## Sample program to demonstrate Rules and facts

```
weather(phoenix, summer, hot).
weather(phoenix, winter, warm).
weather(la,winter,warm).
```

```
weather(City,summer,hot).
City = phoenix
weather(City,_,cold).
City = phoenix
weather(la,winter,warm).
false
```

## Sample program to demonstrate the relationship in prolog.

```
weather(phoenix, summer, hot).
weather(la,winter,warm).

warmer_than(C1,C2):-
    weather(C1, summer, hot),
    weather(C2, summer, warm).
```

```
write(C1),write('is warmer than'),write(C2).
_4736is warmer than_4740
true
weather(C1, summer, hot),weather(C2, summer, warm),write(C1), write('is warmer than '),write(C2).
phoenixis warmer than la
C1 = phoenix,
C2 = la
```

## Sample program to demonstrate the relationship in prolog.

```
parent(joe,jane).
parent(harry,carl).
parent(meg,jane).
parent(jane,anne).
parent(carl,ralph).
parent(hazel,harry).
grandparent(X,Z):- parent(X,Y),parent(Y,Z).
```

*parent*(carl,Y)

**Y** = ralph

*parent*(hazel,X)

**X** = harry

*parent*(joe,X),*parent*(meg,X)

**X** = jane

*parent*(Y,harry)

**Y** = hazel