



**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() || (!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() && up.min() ≥ f) ||
(!down.isEmpty() && down.min() > f)
```

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

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

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

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