

### ***Celestial Bodies Example:***

- ( 1 ) star ( sun ).
- ( 2 ) star ( sirius ).
- ( 3 ) star ( betelgeuse ).

define another relation (binary this time) orbits

- ( 4 ) orbits ( mercury, sun ).
- ( 5 ) orbits ( venus, sun ).
- ( 6 ) orbits ( earth, sun ).
- ( 7 ) orbits ( mars, sun ).
- ( 8 ) orbits ( moon, earth ).
- ( 9 ) orbits ( phobos, mars ).
- (10) orbits ( deimos, mars ).

The following clause defines the unary relation planet:

- (11) planet ( B ):- orbits ( B, sun ).
- i.e. a body is a planet if it orbits the sun.

Another clause defines the relation satellite

- (12) satellite ( B ) :- orbits ( B, P ), planet ( P ).

i.e. a body is a satellite if it orbits some body P and that same body P is a planet.

Other clauses define the relation solar:

- (13) solar ( sun ).
- (14) solar ( B ) :- planet ( B ).
- (15) solar ( B ) :- satellite ( B ).

i.e. the sun is a member of the solar system; a body is a member of the solar system if it is a planet; a body is a member of the solar system if it is a satellite.