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CSE 465

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<div align="center">Homework 3 – Prolog</div>

Output on ceclnx01:

```
| ?- [hw3].
compiling /home/danzicr/CSE465/hw3.pl for byte code...
/home/danzicr/CSE465/hw3.pl compiled, 76 lines read - 11005 bytes written, 13 ms

yes
| ?- quadratic(1,3,-4,ROOTS).

ROOTS = [1.0,-4.0]

yes
| ?- quadratic(1,0,0,ROOTS).

ROOTS = [0]

yes
| ?- quadratic(1,0,5,ROOTS).

ROOTS = [] ? ;

no
| ?- minmax([3,2,9,5],L).

L = [2,9] ? ;

no
| ?- minmax([3],L).

L = [3,3]

yes
| ?- zip([1,2,3],[a,b,c],Z).

Z = [[1,a],[2,b],[3,c]]

yes
| ?- zip([],[],Z).

Z = []

yes
| ?-
```

```
| ?- splitable([1,2,3,4,5,5],L1,L2).

L1 = [1,2,3,4]
L2 = [5,5] ? ;

no
| ?- splitable([1,2,3,9],L1,L2).

no
| ?- union([1,2,3],[2,3,4],U).

U = [1,2,3,4] ? ;

(1 ms) no
| ?- union([1,2,3],[],U).

U = [1,2,3] ? ;

U = [1,2,3]

yes
| ?- union([8],[2,3,4],U).

U = [8,2,3,4]

yes
| ?- issorted([1,2,3,3,4,5]).

true ? ;

no
| ?- issorted([2,3,5,3]).

no
| ?- issorted([]).
```

```
| ?- [zipcodes].
compiling /home/danzicr/CSE465/zipcodes.pl for byte code...
/home/danzicr/CSE465/zipcodes.pl compiled, 43611 lines read - 12202519 bytes writ
ten, 2972 ms

(1736 ms) yes
| ?- getStateInfo('Oxford', State, 45056).

State = 'OH'

yes
| ?- getStateInfo('Oxford', State, _).

State = 'AL' ? ;

State = 'AR' ? ;

State = 'CT' ? ;

State = 'FL' ? ;

State = 'GA' ? ;

State = 'GA' ? ;

State = 'IA' ? ;

State = 'IN' ? ;

State = 'KS' ? ;

State = 'MA' ? ;

State = 'MD' ? ;

State = 'ME' ? ;

State = 'MI' ? ;

State = 'MI' ? ;

State = 'MS' ?
```

```
State = 'CT' ? ;

State = 'FL' ? ;

State = 'GA' ? ;

State = 'GA' ? ;

State = 'IA' ? ;

State = 'IN' ? ;

State = 'KS' ? ;

State = 'MA' ? ;

State = 'MD' ? ;

State = 'ME' ? ;

State = 'MI' ? ;

State = 'MI' ? ;

State = 'MS' ? ;

State = 'NC' ? ;

State = 'NE' ? ;

State = 'NJ' ? ;

State = 'NY' ? ;

State = 'OH' ? ;

State = 'PA' ? ;

State = 'WI' ? ;

(5 ms) no
| ?- getStateInfo(_, 'OH', 48122).

no
| ?-
```