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1  /*
2  * Scola Tutorial
3  * by Antoine B. Rauzy
4  * Ferry
5  */
6
7  domain Location {LEFT_BANK, RIVER, RIGHT_BANK} end
8
9  block LeftBank
10     integer truckNumber 0
11     symbol truckName NONE
12     Boolean boardingClosed false
13     block TruckLane
14     end
15 end
16 block RightBank
17     block TruckLane
18     end
19 end
20 block Ferry
21     Location location LEFT_BANK
22     symbol truckName NONE
23     block Cargo
24     end
25 end
26
27 scenario RiverCrossing
28     scenario TruckArrivalOnLeftBank as LeftBank
29         state Initial
30         choice IsClosingTime
31             branch yes
32             branch no
33         end
34         task CloseBoarding
35             set boardingClosed true
36         end
37         task NewTruck
38             set truckNumber (add truckNumber 1)
39             set truckName (symbol (append "truck" (string truckNumber)))
40             new block (append TruckLane (eval truckName))
41         end
42         state Final
43         next Initial IsClosingTime
44         next IsClosingTime.yes CloseBoarding
45         next IsClosingTime.no NewTruck
46         next NewTruck IsClosingTime
47         next CloseBoarding Final
48     end
49     scenario FerryWay as Ferry
50         state Initial
51         test IsTruckLaneEmpty
52             case yes (eq (size 'main.LeftBank.TruckLane) 0)
53             case no (df (size 'main.LeftBank.TruckLane) 0)
54         end
55         test IsBoardingClose
56             case yes main.LeftBank.boardingClosed
57             case no (not main.LeftBank.boardingClosed)
58         end
59         scenario CrossRiverForthAndBack
60             task Embark
61                 set truckName (identifier (element 'main.LeftBank.TruckLane 0))
62                 move (append main.LeftBank.TruckLane (eval truckName)) (append Cargo (
63                     eval truckName))
64             end
65             task CrossRiverFromLeftBankToRightBank
66                 set location RIVER
67             end
68             task Disembark
69                 set location RIGHT_BANK
70                 move (append Cargo (eval truckName)) (append main.RightBank.TruckLane
71                     (eval truckName))
72             end
73         end
74     end

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71         task CrossRiverFromRightBankToLeftBank
72             set location RIVER
73         end
74         task Arrive
75             set location LEFT_BANK
76         end
77         next Embark CrossRiverFromLeftBankToRightBank
78         next CrossRiverFromLeftBankToRightBank Disembark
79         next Disembark CrossRiverFromRightBankToLeftBank
80         next CrossRiverFromRightBankToLeftBank Arrive
81     end
82     state Final
83     next Initial IsTruckLaneEmpty
84     next IsTruckLaneEmpty.yes IsBoardingClose
85     next IsTruckLaneEmpty.no CrossRiverForthAndBack.Embark
86     next IsBoardingClose.yes Final
87     next IsBoardingClose.no IsTruckLaneEmpty
88     next CrossRiverForthAndBack.Arrive IsTruckLaneEmpty
89     end
90 end
91
```