Corner Cases:

Concurrency: Since there are multiple buttons involved, care must be taken in case multiple buttons are pressed at the same time or within a very small interval from each other. The state of should not be broken in such a scenario except in case of an emergency scenario if there is provision for one.

Capacity: The lift system should be designed to accommodate the expected number of passengers during peak hours. The size and capacity of the lift should be carefully considered to ensure that it can transport passengers safely and efficiently.

Safety: The lift system should be designed to ensure the safety of passengers at all times. This includes measures such as emergency stop buttons, interlocks, and other safety features that prevent the lift from moving if a door is open or if there is a problem with the lift's mechanisms.

Accessibility: The lift system should be accessible to all users, including those with disabilities. This may involve features such as wider doors, larger lift cars, and Braille signage.

Power Outages: In the event of a power outage, the lift system should have a backup power source to ensure that passengers are not stranded. This may involve the use of battery backups or generators.