What are Modular system? Explain different types of model cohesion and coupling.

Modular systems

Modular systems are software systems that are designed as a collection of separate modules or components, each responsible for a specific functionality. These modules are designed to be independent of each other, making it easier to develop, test, maintain and modify the software system.

Cohesion:

Cohesion refers to the degree to which the elements within a module are related to each other.

There are several types of cohesion:

- 1. Functional cohesion: The elements within a module are related because they all contribute to a single, well-defined function or task.
- 2. Sequential cohesion: The elements within a module are related because they are executed sequentially to accomplish a specific task.
- 3. Communicational cohesion: The elements within a module are related because they all operate on the same data or communicate with each other to accomplish a specific task.
- 4. Procedural cohesion: The elements within a module are related because they all contribute to a specific procedural task or activity.
- 5. Temporal cohesion: The elements within a module are related because they are all executed at the same time or within the same time frame.

What are Modular system? Explain different types of model cohesion and coupling.

Coupling:

Coupling refers to the degree to which modules in a system depend on each other.

There are several types of coupling:

- 1. Content coupling: Modules are directly dependent on each other through shared data or code.
- 2. Common coupling: Modules are dependent on a common data structure or global variable.
- 3. Control coupling: One module controls the flow of execution of another module.
- 4. Stamp coupling: Modules are dependent on a subset of data items from another module.
- 5. Data coupling: Modules are dependent on each other through a parameter or return value.
- 6. Message coupling: Modules are dependent on each other through a message passing mechanism.