

tracing: ?- value(lion, social_behavior, X).

rename: $X = _1$

value(lion, social_behavior, $_1$).

```
value(Frame, Slot, Value) :-
  Query =.. [Frame, Slot, Value],
  call(Query), !.
```

Frame = lion,
Slot = social_behavior,
Value = $_1$

```
value(Frame, Slot, Value) :-
  parent(Frame, ParentFrame),
  value(ParentFrame, Slot, Value).
```

{ lion(social_behavior, $_1$), ! }

fail

back trace
(BT)

{ parent(lion, parentFrame), value(parentFrame, social_behavior, $_1$) }

ParentFrame = $_2$

{ parent(lion, $_2$), value($_2$, social_behavior, $_1$) }

parent(lion, $_2$) :-

(Query =.. [lion, instance, $_2$] ;

Query =.. [lion, subclass, $_2$]),

call(Query).

```
parent(Frame, ParentFrame) :-
  (Query =.. [Frame, instance, ParentFrame]
  ;
  Query =.. [Frame, subclass, ParentFrame]),
  call(Query).
```

{ lion(instance, $_2$), value($_2$, social_behavior, $_1$) } { lion(subclass, $_2$), value($_2$, social_behavior, $_1$) }

fail

BT

lion(subclass, carnivorous)
 $_2 = \text{carnivorous}$

{ value(carnivorous, social_behavior, $_1$) }

Frame = carnivorous
Slot = social_behavior
Value = $_1$

{ carnivorous(social_behavior, $_1$) }

fail

BT

```
value(Frame, Slot, Value) :-
  parent(Frame, ParentFrame),
  value(ParentFrame, Slot, Value).
```

Frame = carnivorous,
Slot = social_behavior,
Value = $_1$

{ parent(carnivorous, ParentFrame), value(ParentFrame, social_behavior, $_1$) }

ParentFrame = $_3$

parent(carn, $_3$) :-

(Query =.. [carn, instance, $_3$] ;

Query =.. [carn, subclass, $_3$]),

call(Query).

{ parent(carnivorous, $_3$), value($_3$, social_behavior, $_1$) }

```
parent(Frame, ParentFrame) :-
  (Query =.. [Frame, instance, ParentFrame]
  ;
  Query =.. [Frame, subclass, ParentFrame]),
  call(Query).
```

{ carnivorous(instance, $_3$), value($_3$, social_behavior, $_1$) }

fail

BT

{ carnivorous(subclass, $_3$), value($_3$, social_behavior, $_1$) }

carnivorous(subclass, mammal)
 $_3 = \text{mammal}$

{ value(mammal, social_behavior, $_1$) }

Frame = mammal,
Slot = social_behavior,
Value = $_1$

{ mammal(social_behavior, $_1$), ! }

mammal(social_behavior, social_animal)
 $_1 = \text{social_animal}$

{ ! }

! be not allowed back trace on this branch process end

{ }

$_1 = \text{social_animal}$

$X = _1 = \text{social_animal}$