Elevator Simulation

Write an application that simulates the movement of a passenger elevator. Create a class named Elevator that holds the following information: current floor number, number of passengers on the elevator, and direction (up or down). Declare an enumerated type to represent the elevator direction. Most of your other code will be located in the startup form.

The simulated building contains eight floors. The elevator starts at the first floor and moves upward until it reaches the top floor; it then pauses for one cycle, and begins moving downward until it reaches the first floor. After one cycle, it begins moving up again. Each floor of the building is initialized with a random number of passengers (between 0 and 5). As the elevator stops at each floor and picks up passengers, the number of passengers inside the elevator increases. When the elevator reaches the end of its trip, all passengers leave the elevator, and the list of floors is filled with a new set of random passenger counts.

Use a Timer control to move the elevator to the next floor every two seconds. On each floor, display the number of people waiting for the elevator.
Before moving to the second floor, the single passenger on the first floor will enter the elevator.

Use a Panel control to display the elevator as it is moving up and down. To move the Panel up and down in the window, create a new Point object using ***x*** and ***y*** coordinates, and assign it to the Panel's Location property.

Example Run:
In this screenshot, the elevator is going down and picked up people from the upper 3 floors. The people waiting on the elevator are created randomly and displayed in a label we create in run time based on the random number of people generated. The number of floors is always 8.