# **LAB2: Introduction to Prolog**

1. **Making a .pl file and consulting.**

*Make a simple text file and rename it to test.pl.*

*Write in file*

**?-boy(ram).**

*Through the Prolog Terminal, use the command*

**?-consult(test.pl)**

**?- boy(ram).**

**TRUE**

The file can be directly consulted form File>Consult>Select File.

1. **First File**

**boy(ram).**

**girl(sita).**

Terminal:

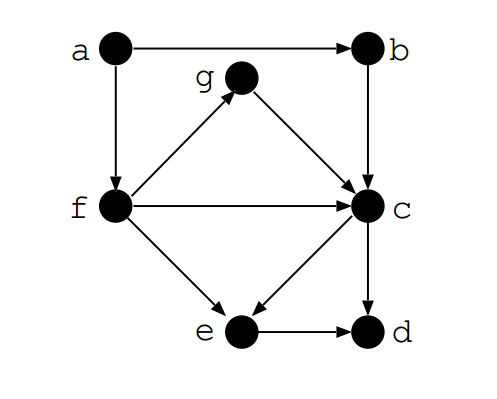
**?- boy(ram).** // ram is a boy. So the program returns TRUE after consulting

**TRUE**

**?- boy(sita).** //sita is not a boy. So the program returns FALSE after consulting

**FALSE**

1. **Graph Representation**



File name: graph.pl

**edge(a,b).** // a vertex is connected to vertex b

**edge(a,f).**

**edge(f,e).**

**edge(e,d).**

**edge(b,c).**

**edge(f,c).**

**edge(c,e).**

**edge(f,g).**

**edge(g,c).**

**edge(c,d).**

**path(Node1,Node2):- edge(Node1,Node2).**

// If node1 and node 2 is connected, then there is path between them.

**path(Node1, Node2) :- edge(Node1,Somenode),path(Somenode,Node2).**

/\* This is the recursion that checks the path between two nodes which are connected through many edges \*/

*Terminal:*

**?- edge(a,b).**

**TRUE**

**?- edge(X,c).**

**X = b ;**

**X = f ;**

**X = g.**

**?- path(a,f).**

**TRUE**

**?- path(a,d).**

**TRUE;**

1. *Family Representation*

*Filename: family.pl*

**father(ram).**

**mother(sita).**

**male(amar).**

**male(chandra).**

**female(bina).**

**female(divya).**

**parent(amar,chandra).**

**parent(amar,divya).**

**parent(bina,chandra).**

**parent(bina,divya).**

**sibling(X,Y):- parent(Z,X),parent(Z,Y),different(X,Y).**

/\* X is sibling of Y if parents are same and X and Y are different \*/

**different(X,X):- !,fail.**

/\* X is not different to X \*/

**different(X,Y).**

/\* X is different than Y \*/

Terminal:

**?- father(ram).**

**TRUE**

**?- parent(X,chandra).**

**X = amar;**

**X = bina.**

**?- parent(X,divya).**

**X = amar ;**

**X = bina.**

**?- sibling(chandra,divya).**

**TRUE**

**?- sibling(chandra,chandra).**

**FALSE**

**?- siblin(chandra,amar).**

**Correct to: "sibling(chandra,amar)"?**

**Please answer 'y' or 'n'? yes**

**FALSE**