**LAB EXERCISE 9**

**Aim: To draw the behavioural view diagram: Component diagram**

**Objective:** Design an Component Diagram for order management system

**Theory:** Component diagrams are used to describe the physical artifacts of a system. This artifact includes files, executables, libraries, etc

The purpose of this diagram is different. Component diagrams are used during the implementation phase of an application. However, it is prepared well in advance to visualize the implementation details.

Initially, the system is designed using different UML diagrams and then when the artifacts are ready, component diagrams are used to get an idea of the implementation.

This diagram is very important as without it the application cannot be implemented efficiently. A well-prepared component diagram is also important for other aspects such as application performance, maintenance, etc.

Before drawing a component diagram, the following artifacts are to be identified clearly −

* Files used in the system.
* Libraries and other artifacts relevant to the application.
* Relationships among the artifacts.

After identifying the artifacts, the following points need to be kept in mind.

* Use a meaningful name to identify the component for which the diagram is to be drawn.
* Prepare a mental layout before producing the using tools.
* Use notes for clarifying important points.

Following is a component diagram for order management system. Here, the artifacts are files. The diagram shows the files in the application and their relationships. In actual, the component diagram also contains dlls, libraries, folders, etc.

In the following diagram, four files are identified and their relationships are produced. Component diagram cannot be matched directly with other UML diagrams discussed so far as it is drawn for completely different purpose.

The following component diagram has been drawn considering all the points mentioned above.

