**MULTIPLE PREDICATE & INPUT/OUTPUT IN PROLOG**

**LAB WORK**

**1.PROGRAM**

Predicates nondeterm can\_by(Symbol,Symbol)

nondeterm person(Symbol)

nondeterm car(Symbol)

likes(Symbol,Symbol)

for\_sale(Symbol)

Clauses

can\_by(X,Y):-person(X),car(Y),likes(X,Y),for\_sale(Y).

person(judy).person(kelly).person(ellen).person(mark).

car(lemon).car(hot\_dog).

likes(kelly,hot\_dog).likes(judy,pizza).likes(ellen,tennis).likes(mark,tennis).

for\_sale(pizza).for\_sale(lemon).for\_sale(hot\_dog).

Goal can\_by(Who,What).

**OUTPUT:**

Who=kelly, What=hot\_dog

1 Solution

**2. PROGRAM**

car(Symbol,Long,Integer,Symbol,Long)

truck(Symbol,Long,Integer,Symbol,Long)

nondeterm vehicle(Symbol,Long,Integer,Symbol,Long)

Clauses

car(foxi,13000,3,red,12000).

car(ford,9000,4,grey,25000).

car(dastan,8000,1,red,3000).

truck(ford,8000,6,blue,8000).

truck(toyota,25000,2,black,25000).

vehicle(Make,Odometer,Age,Color,Price):-car(Make,Odometer,Age,Color,Price);truck(Make,Odometer,Age,Color,Price).

Goal car(Make,Odometer,Age,Body,25000);truck(Make,Odometer,Age,Body,25000).

**OUTPUT:**

Make=ford, Odometer=9000, Age=4, Body=grey

Make=toyota, Odometer=25000, Age=2, Body=black

2 Solutions

**3. PROGRAM**

DOMAINS

tittle,author=symbol

pages=unsigned

predicates

book(tittle,pages)

nondeterm write\_by(author,tittle)

nondeterm long\_noval(tittle)

clauses

write\_by(fleming,"DRNO").

write\_by(melville,"MOBY DICK").

book("MOBY DICK",250).

book("DRNO",310).

long\_noval(Tittle):-

write\_by(\_,Tittle),book(Tittle,Length),

Length > 300.

goal long\_noval(X).

**OUTPUT:**

X=DRNO

1 Solution

**4. PROGRAM**

predicates

count(long)

clauses

Count(N):- write('\r',N),

NewN=N+1,count(NewN).

goal count(0).

**OUTPUT:**

0

1

2

3

.

.

Infinite loop

**5. PROGRAM**

predicates

nondeterm repeat

nondeterm typewriter

clauses

repeat:- repeat.

typewriter:-repeat,readchar(C),

write(C),C='\r'.

goal typewriter,nl.

**OUTPUT:**

H

**TASK:**

**Object 01:**

Write the program that has country and its population as facts. Print all the countries those population is greater then 1250000

**Source Code:**

predicates

country(symbol,long)

nondeterm country\_name(symbol)

nondeterm name(symbol)

clauses

country\_name("Pakistan").

country\_name("India").

country\_name("Turky").

country("Pakistan" , 2500).

country("India",1255000).

country("Turky",1253000).

name(Name):-

country\_name(Name),

country(Name,Population),

Population > 1250000.

goal name(Name).

**Output:**

Name=India

Name=Turky

2 Solutions

**Object 02:**Write a program that restrict the recursive program disccuss in lab up to the value of 1000

**Source Code:**

predicates

count(long)

clauses

count(N):-

Write('\r',N),

Newn = N+1,N<=999,

count(Newn).

goal count(0).

**Output:**

0

1

2

.

.

.

993

994

995

996

997

998

999

1000no

**Object 03:**Write a program that takes the number use input but when user press 0 it terminate the program and print all the numbers

**Source Code:**

predicates

nondeterm repeat

nondeterm typewriter

clauses

repeat.

repeat:-repeat.

typewriter:-repeat,readint(C),

Write(C),

C = 0.

goal typewriter.

**Output:**

1

1

2

2

3

3

0

0yes