



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

```

c1 = !to.isEmpty() || (!up.isEmpty() && up.max() ≥ f) ||
      (!down.isEmpty() && down.max() > f)

c2 = !to.isEmpty() || (!down.isEmpty() && down.min() ≤ f) ||
      (!up.isEmpty() && up.min() < f)

c3 = to.isEmpty() && up.isEmpty() && down.isEmpty()

c4 = to.isEmpty() && (!up.isEmpty() && !down.isEmpty()) && (up.max() < f)
    && (down.max() ≤ f)

c5 = to.isEmpty() && (!up.isEmpty() && !down.isEmpty()) && (down.min() > f)
    && (up.min() ≥ f)

c6 = to.isEmpty() && ((!down.isEmpty() && down.min() < f && down.max() ≤ f)
    || (!up.isEmpty() && up.max() < f && up.min() < f))

c7 = to.isEmpty() && up.isEmpty() && down.isEmpty()

c8 = to.isEmpty() && ((!down.isEmpty() && down.min() > f && down.max() > f)
    || (!up.isEmpty() && up.max() > f && up.min() ≥ f))

c9 = to.isEmpty() && up.isEmpty() && down.isEmpty()
  
```