

ASSIGNMENT: 06

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Question 6: Prolog-Family Tree:

Code:

```
female(selena).
female(taylor).
female(deepika).
female(alia).
female(prinkya).
female(anushka).
male(ranbir).
male(justin).
male(jaden).
male(harry).
male(zayn).
male(messi).
parent(selena,jaden).
parent(harry,jaden).

parent(selena,ranbir).
parent(harry,ranbir).

parent(selena,anushka).
parent(harry,anushka).

parent(taylor,justin).
parent(zayn,justin).

parent(jaden,alia).

parent(prinkya,alia).
mother(X,Y) :- parent(X,Y), female(X).
father(X,Y) :- parent(X,Y), male(X).
haschild(X) :- parent(X,_).
sister(X,Y) :- parent(Z,X),parent(Z,Y),female(X),X\==Y.
brother(X,Y) :- parent(Z,X),parent(Z,Y),male(X),X\==Y.
grandfather(X,Y) :- male(X), parent(X,Z),parent(Z,Y).
grandmother(X,Y) :- female(X), parent(X,Z),parent(Z,Y).
```

```
aunt(X,Y) :- female(X),parent(Z,Y), sister(Z,X).
uncle(X,Y) :- male(X),parent(Z,Y), brother(Z,X).
```

Output:

 SWI-Prolog (AMD64, Multi-threaded, version 8.4.2)

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```
?- father(X,alia).
X = jaden .
```

```
?- mother(X,alia).
X = prinkya.
```

```
?- grandmother(X,alia).
X = selena .
```

```
?- grandfather(X,alia).
X = harry .
```

```
?- uncle(X,alia).
X = ranbir .
```

```
?- sister(X,jaden).
X = anushka .
```

```
?- parent(X,jaden).
X = selena .
```

```
?- brother(X,anushka).
X = jaden .
```

```
?- male(jaden)
|
true.
```

```
?- female(selena).
true.
```

```
?-
```