

EX.NO:7

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PROLOG- FAMILY TREE

AIM : To develop a family tree program using PROLOG with all possible facts, rules, and queries.

CODE:

```
/*FACTS :: */
```

```
male(peter).
```

```
male(john).
```

```
male(chris).
```

```
male(kevin).
```

```
female(betty).
```

```
female(jeny).
```

```
female(lisa).
```

```
female(helen).
```

```
parentOf(chris,peter).
```

```
parentOf(chris,betty).
```

```
parentOf(helen,peter).
```

```
parentOf(helen,betty).
```

```
parentOf(kevin,chris).
```

```
parentOf(kevin,lisa).
```

```
parentOf(jeny, john).  
parentOf(jeny, helen).  
  
/*RULES :: */  
  
/* son, parent  
  
* son, grandparent */  
  
father(X, Y):- male(Y), parentOf(X, Y).  
mother(X, Y):- female(Y), parentOf(X, Y).  
grandfather(X, Y):- male(Y), parentOf(X, Z), parentOf(Z, Y).  
grandmother(X, Y):- female(Y), parentOf(X, Z), parentOf(Z, Y).  
brother(X, Y):- male(Y), father(X, Z), father(Y, W), Z==W.  
sister(X, Y):- female(Y), father(X, Z), father(Y, W), Z==W.
```

OUTPUT:

? parentof(kevin, X)

X=chris

? father(X, chris)

X=kevin

? sister(X, chris)

false

Result:

Thus the above program is executed successfully