

# Week 5 Essay Question

---

CSE-682 SOFTWARE ENGINEERING

PROF. HESHAM SAADAWI

2/3/2023

Anthony Redamonti  
SYRACUSE UNIVERSITY

## Question

How might you use a model of a system that already exists? You may assume the system model is represented as UML diagrams. Explain why it is not always necessary for such a model to be complete and correct. Would the same be true if you were developing a model of a new system?

The existing model is represented as a UML diagram. Unified Modeling Language (UML) is a language used in software engineering to model the classes, interactions, events, and behavior of a system in an effort to understand, maintain, and improve it. The effective visual techniques involved with UML have made it one of the most popular modeling languages used in a variety of professional fields.

When using a preexisting UML model, the overall architecture and behavior of the system can be observed. It can aid in understanding all of the system's subcomponents, including their class structure, important members, and their overall roles within the system. The preexisting UML model can also visually assist in recognizing possible improvements and identifying weaknesses in the existing system.

Such a system model does not need to be complete and entirely correct. It functions as a visual aid in conveying the overall system architecture and behavior. The UML diagram can still perform its function if it's missing a few trivial details. However, the UML diagram should be complete and correct if it's being used as a tool to document the workings of the entire system.

The same can be said for newer systems. In a newer system, once the system is complete, the UML diagram does not need to be exactly accurate to convey the architecture and relationships between its parts. However, if the system is being developed using models, then it's imperative that the UML diagram be as accurate as possible so that the system is properly designed during each stage in its development.