

28.02.2025

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## **Laborator 1. PS.**

### **2. Ce este UML si pentru ce este utilizat?**

UML (Unified Modeling Language) is a visual modeling language used in software engineering for specifying, designing, documenting, and visualizing software systems. It is used to represent the architecture, behavior, and interactions between components of a system.

Main uses of UML:

1. Software analysis and design – Helps to understand and define the requirements of a system.
2. Documentation – Provides a clear and standardized representation of the software architecture.
3. Inter-team communication – Facilitates collaboration between developers, analysts, and stakeholders.
4. Architectural modeling – Represents the structure of the system and how its components interact.
5. Testing and maintenance – Allows for rapid identification of errors and modification of the system in an organized manner.

### **3. Ce sunt modelele și care este utilitatea lor?**

Models allow us to describe systems efficiently and elegantly. A system is an integrated whole made up of components that are related to each other and influence each other in such a way that they can be perceived as a single, task-based or purposeful unit. In this sense, they are separated from their environment. Examples of systems are material things, such as cars or airplanes, ecological environments, such as lakes and forests, but also organizational units such as a university or a company. In information technology, we are interested in how it is developed especially in software systems and therefore in models that describe software systems.

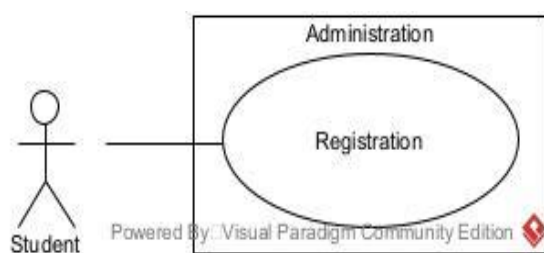
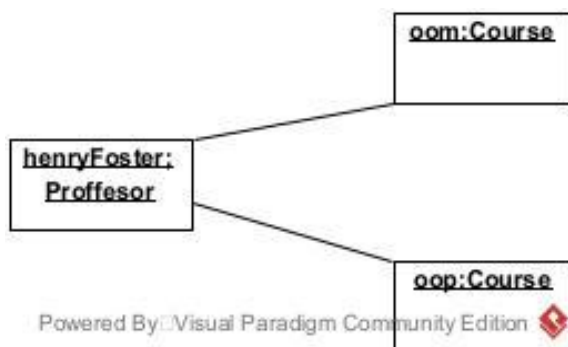
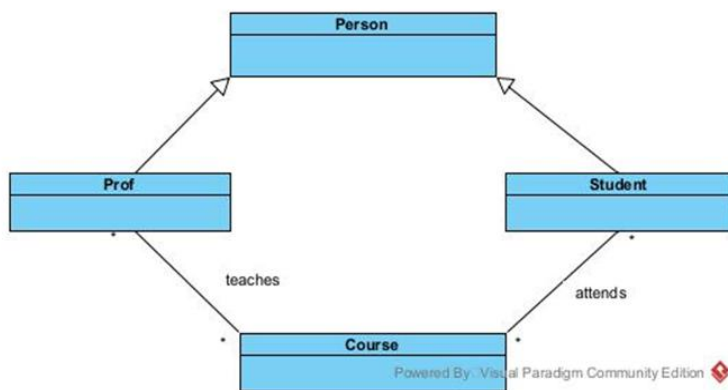
To summarize, there are 3 applications of models

1.Models as a sketch

2.Model as a blueprint

3.Models as executable programs

4.



## 5. Ce tipuri de diagrame sunt prezentate în [1] – Capitolul 2? Care sunt asemănările și deosebirile?

Similarities: Represent aspects of a software system – All of these diagrams are used to model a computer system, either structurally or behaviorally.

Standardized in UML – All are part of the UML standard and follow well-defined rules and symbols. Used in software analysis and design – They help in understanding, designing, and communicating the requirements of a system.

7.

