Ex No: 2   **UML Class Diagram for Student Management System**

Aim: To draw UML Class diagram for student management system.
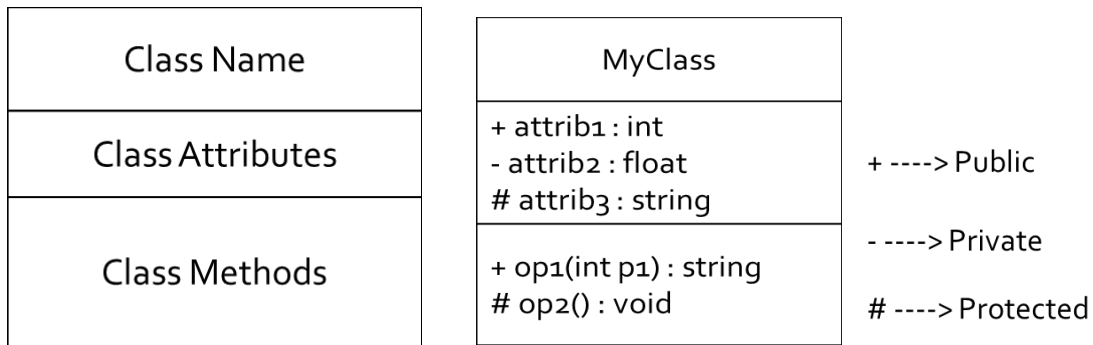
Procedure:

A class diagram is a static diagram. This describes the structure of the system by showing the system's classes, their attributes, methods and relationship between objects.

Class Diagram Notations

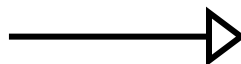In UML a class is represented as a rectangle. It has three parts in it.
- Class Name
- Class Attributes
- Class Methods (Operations)

Class Name
Class Attributes
Class Methods

MyClass
+ attrib1 : int - attrib2 : float # attrib3 : string
+ op1(int p1) : string # op2() : void

+ ----> Public

- ----> Private

----> Protected

When objects/methods of one class use objects/methods from another class they are defined using relationship.

Types of relationship
- Inheritance
- Association
- Aggregation
- Composition
- Dependency

- Inheritance
  - Represents "is a" relationship

- Association
  - A structural link between two classes

- Aggregation
    - A special type of association. It represents a "part of" relationship

- Composition
    - A special type of aggregation. In this if one part is deleted then the other part also gets discarded

- Dependency
    - It depicts the relationship between two classes, where a change in one class cause change in another class

Result:

Thus UML Class diagram for student management system is drawn successfully.

Ex2:

course

#id: int
+amount: string
+date: string
+Attribute1

+update()

subjects

+information: string

+process detail()

enrollment

#id: int
+details: string
+requirements: string
+Attribute1

+update()

students

#id: int
+name: string
+dept: string
+atmnumber: string

#enable user()
#disable user()

admin

#id: int
+name: string
+age: string
+contactnum: string
-username: string
-password: string

+create()
+update()

instructors

+credentials: string

+add()
+update()

Transactions

#id: int
+number: int
+Attribute1

+processdebit()