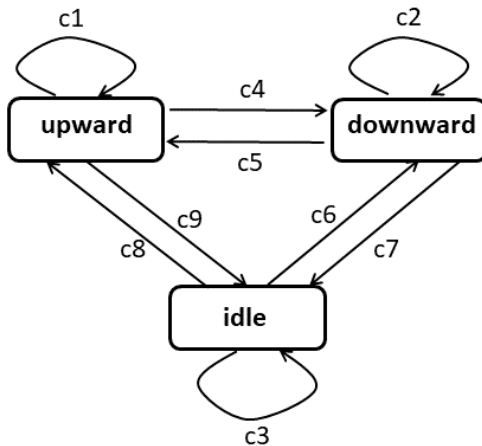


Assignment 6 - Part 3

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State Diagram:



Ordered Lists (ascending order):

- * **to** = list of floors to which people inside elevator want to reach in the direction of its motion
- * **down** = list of floors outside the elevator from where people have pressed the 'down' button
- * **up** = list of floors outside the elevator from where people have pressed the 'up' button

Conditions:

```
c1 = !to.isEmpty() || (!up.isEmpty() && up.max() ≥ f) ||  
      (!down.isEmpty() && down.max() > f)  
c2 = !to.isEmpty() || (!up.isEmpty() && up.min() < f) ||  
      (!down.isEmpty() && down.min() ≤ f)  
c3 = to.isEmpty() && up.isEmpty() && down.isEmpty()  
  
c4 = to.isEmpty() && (!up.isEmpty() && !down.isEmpty()) &&  
      (!up.isEmpty() && up.max() < f) && (!down.isEmpty() && down.max() ≤ f)  
c5 = to.isEmpty() && (!up.isEmpty() && !down.isEmpty()) &&  
      (!up.isEmpty() && up.min() ≥ f) && (!down.isEmpty() && down.min() > f)  
  
c6 = to.isEmpty() && ((!up.isEmpty() && up.min() < f) ||  
      (!down.isEmpty() && down.min() ≤ f))  
c7 = to.isEmpty() && up.isEmpty() && down.isEmpty()  
c8 = to.isEmpty() && ((!up.isEmpty() && up.max() ≥ f) ||  
      (!down.isEmpty() && down.max() > f))  
c9 = to.isEmpty() && up.isEmpty() && down.isEmpty()
```

End of Assignment 6 - Part 3