Sardar Vallabhbhai National Institute of Technology, Surat
Computer Science and Engineering Department
B.Tech III - VI Semester
Artificial Intelligence (CS304)
Assignment 2

1. Implementation of Family tree with using these following facts like male, female, parent, brother, sister.

male(shankar).
male(ulhas).
male(satish).
male(saurabh).
male(prashant).

female(umabai).
female(mrunal).
female(sadhana).
female(swati).

parent(shankar,umabai,ulhas).
parent(shankar,umabai,satish).
parent(ulhas,mrunal,prashant).
parent(satish,sadhana,saurabh).
parent(satish,sadhana,swati).

brother(ulhas,satish).
brother(satish,ulhas).
brother(prashant,saurabh).
brother(saurabh,prashant).
sister(swati,saurabh).
sister(swati,prashant).

1. Use the following predicates like:
   father, mother, son, daughter, grandfather, aunt, uncle, cousin, ancestor.
2. Generate rules of following relations in considering the given knowledge base:
   a. grandparent/2.
   b. brother/2.
   c. sister/2.
   d. mother/2.
   e. father/2.
   f. child/2.
   g. son/2.
   h. daughter/2.

3. Answer the following queries:
   a. Find all females in the given tree.
   b. Find all males in the given tree.

b. How many grandchildren do Shankar has?
c. Who is/are sister of Prashant?
d. Who are parents of Swati?