CSE 341 - PROGRAMMING LANGUAGES – HW #4 REPORT

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PART1) run command: swipl -s part1.pl

```
?- route(edirne,X).
X = edremit ;
X = erzincan ;              ?- route(istanbul,burdur).
false.                      true .
```

```
?- route(istanbul,X).
X = antalya ;
X = izmir ;
X = gaziantep ;
X = ankara ;
X = van ;
X = rize ;
X = gaziantep ;
X = konya ;
X = isparta ;
X = antalya ;
X = van ;
X = konya ;
X = ankara ;
X = rize ;
X = van ;
X = ankara ;
X = burdur ;
X = konya ;
X = rize ;
X = antalya ;
X = konya ;
X = ankara ;
false.
```

PART2) run command: swipl -s part2.pl

```
?- sroute(ankara,istanbul,Distance).
Distance = 351 .

?- sroute(edremit,istanbul,Distance).
false.

?- sroute(istanbul,burdur,Distance).
Distance = 660 .

?- sroute(konya,rize,Distance).
Distance = 1520 .
```

PART3) run command: swipl -s part3.pl

```
?- schedule(a,P,T).
P = z23,
T = 10 ;
P = z11,
T = 12.

?- usage(207,T).
T = 16 ;
T = 17.

?- conflict(452,455).
true .

?- meet(a,b).
true .

?- meet(a,e).
false.
```

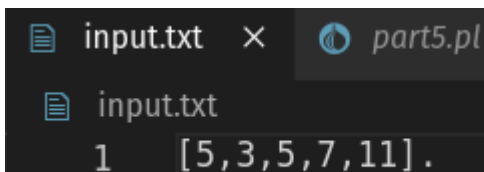**PART4) run command: swipl -s part4.pl**

```
?- element(6,[4,3,7,2,6]).
true.

?- element(6,[4,3,7,2]).
false.

?- union([1,2,3],[4,5],[1,2,3,4,5]).
true.

?- union([1,2,3],[4,5],[5,7,8,6,2]).
false.
```

```
?- intersect([4,5],[3,4,6],[4]).
true.

?- intersect([4,5],[3,4,6],[4,5]).
false.

?- equivalent([1,2,3],[3,2,1]).
true.

?- equivalent([1,2,3],[3,2,1,4]).
false.
```

PART5) run command: swipl -s part5.pl

```
?- main.
5-3*(5-7) = 11
Written in output.txt
[5,3,5,7,11]
true .
```

input.txt:

```
📄 input.txt  ✕     🔵 part5.pl

📄 input.txt
    1    [5,3,5,7,11].
```

output.txt:

```
input.txt        output.txt ×

output.txt
  1     5-3*(5-7) = 11
```

```
?- main.
(5-(3-5))*7 = 49
Written in output.txt
[5,3,5,7,49]
true
```

input.txt:

```
input.txt  ×     output.txt

input.txt
  1     [5,3,5,7,49].
```

output.txt:

```
input.txt        output.txt ×

output.txt
  1     (5-(3-5))*7 = 49
```

PART6) I could not implement part6 because it was difficult for me to do. I think it is a too hard problem for us.