Date :

Practical No.: 7

Aim: To draw the implementation view diagram: Component diagram.

Theory:

- Component diagrams are used to show code modules of a system in Unified Modeling Language (UML). They are generally used for modeling subsystems. It represents how each and every component acts during execution and running of a system program.

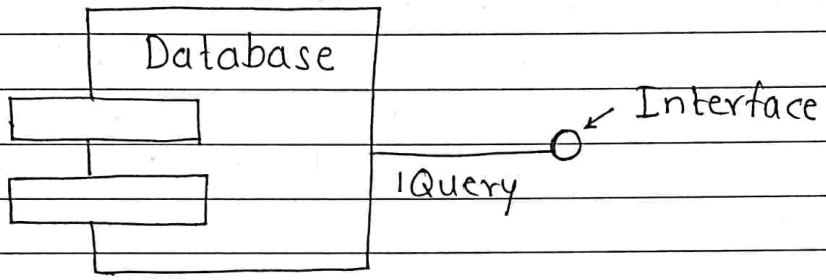
- They are also used to show and represent structure and organization of all components. These code modules include application program, ActiveX control, Java Beans, backend databases or some ASP programs. The component diagrams represent implementation of view models.

- The component diagrams are for representing interfaces and dependencies among software architecture. The word component simply means modules of a class that usually represents an independent subsystem.

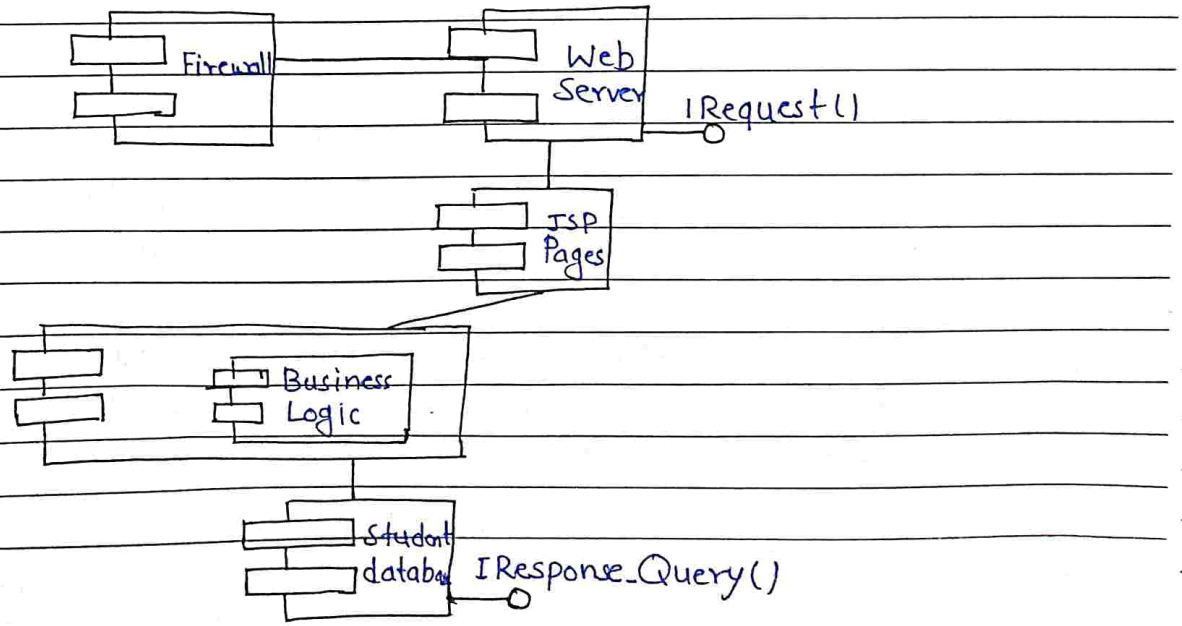
- These components have ability to interface with rest of the system. The component diagram is used to explain working and behavior of various components

of a system and is static diagram of UML. They are also used for subsystem modeling. The main purpose of component diagram is simply to show relationship among various components of a system.

- The component and interface are as shown below:



- Example - Following is a component diagram for the 'Online Course Registration' system. This diagram shows conceptual view of server-side components.



- Advantages:
- Component diagrams are very simple, standardized, and very easy to understand.
- It is also useful in representing implementation of system
- Use of reusable components also helps in reducing overall development cost.
- It is very easy to modify and update implementation without causing any other side effects.

- Disadvantages:
- They cannot be used for designing software like web pages, applications, etc.
- It also requires sponsoring equipment and actuators for each and every component.