**EX.NO:06** **DATE:25.10.2024**
**Reg.no:220701054**

# 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 a lowercase letter.
Ex:
dog
ab_c_321

**2. Variables: -**

dog ab_c_321

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: -**

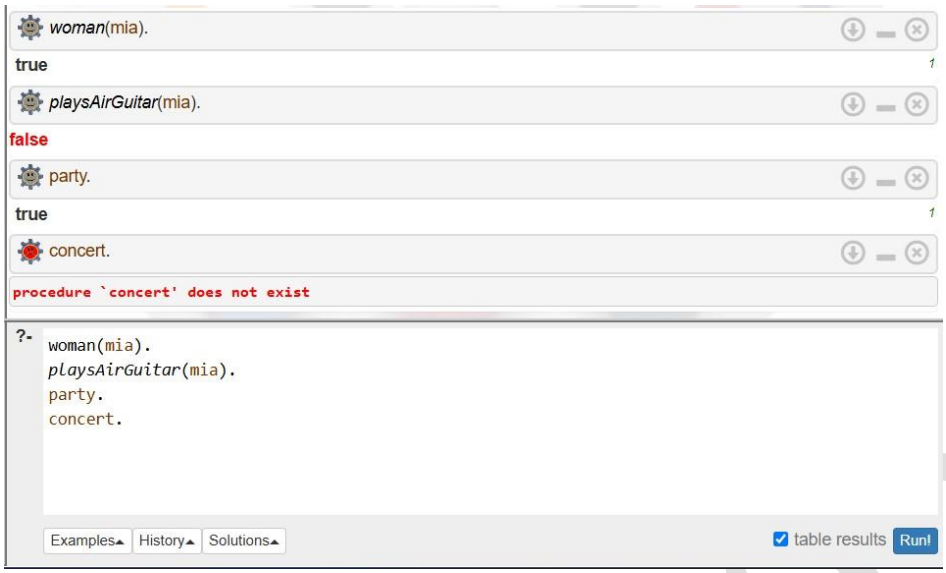
A rule consists of a head (a predicate) and a body (a sequence of predicates separated by commas).
Ex:
is_smaller(X,Y):-is_bigger(Y,X).
aunt(Aunt,Child):-sister(Aunt,Parent),parent(Parent,Child).

**SOURCE CODE:**

**KB1:**

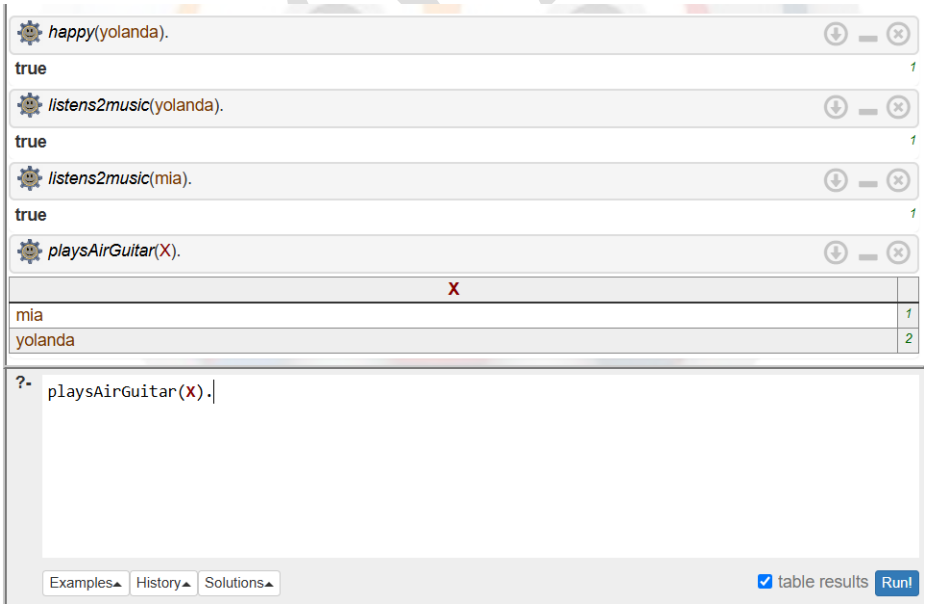
```
woman(mia). woman(jody). woman(yolanda).
playsAirGuitar(jody). party.
Query 1: ?-woman(mia).
Query 2: ?-playsAirGuitar(mia).
Query 3: ?-party.
```

Query 4: ?-concert.
**OUTPUT: -**




**KB2:**
happy(yolanda).
listens2music(mia).
Listens2music(yolanda):-happy(yolanda).
playsAirGuitar(mia):-listens2music(mia).
playsAirGuitar(Yolanda):-listens2music(yolanda).

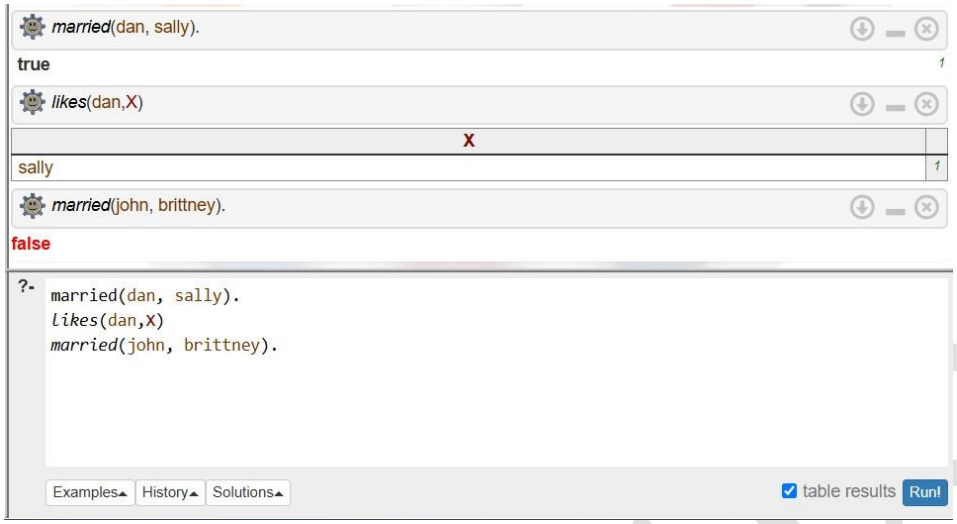
**OUTPUT: -**



**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).

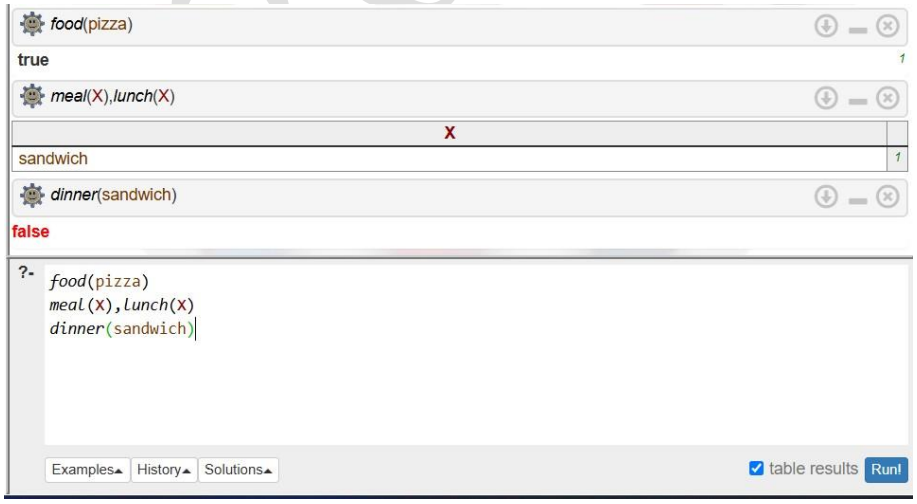
**OUTPUT: -**




**KB4:**

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

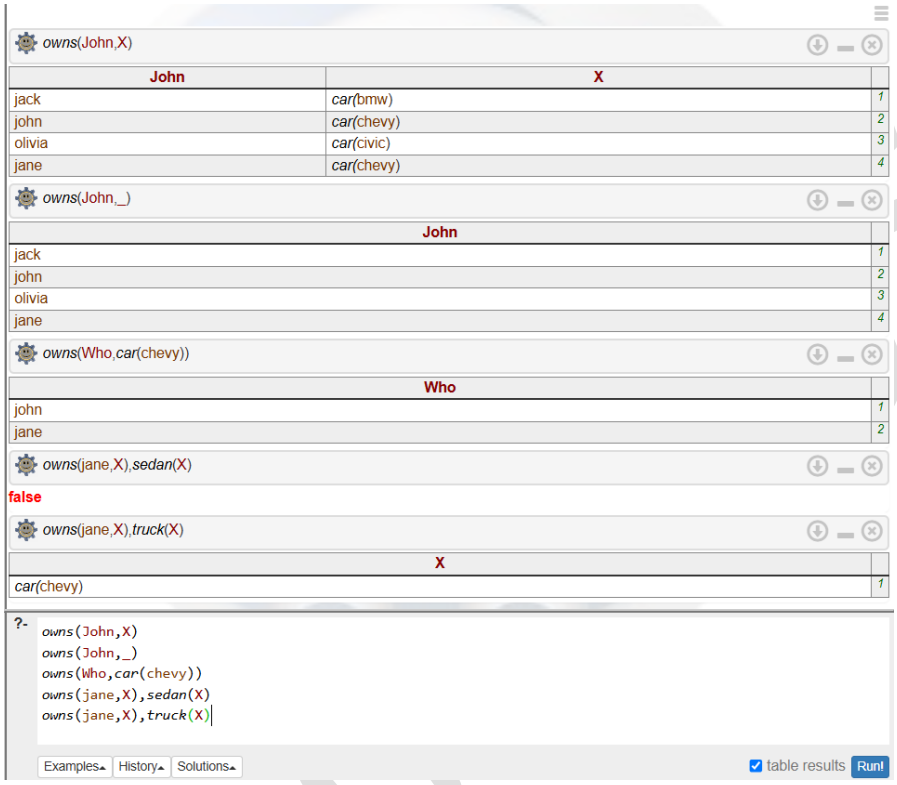
**OUTPUT:**



**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)).

**OUTPUT:**




**RESULT:**

Thus the introduction of prolog is studied and executed successfully.