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```
\begin{array}{ll} \text{middle}\left(\mathbf{X}\text{, }\left[\mathbf{X}\right]\right)\text{.} \\ \text{middle}\left(\mathbf{X}\text{, }\left[\mathbf{H}\right|\mathbf{T}\right]\right)\text{ :-} \end{array}
     append (M, [L], T),
     middle(X, M).
§ _____
% -----EXAMPLE QUERY-----
% -----
% -----VERSION 1-----
% ----Program----
% middle(X, [X]).
% middle(X, [H|T]) :-
       append(M, [L], T),
middle(X, M).
응
% ?- middle(X, [a, b, c]).
% X = b ? ;
% ?- middle(a, X).
% X = [a] ? ;
% X = [_A,a,_B] ?;
% X = [_A,_B,a,_C,_D] ?
% (infinite results...)
% yes
응
  -----VERSION 2-----
응
% -----Program-----
% middle(X, [H|T]) :-
       append(M, [L], T),
middle(X, M).
응
응
% middle(X, [X]).
% ?- middle(X, [a, b, c]).
% X = b ? ;
% no
% ?- middle(a, X).
% X = [_A,a,_B] ?;
% X = [_A,_B,a,_C,_D] ?
% (infinite results...)
% yes
응
% -----VERSION 3-----
% -----Program-----
% middle(X, [H|T]) :-
% middle(X, M),
% append(M, [L], T).
% middle(X, [X]).
% ?- middle(X, [a, b, c]).
% Resource error: insufficient memory
% (non-terminating query it seems???)
% ?- middle(a, X).
% Resource error: insufficient memory
  (also query that never terminates?)
% -----VERSION 4-----
% ----Program----
% middle(X, [X]). % middle(X, [H|T]) :-
       middle(X, M),
응
       append (M, [L], T).
% middle(X, [a, b, c]). % X = b?; (seems it got one result)
% Resource error: insufficient memory
% (non-terminating query it seems???)
```

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```
% middle(a, X).
% X = [a] ?;
% X = [_A,a,_B] ?;
% X = [_A,_B,a,_C,_D] ?
% (infinite results...)
```