

GraphMinimal.mod

```
1 /*****
2  * OPL 12.4 Model
3  * Author: alexander
4  * Creation Date: Apr 24, 2014 at 6:15:55 PM
5  *****/
6 using CP;
7 range edgeId = 1..3;
8
9 tuple Edge {
10     int pred;
11     int succ;
12     {int} setPreds; // a guard expression
13 };
14
15 {int} seen = {1,2};
16
17 int current = 1;
18 Edge edges[edgeId] = [<1,2, {}>, <1,3, {2}>, <1,4, {3}>];
19
20 int countPredecessors[e in edgeId] = card(edges
    [e].setPreds);
21 int countInSeen[e in edgeId] = sum(i in edges
    [e].setPreds) (i in seen);
22 int isValid[e in edgeId] = (countInSeen[e] ==
    countPredecessors[e]);
23
24 dvar int selectedEdge in edgeId;
25 maximize selectedEdge;
26 subject to {
27     isValid[selectedEdge] == true;
28 }
29
30 execute {
31     writeln(countPredecessors);
```

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```
32     writeln(countInSeen);  
33     writeln(isValid);  
34 }  
35
```