Remote Control Fan

Vague, high-level problem statement, as delivered in an interview: Design an interaction system between a fan and its remote control.

What that typically means:

Imagine you are hired by a fan manufacturing company, to design the interaction between a table-fan and its remote control. Assume four simplistic buttons on the remote - Power, Speed, Oscillation, Timer.

*Power button: toggles the on/off state of the fan

*Speed button: each time you press it increases the speed of the fan until some maximum, after which the speed becomes 0 (i.e. power off)

*Oscillation button: toggles the on/off oscillation

*Timer button: each time you press, it increases the hours until some max

Think about what happens if someone presses the buttons too fast?

Deliverables:

1. A set of classes, showing relationships with each other where appropriate. Classes should show state and methods. Use any convenient notation.

2. Main() method, showing how you'll initialize your system and use it.

3. (Optional, only if it helps bolster understanding): A flow chart of main use-cases and a state-diagram.

Please put everything in one single file and upload it. It could be a Doc file, online GDoc (converted to PDF), a powerpoint, a spreadsheet, a Visio file, whatever. Just have it all in there.

Possible directions for further questions:

1. What assumptions are you making, and how will your design change, if those assumptions change?

2. If you provide this library as a service, how will you scale it?