

Lecture 5. UML use case, sequence, activity and state diagrams SOEN 6481
Summer 2022

Topic: Diagrammatic notations

Duration: 60 minutes

Based on the following requirements for a SmartHome system, create the following diagrams:

- A UML use case diagram to collect all the operations that a window controller should perform. **20 points.**
- UML sequence diagram to depict the interaction between primary and secondary actors. **40 points.**
- The UML state machine diagram that covers the scenarios you have identified in (b). **40 points.**

SmartHome Requirements: Window controller

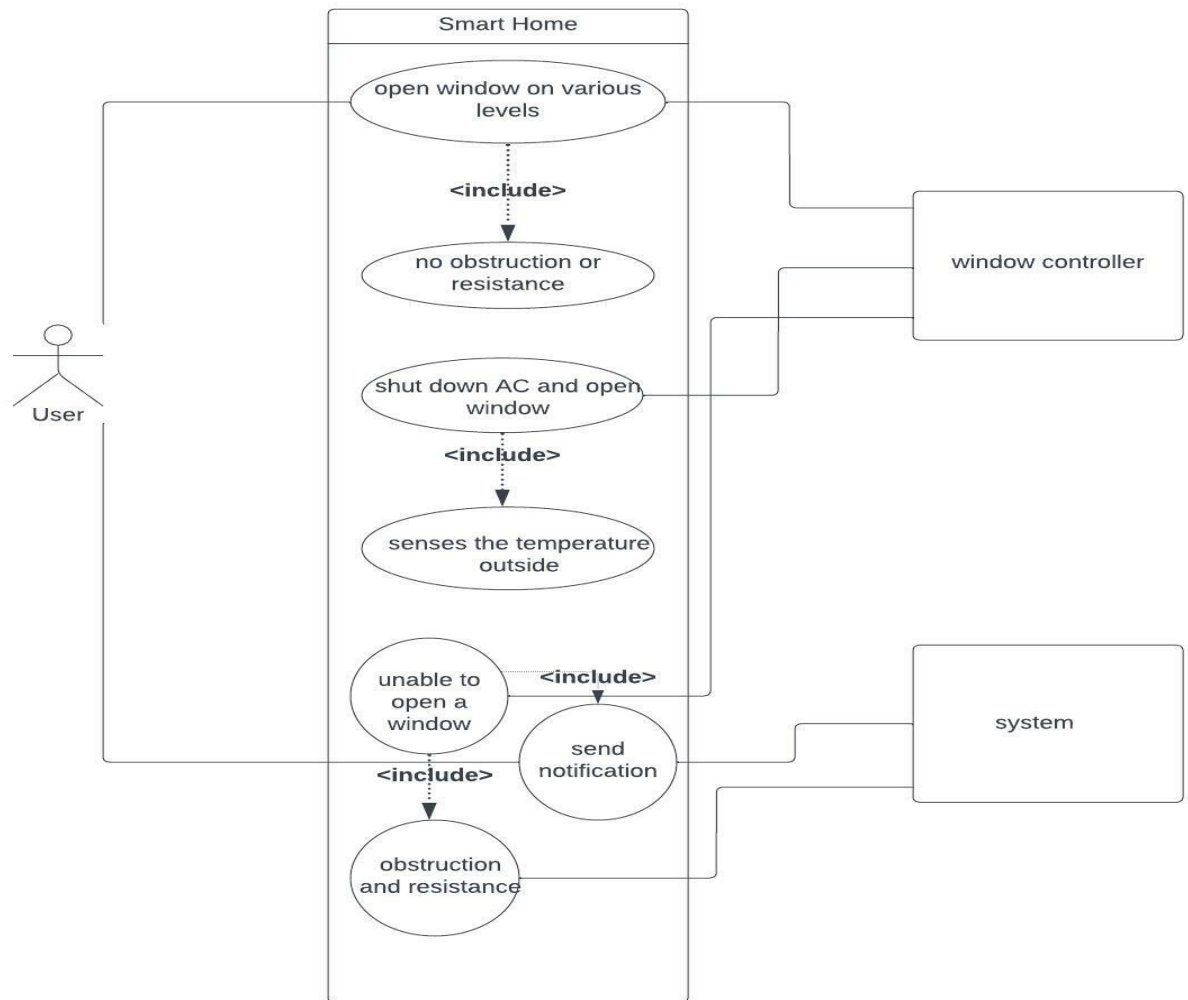
- System shall support commands to open windows on various levels of the house
- System shall shut down air conditioning and open windows if temperature outside is cooler than the inside temperature
- System shall not open or close any windows if there is something obstructing the path of the window or if it encounters any resistance.
- System shall send notifications to homeowner if window controller could not complete the desired action (open or close) windows

Submit it as a PDF file to Moodle **individually**.

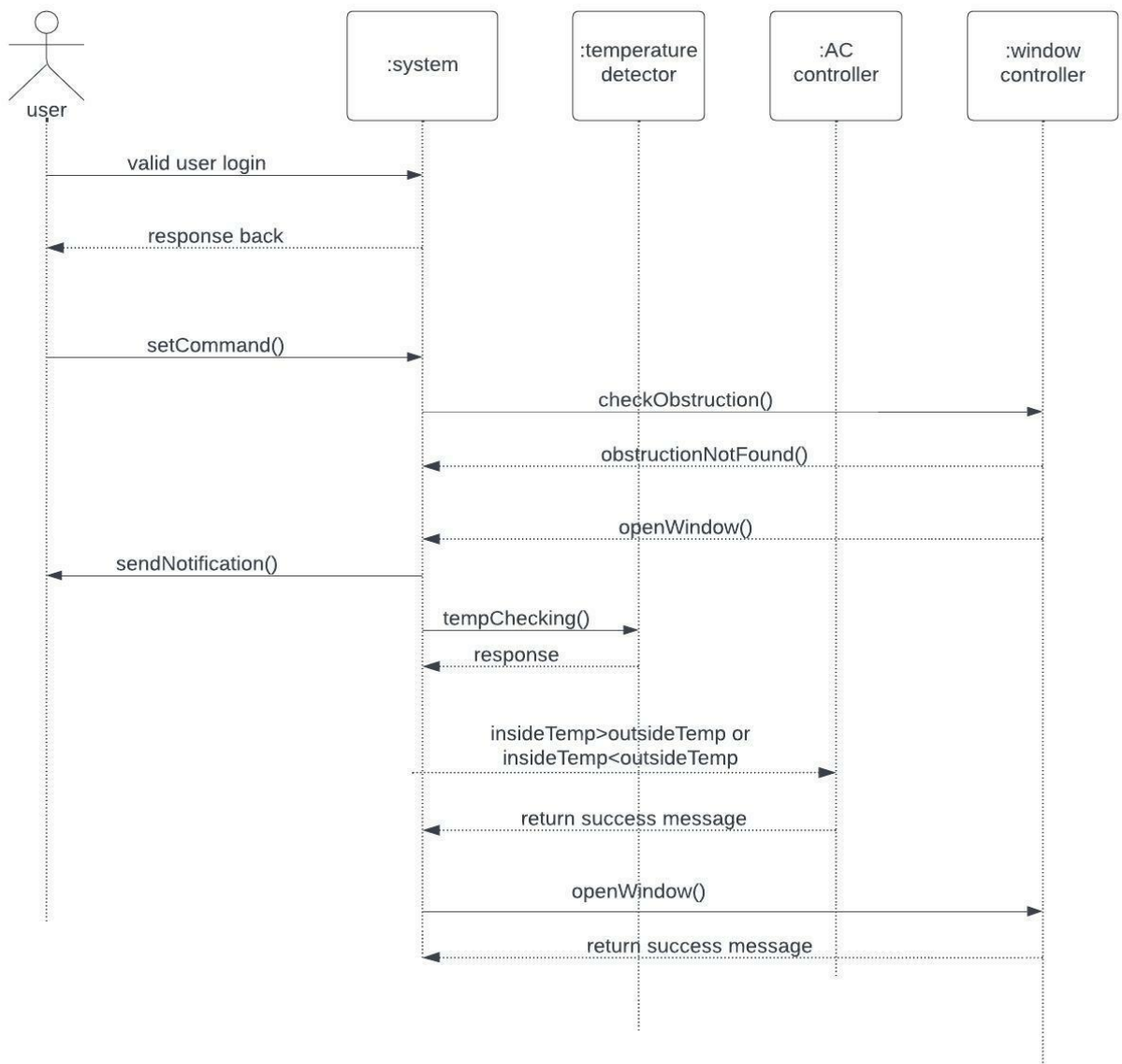
It is recommend to use Draw.io^{[\[1\]](#)} (free) or Microsoft Visio to do the diagrams.

Total 100 points

1. Use case diagram:



2. Sequence diagram:



3. State Machine Diagram:

