

Computer Programming Paradigm Lab
Lab Experiment No. 7

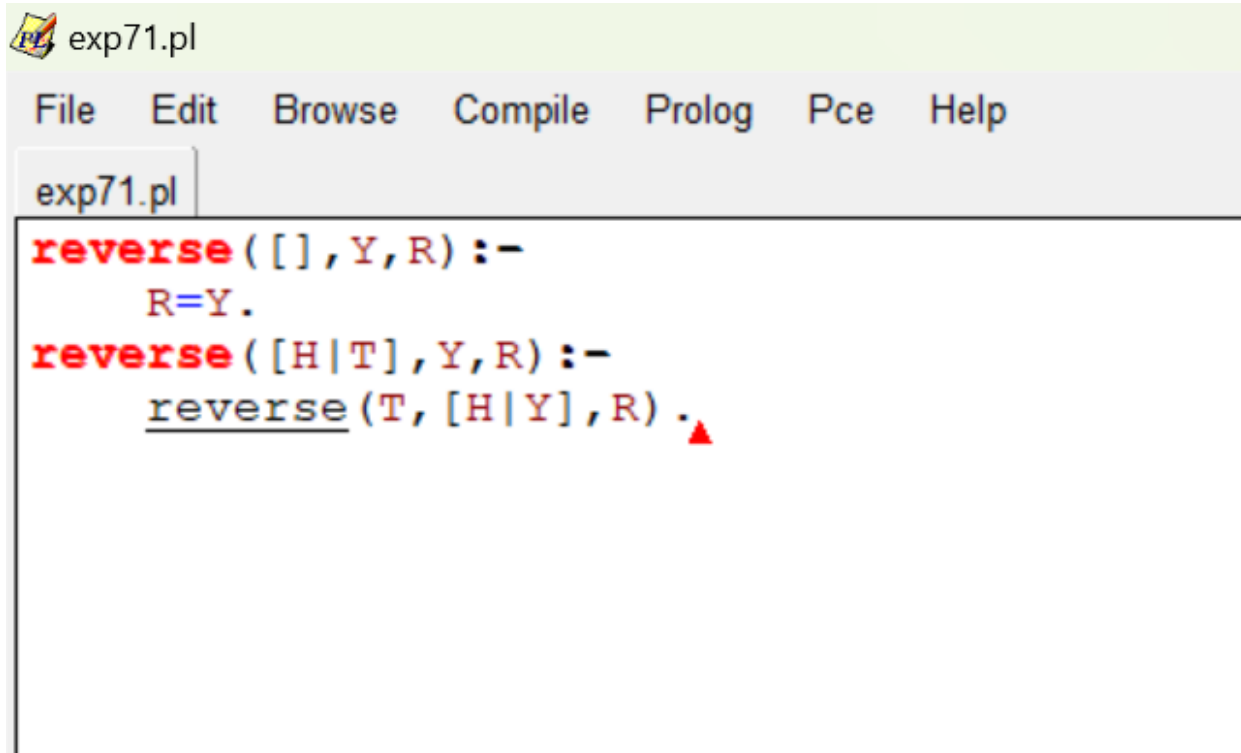
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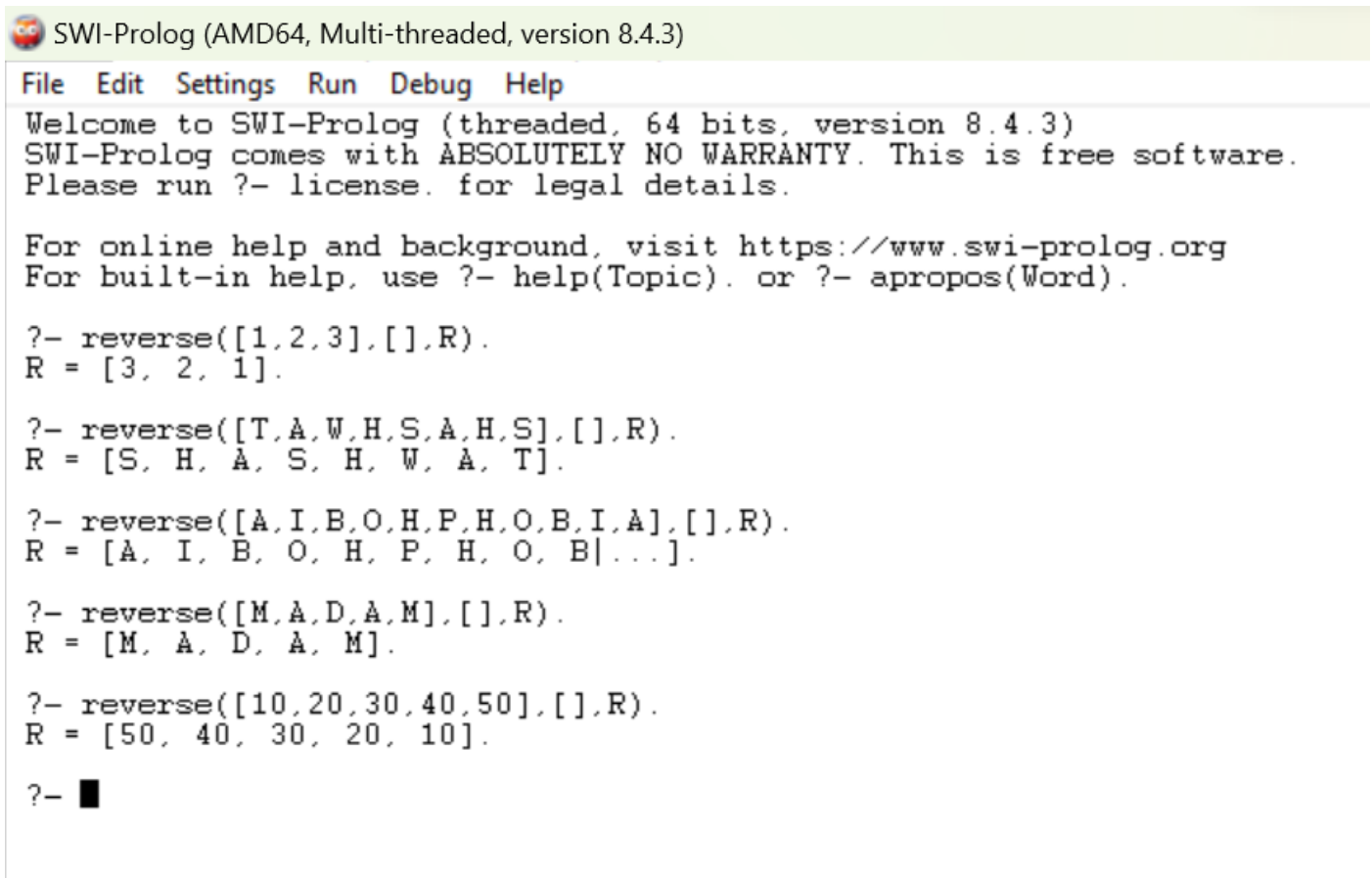
Problem Statement & Output:

Exercise 1.

1.Reverse a given list



```
exp71.pl
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exp71.pl
reverse([],Y,R):-
    R=Y.
reverse([H|T],Y,R):-
    reverse(T,[H|Y],R).
```



```
SWI-Prolog (AMD64, Multi-threaded, version 8.4.3)
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Welcome to SWI-Prolog (threaded, 64 bits, version 8.4.3)
SWI-Prolog comes with ABSOLUTELY NO WARRANTY. This is free software.
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For online help and background, visit https://www.swi-prolog.org
For built-in help, use ?- help(Topic). or ?- apropos(Word).

?- reverse([1,2,3],[],R).
R = [3, 2, 1].

?- reverse([T,A,W,H,S,A,H,S],[],R).
R = [S, H, A, S, H, W, A, T].

?- reverse([A,I,B,O,H,P,H,O,B,I,A],[],R).
R = [A, I, B, O, H, P, H, O, B, I, A].

?- reverse([M,A,D,A,M],[],R).
R = [M, A, D, A, M].

?- reverse([10,20,30,40,50],[],R).
R = [50, 40, 30, 20, 10].

?-
```

Exercise 2.


2. Check whether a number is in a given range

 exp72.pl

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exp72.pl

```
betweenList(L,R,[]) :-  
    L>=R.  
betweenList(L,R,[L|Rest]) :-  
    L<R,  
    LL is L+1,  
    betweenList(LL,R, Rest).  
between_(L,X,R) :-  
    betweenList(L,R,[L|List]),  
    member(X, List). ▲
```

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```
?- between_(1,X,3).  
X = 2 ,
```

```
?- between_(59,X,61).  
X = 60 ,
```

```
?- between_(46,X,48).  
X = 47 ,
```

```
?- between_(29,X,31).  
X = 30 ,
```

```
?-
```