

1. What is UML used for ?

UML (Unified Modelling Language) is used to help us communicate the design and visualize the relationship between different parts of the diagram of a complex program. We will use UML class diagrams, UML relationships, and UML notations for objects in this case.

2. Consider the following relationships. Explain whether each is an association, composition, or inheritance.

- a. A dog is a kind of pet

This is an inheritance relationship as per is the superclass and dog is the subclass

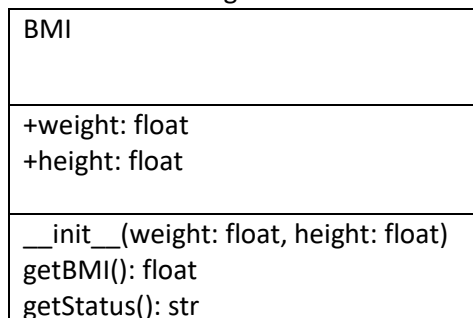
- b. A dog owner feeds the dog

This is an association between owner class and dog class

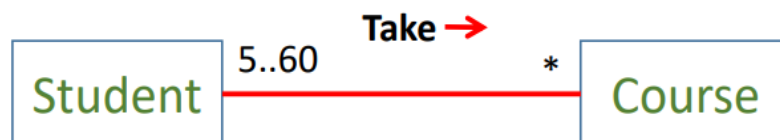
- c. The dog has a tail

This is composition of a dog class

3. Draw the class diagram for the following python code :



4. Consider a Student class and a Course class. A student may take any number of courses; and a course may have from five to sixty students. Draw the class diagram, showing the association between the two classes.



5. State and explain two UML approaches for interactions modeling.

UML use case diagram models the interaction between the system and its external agents such as human users or other systems. It is usually shown in oval involving actors and actors involved.

UML sequence diagram shows interaction between actors and objects in the system, and interaction between the objects themselves. It also usually will show some flow of time in order to order the messages. (typically downwards as time passes)