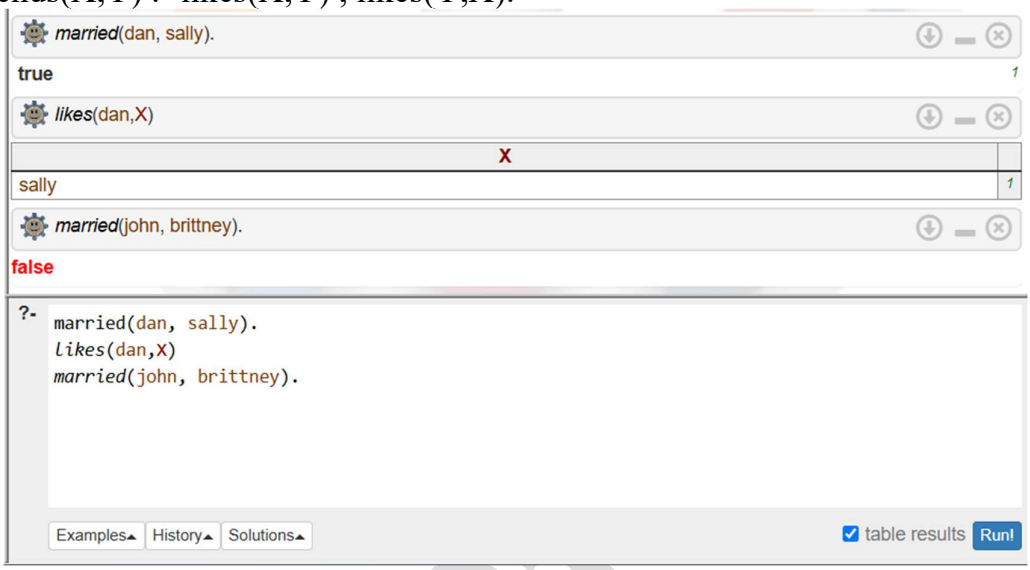
KB2:

happy(yolanda).
listens2music(mia).
listens2music(yolanda):-happy(yolanda).
playsAirGuitar(mia):-listens2music(mia).
playsAirGuitar(Yolanda):-listens2music(yolanda).



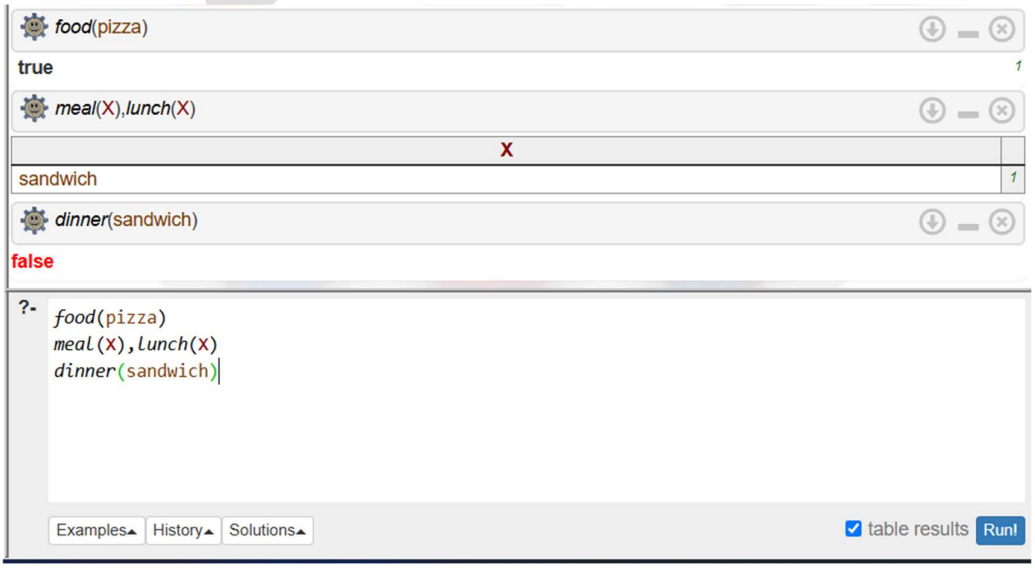
KB3:

likes(dan,sally).
likes(sally,dan).
likes(john,brittney).
married(X,Y) :- likes(X,Y) , likes(Y,X).
friends(X,Y) :- likes(X,Y) ; likes(Y,X).



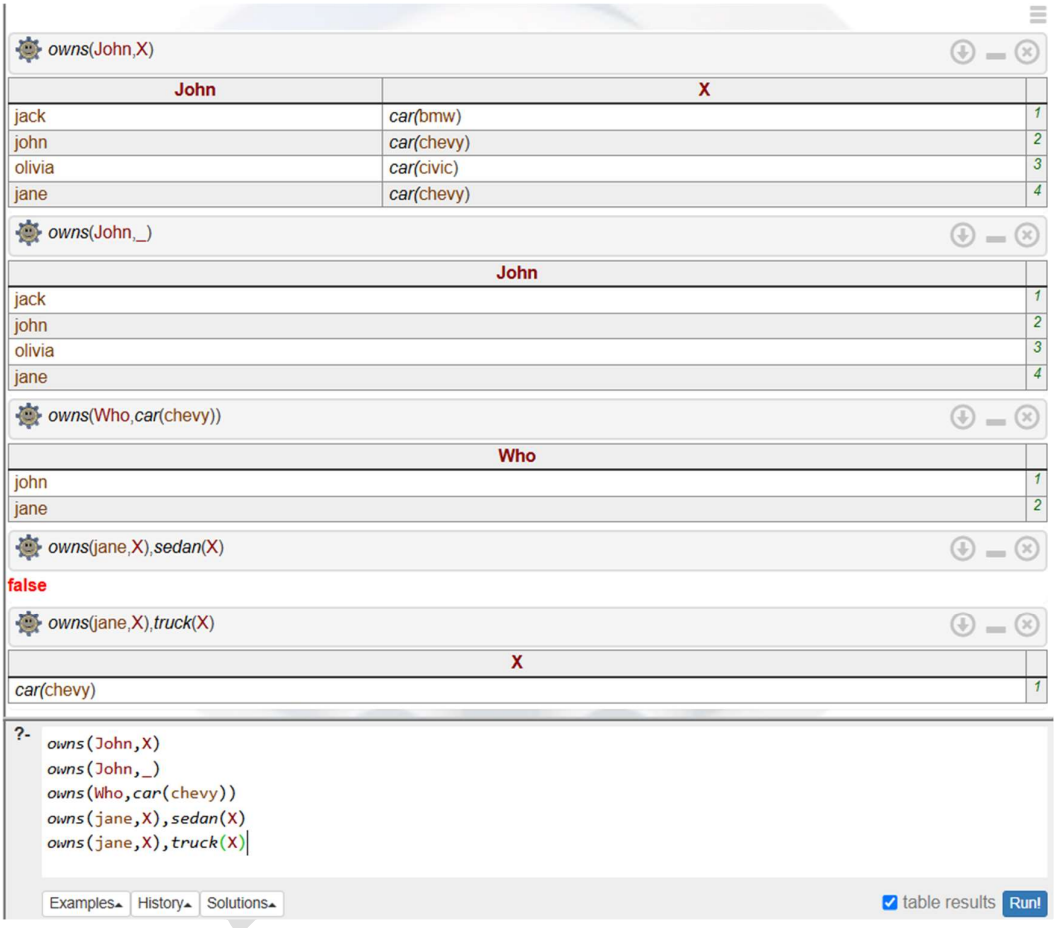
KB4:

food(burger).
food(sandwich).
food(pizza).
lunch(sandwich).
dinner(pizza).
meal(X):-food(X).



KB5:

owns(jack,car(bmw)).
owns(john,car(chevy)).
owns(olivia,car(civic)).
owns(jane,car(chevy)).
sedan(car(bmw)).
sedan(car(civic)).
truck(car(chevy)).



RESULT:

Thus, we have written basic programs to learn prolog terminologies.