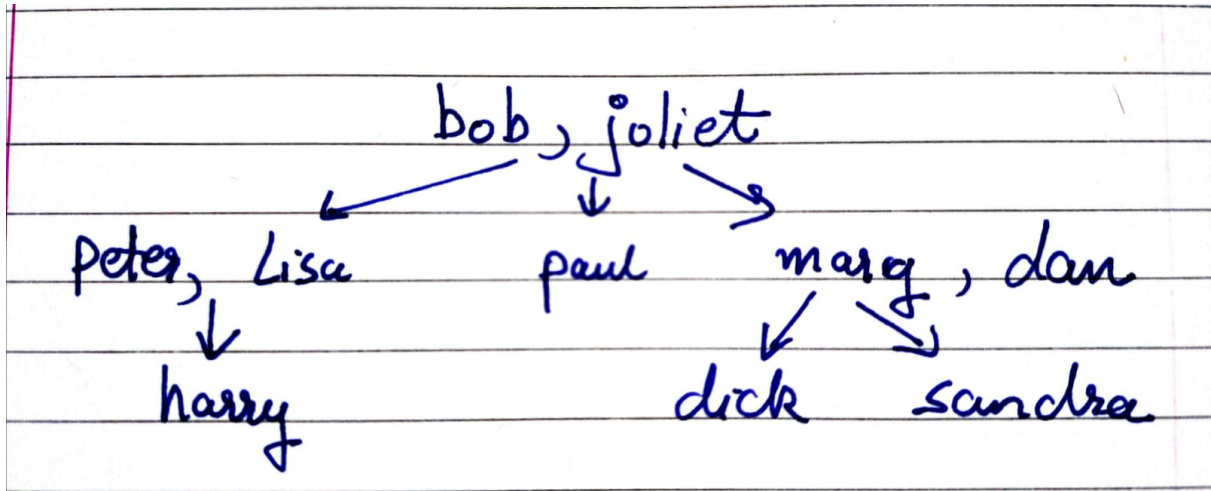# PPL LAB 2

SAHIL BONDRE: U18CO021

Family Tree:

family.pl:

```prolog
female(mary).

female(sandra).

female(juliet).

female(lisa).

male(peter).

male(paul).

male(dick).

male(bob).

male(harry).

male(dan).


parent(bob, lisa).

parent(bob, paul).
```

```prolog
parent(bob, mary).

parent(juliet, lisa).

parent(juliet, paul).

parent(juliet, mary).

parent(peter, harry).

parent(lisa, harry).

parent(mary, dick).

parent(mary, sandra).

parent(dan, dick).

parent(dan, sandra).


husband(bob, juliet).

husband(peter, lisa).

husband(dan, mary).


child(X, Y) :- parent(Y, X).


mother(X, Y) :- parent(X, Y), female(X).

father(X, Y) :- parent(X, Y), male(X).


wife(X, Y) :- husband(Y, X).


son(X, Y) :- parent(Y, X), male(X).

daughter(X, Y) :- parent(Y, X), female(X).


sibling(X, Y) :- parent(Z, X), parent(Z, Y), X \= Y.
```

```prolog
brother(X, Y) :- sibling(X, Y), male(X).

sister(X, Y) :- sibling(X, Y), female(X).


uncle(X, Y) :- parent(Z, Y), sibling(X, Z), male(X).

aunt(X, Y) :- parent(Z, Y), sibling(X, Z), female(X).


nephew(X, Y) :- sibling(Y, Z), parent(Z, X), male(X).

niece(X, Y) :- sibling(Y, Z), parent(Z, X), female(X).
```

child:

```
?- child(X, juliet).
X = lisa ;
X = paul ;
X = mary.

?- |
```

mother:

```
?- mother(mary, X).
X = dick ;
X = sandra.

?- |
```

father:

```
?- father(dan, X).
X = dick ;
X = sandra.

?- |
```

wife:

```
?- wife(X, dan).
X = mary.

?- |
```

son:

```
?- son(X, lisa).
X = harry.

?- |
```

daughter:

```
?- daughter(X, mary).
X = sandra.
```

brother:

```
?- brother(X, mary).
X = paul .

?- |
```

sister:

```
?- sister(X, lisa).
X = mary .
```

uncle:

```
?- uncle(X, harry).
X = paul .
```

aunt:

```
?- aunt(X, harry).
X = mary .
```

nephew:

```
?- nephew(X, mary).
X = harry .

?-
```

niece:

```
?- niece(X, paul).
X = sandra .

?-
```