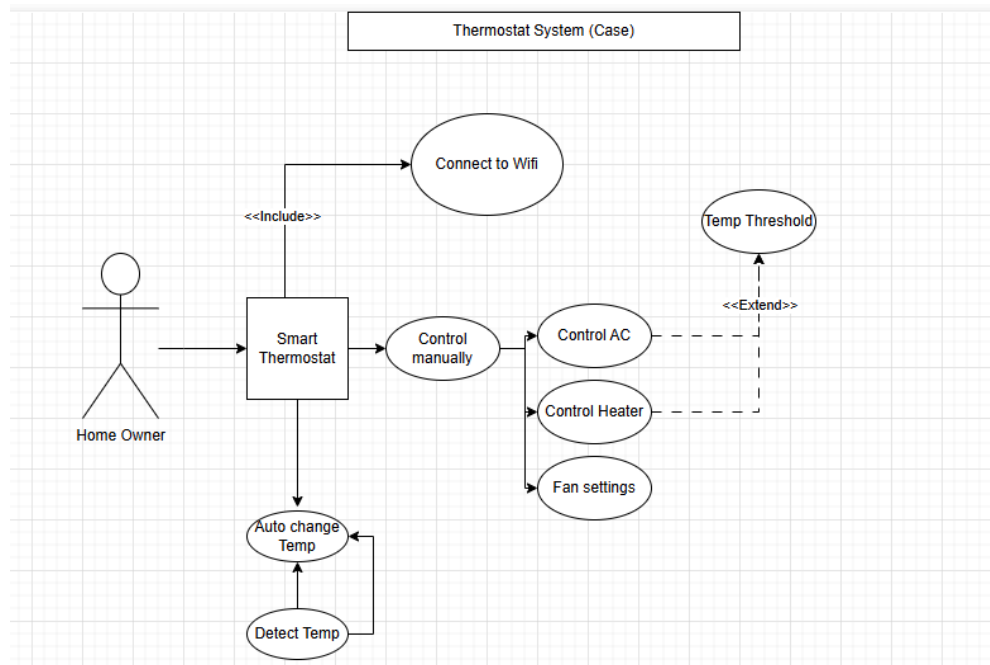


## Software Engineering UML Assignment

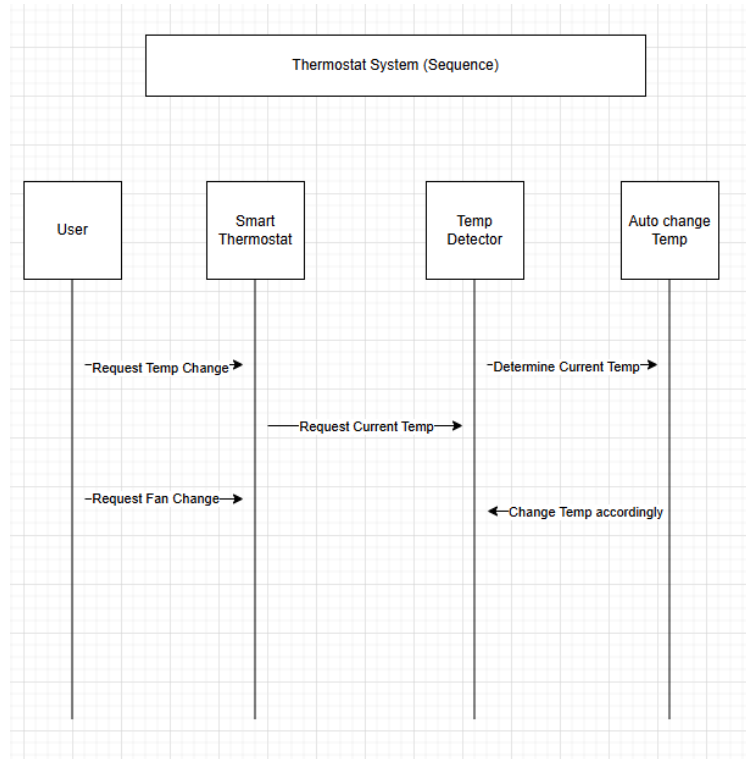
The purpose of this paper is to define the three separate UML diagrams (Case, Sequence and Deployment), and their individual and combined importance. This paper also defines and explains each element in the UML diagrams attached. This paper will serve to explain the importance of each element, as well as why the UML design has been constructed in the manner it has.

## UML Diagram Assignment



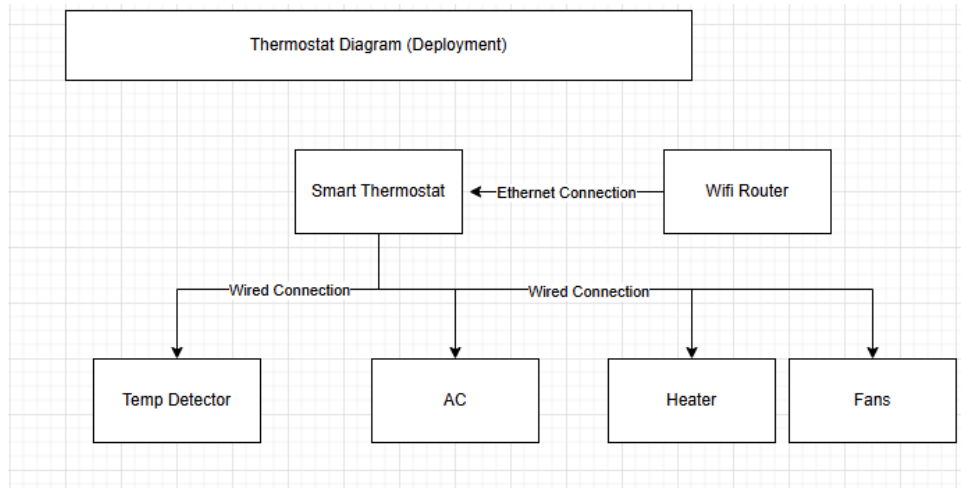
The Case diagram is defined as “A UML use case diagram is the primary form of system/software requirements for a new software program underdeveloped. Use cases specify the expected behavior (what), and not the exact method of making it happen (how). Use cases once specified can be denoted both textual and visual representation (i.e. use case diagram). A key concept of use case modeling is that it helps us design a system from the end user's perspective. It is an effective technique for communicating system behavior in the user's terms by specifying all externally visible system behavior.” (Paragrim)

## UML Diagram Assignment



The Sequence Diagram is defined as “interaction diagrams that detail how operations are carried out. They capture the interaction between objects in the context of a collaboration. Sequence Diagrams are time focus and they show the order of the interaction visually by using the vertical axis of the diagram to represent time what messages are sent and when.” (Paragrim)

## UML Diagram Assignment



The Deployment Diagram is defined as “a diagram that shows the configuration of run time processing nodes and the components that live on them. Deployment diagrams is a kind of structure diagram used in modeling the physical aspects of an object-oriented system. They are often used to model the static deployment view of a system (topology of the hardware).”

(Paragraim)

The three separate diagrams all have individual importance in the bigger picture. Beginning with the Case Diagram. The Case Diagram shows how the user case will interact with the software. This diagram shows the “actor” (in this case the homeowner) interacting with the Smart Thermostat. Then the Smart Thermostat has different interactions. As stated above, this helps visualize the expected behavior and interaction.

The Sequence Diagram is important, as it shows how the interactions will occur. This is an important visualization as it shows the expected interactions and outlines and expected outcome. This diagram is different in its design. This is to show how each piece directly interacts with the other

## UML Diagram Assignment

The Deployment Diagram is important as it serves as a “topology of the hardware” (Paragrim). This shows how all the pieces fit together and how they are expected to interact physically.

All three UML designs were built with efficiency and simplicity in mind. The design is built to be readable by anyone, avoiding any unnecessary interactions, nodes and other pieces that may have clogged the overall finished product. Included is the Homeowner (Actor), the interaction with the Smart Thermostat, and its interactions with its included features. All of which are features that align with the purpose of a Thermostat.

### Bibliography

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## UML Diagram Assignment

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