Logic

SWI-Prolog

AI Game

AI

SWI-Prolog

Device

Robotics

Facts

what is the name
of satcho's sister?

```
male(shohidul).
fatherOfSatcho(shohidul,satcho).
DaughterOfShohidul(shohidul,samia).
```

samia

Program-1:

```
first.pl
File   Edit   Browse   Compile   Prolog   Pce   Help
first.pl
name(shakil).

name(satcho).

man(adam).
girl(jerry).
like(blue).
like(adam,pizza).
like(satcho,banana).
eat(adam, apple).
```

comma sign (,)

factName(object1 , object2)

```
% c:/users/rashedul alam/desktop/prolog codes/first compiled 0.00 sec, 0
?-
|     name(shakil).
true.

?- name(satcho).
true.

?-
% c:/users/rashedul alam/desktop/prolog codes/first compiled 0.00 sec, 0
?-
|     like(adam,pizza).
true.

?- like(adam.pizza).
ERROR: Type error: `dict' expected, found `adam' (an atom)
ERROR: In:
ERROR:    [11] throw(error(type_error(dict,adam),_1130))
ERROR:    [9] '$dicts':'.'(adam,pizza,_1170) at c:/program files/swipl/b
46
ERROR:    [8] '<meta-call>'(user:(...,...)) <foreign>
ERROR:    [7] <user>
ERROR:
ERROR: Note: some frames are missing due to last-call optimization.
ERROR: Re-run your program in debug mode (:- debug.) to get more detail.
?-
% c:/users/rashedul alam/desktop/prolog codes/first compiled 0.00 sec, 0
?-
|     like(adam, pizza).
true.
```

Program-2:

File   Edit   Browse   Compile   Prolog   Pce   Help

var3.pl

```prolog
parent(pam,bob).
parent(tom,bob).
parent(tom,liz).
parent(bob,ann).
parent(pat,jim).
parent(tom,kim).
parent(bob,pat).
```


SWI-Prolog (AMD64, Multi-threaded, version 8.0.3)

File   Edit   Settings   Run   Debug   Help

```
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For online help and background, visit http://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

?- parent(bob,ann).
true.

?- parent(tom,liz).
true.

?- parent(tom,loz).
false.

?- parent(tom,X).
X = bob ;
X = liz ;
X = kim.

?- parent(A,bob).
A = pam ;
A = tom.

?-
```

Program-3:

Consider the following Facts:

FatherOf(joe, paul).

FatherOf (joe,mary).

MotherOf(jane,paul).

MotherOf(jane,mary).

male(paul).

male(joe).

female(mary).

female(jane).

1. Check whether the following statements are true or false through Prolog query

   a. Paul is Joe's Father
   b. Jane is Mary's mother
   c. Mary is male.
   d. Paul is male

2. Find out the following people:
   a. Joe's children
   b. Jane's children
   c. Male family members
   d. Female family members

task1.pl

File   Edit   Browse   Compile

task1.pl

```prolog
fatherOf(joe, paul).
fatherOf(joe,mary).
motherOf(jane,paul).
motherOf(jane,mary).
male(paul).
male(joe).
female(mary).
female(jane).
```

For online help and background, visit http://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

```
?-
|    fatherOf(paul,joe).
false.

?- motherOf(jane,mary).
true.

?- male(mary).
false.

?- male(paul).
true.

?- ■
```

```
?- male(mary).
false.

?- male(paul).
true.

?- fatherOf(joe,Child).
Child = paul ;
Child = mary.

?- motherOf(jane,X).
X = paul ;
X = mary.

?- male(Male).
Male = paul ;
Male = joe.

?- female(X).
X = mary ;
X = jane.

?- ■
```

Program-4: conjunction

Conjunction: (or , and)

Facts are given below:

emperor(turza,simulation).

emperor(sadhin, html).

emperor(udoy,sleep).

emperor(rajesh,love).

emperor(minhaj,superman).

emperor(turza,css).

emperor(tanu,deeplearning).

emperor(bipro,css).

emperor(munna,html).

emperor(tanvir,poet).

emperor(arif,math).

likes(ismail,dating).

likes(rajesh,dating).

likes(minhaj,photograph).

Questions:

1. Who are the emperor of HTML and CSS?

2. Who are the emperor of HTML or CSS?

3. Who are the emperor of love and likes dating?

4. Show all the characteristics of minhaj.

File Edit Settings Run Debug Help

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?-
% c:/users/rashedul alam/desktop/prolog codes/con1 compiled 0.02 s
lauses
?-
| emperor(X,html),emperor(X,css).
false.

?-
Warning: c:/users/rashedul alam/desktop/prolog codes/con1.pl:15:
        Clauses of emperor/2 are not together in the source-file
            Earlier definition at c:/users/rashedul alam/desktop/pro
es/con1.pl:1
            Current predicate: likes/2
            Use :- discontiguous emperor/2. to suppress this message
% c:/users/rashedul alam/desktop/prolog codes/con1 compiled 0.00 s
lauses
% c:/users/rashedul alam/desktop/prolog codes/con1 compiled 0.00 s
clauses
?-
| emperor(X,html),emperor(X,css).
X = sadhin ,

?- emperor(X,html);emperor(X,css).
X = sadhin ;
X = munna ;
X = turza ;
X = bipro ;
X = sadhin.

?- emperor(X,love),likes(X,dating).
X = rajesh.

?- emperor(minhaj,X);likes(minhaj,X).
X = superman ;
X = photograph.

?- emperor(minhaj,X),likes(minhaj,X).
false.

?-

Activate Windows

Program-5: anonymous variable


```
con1.pl

File  Edit  Browse  Compile  Prolog  Pce  Help

con1.pl

emperor(turza,simulation).
emperor(sadhin,html).
emperor(udoy,sleep).
emperor(rajesh,love).
emperor(minhaj,superman).
emperor(turza,css).
emperor(tanu,deeplearning).
emperor(bipro,css).
emperor(sadhin,css).
emperor(munna,html).
emperor(tanvir,poet).
emperor(arif,math).
likes(ismail,dating).
likes(rajesh,dating).
likes(minhaj,photograph).
```

```
?-
% c:/users/rashedul alam/de
lauses
?-
|    emperor(Name,css).
Name = turza ;
Name = bipro ;
Name = sadhin.

?- emperor(_,css).
true ;
true ;
true.

?- emperor(turza,TOPIC).
TOPIC = simulation ;
TOPIC = css.

?- emperor(turza,_).
true ;
true.

?- █
```