

First Steps in Prolog

Read the first pages of the online user-manual of Sicstus Prolog.

Load the following Prolog program:

```
arc(a,b).  
arc(a,c).  
arc(b,d).  
arc(c,d).  
arc(d,e).
```

```
path(From,To):-  
    arc(From,To).  
path(From,To):-  
    arc(From,Node),  
    path(Node,To).
```

Try at least the following goals and trace their execution:

```
path(a,c).  
path(b,Y).  
path(f,g).
```

Exchange the order of the two clauses for `path` and try the above goals again. What changes?

Exchange the two goal atoms in the body of the recursive clause for `path`. What changes?

First Steps in CLP

Load the following Prolog program:

```
min(X,Y,Z):- X =< Y, X = Z.  
min(X,Y,Z):- Y =< X, Y = Z.
```

Try at least the following goals and trace their execution:

```
min(1,2,C).  
min(A,2,1).  
min(A,A,B).
```

Exchange the order of the two goal atoms in the body of each clause. Try the above goals again and trace them. What changes?

Change the program as follows:

```
:- use_module(library(clpq)).  
  
min(X,Y,Z):- {X =< Y, X == Z}.  
min(X,Y,Z):- {Y =< X, Y == Z}.
```

Try the above goals again and trace them. What changes?