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Logic

Event Simulation

The simulation starts with a person with an initial floor and a destination floor, and an elevator in its idle state on a certain floor. The elevator starts moving when people ask for the elevator. A random function will decide the future event in what floor each person in the array is trying to go. And there will be a delayed time tracker for whoever is waiting on a floor to get in to an elevator.Depending on which direction the person is going, they will get on a specific elevator, as there will be 4 elevators. All entering passengers are placed on the activation stack once passengers exit the elevator on time. Passengers' destinations are added to the elevator's destination list once they enter. Each elevator's list of destinations Will include the number of passengers departing from each destination. If all elevators are busy and not going in the right direction, the system will reconsider the person's request.

For example, if there are 4 people waiting on floor 3, and 2 of them are trying to go up to floor 4 and 5, they will get on an elevator that is idle or get on an elevator that is already going up from a floor below. And it will be the exact opposite for people that are trying to go down. We will generate a random function that will decide which floor they want to go to. When you arrive at a new floor, if the person requests an array indicating people want to get off from the current floor the event will be submitted to the FEL. There will be a time delay for how long each person is waiting for an elevator and a time delay for how long they take to try to get on and get off the elevator. The time will be tracked from the time of arrival and to the time it takes to reach the destination.