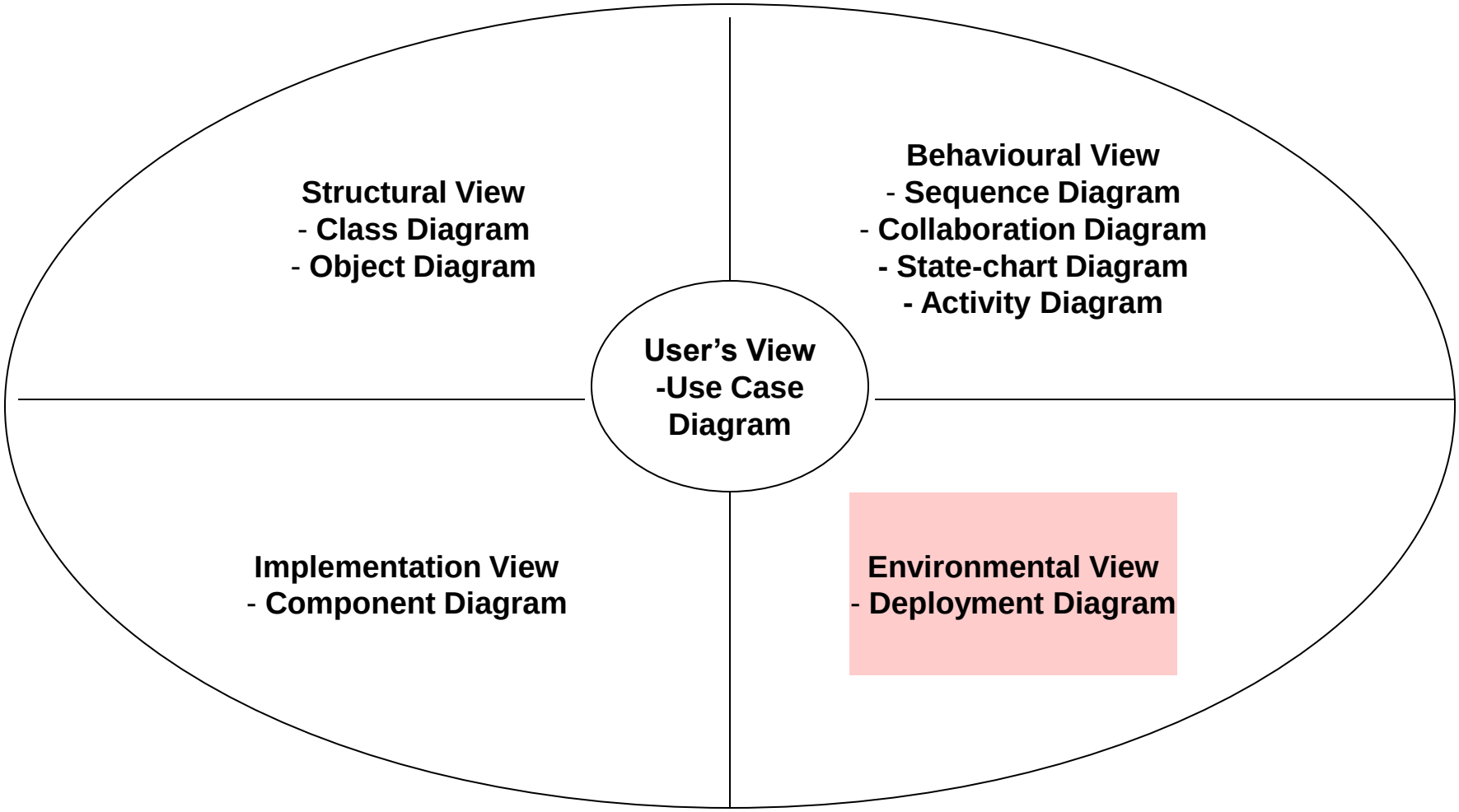
Chapter 6

Environmental View

UML Diagrams



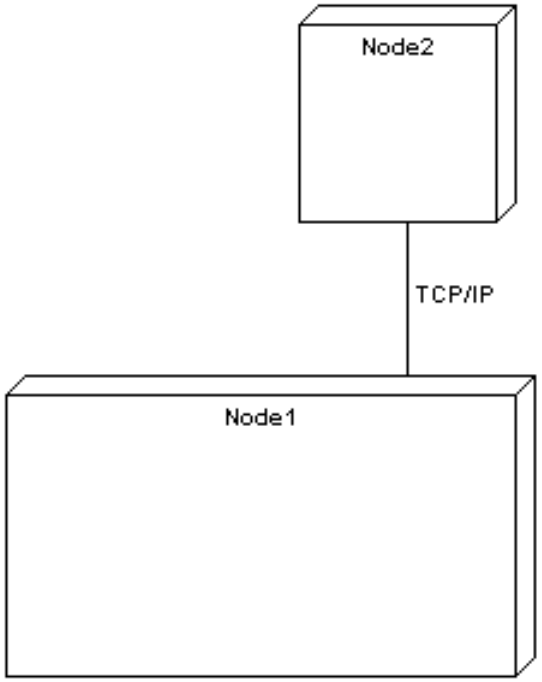
Diagrams and views in UML

Deployment Diagrams

- There is a strong link between components diagrams and deployment diagrams
- Deployment diagrams
  - Show the physical relationship between hardware and software in a system
  - Hardware elements:
    - Computers (clients, servers)
    - Embedded processors
    - Devices (sensors, peripherals)
  - Are used to show the nodes where software components reside in the run-time system

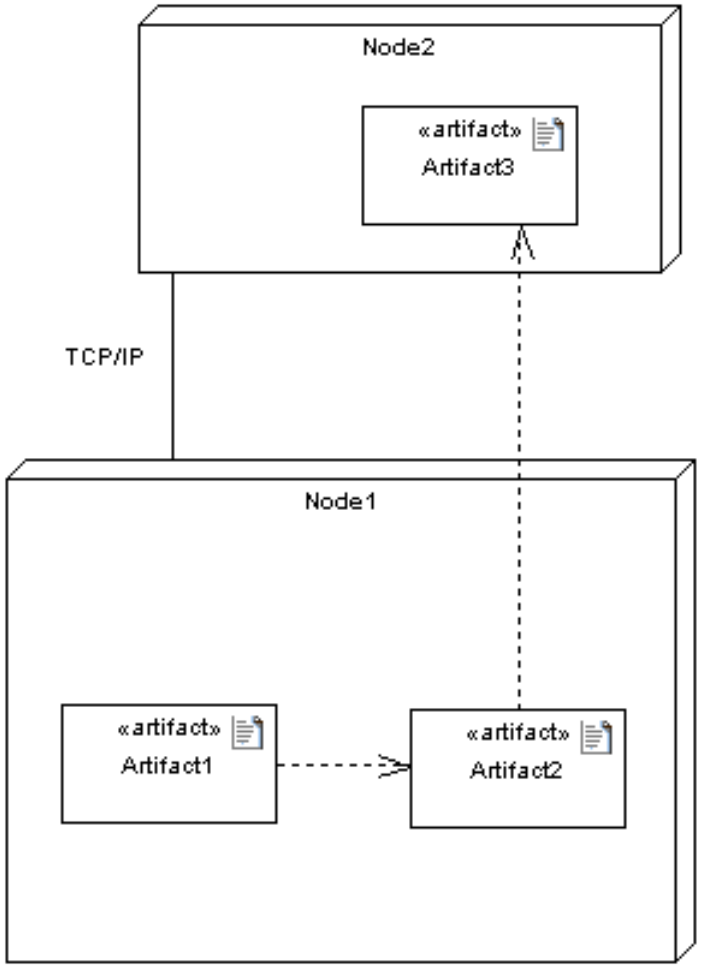
Deployment Diagrams

- Deployment diagram
  - Contains nodes and connections
  - A node usually represent a piece of hardware in the system
- A connection depicts the communication path used by the hardware to communicate
  - Usually indicates the method such as TCP/IP



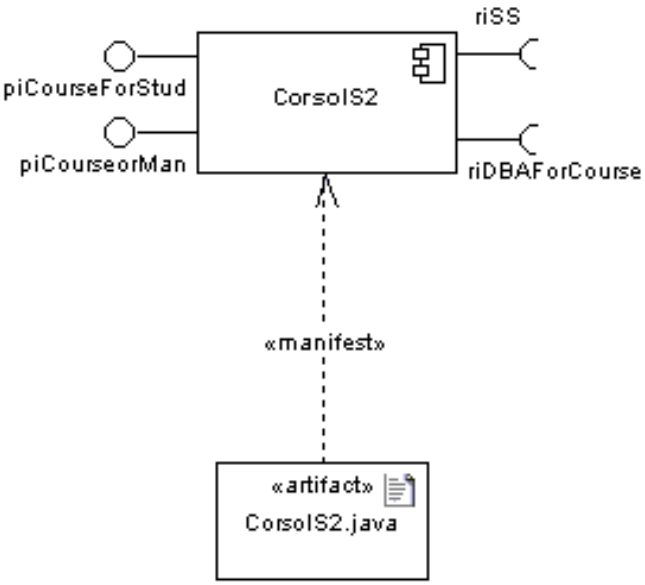
Deployment Diagrams

- Deployment diagrams contain artifact
- An artifact
  - Is the specification of a physical piece of information
  - Ex: source files, binary executable files, table in a database system,….
  - An artifact defined by the user represents a concrete element in the physical world
  - Only artifacts live on physical nodes; classes and components do not have "location."

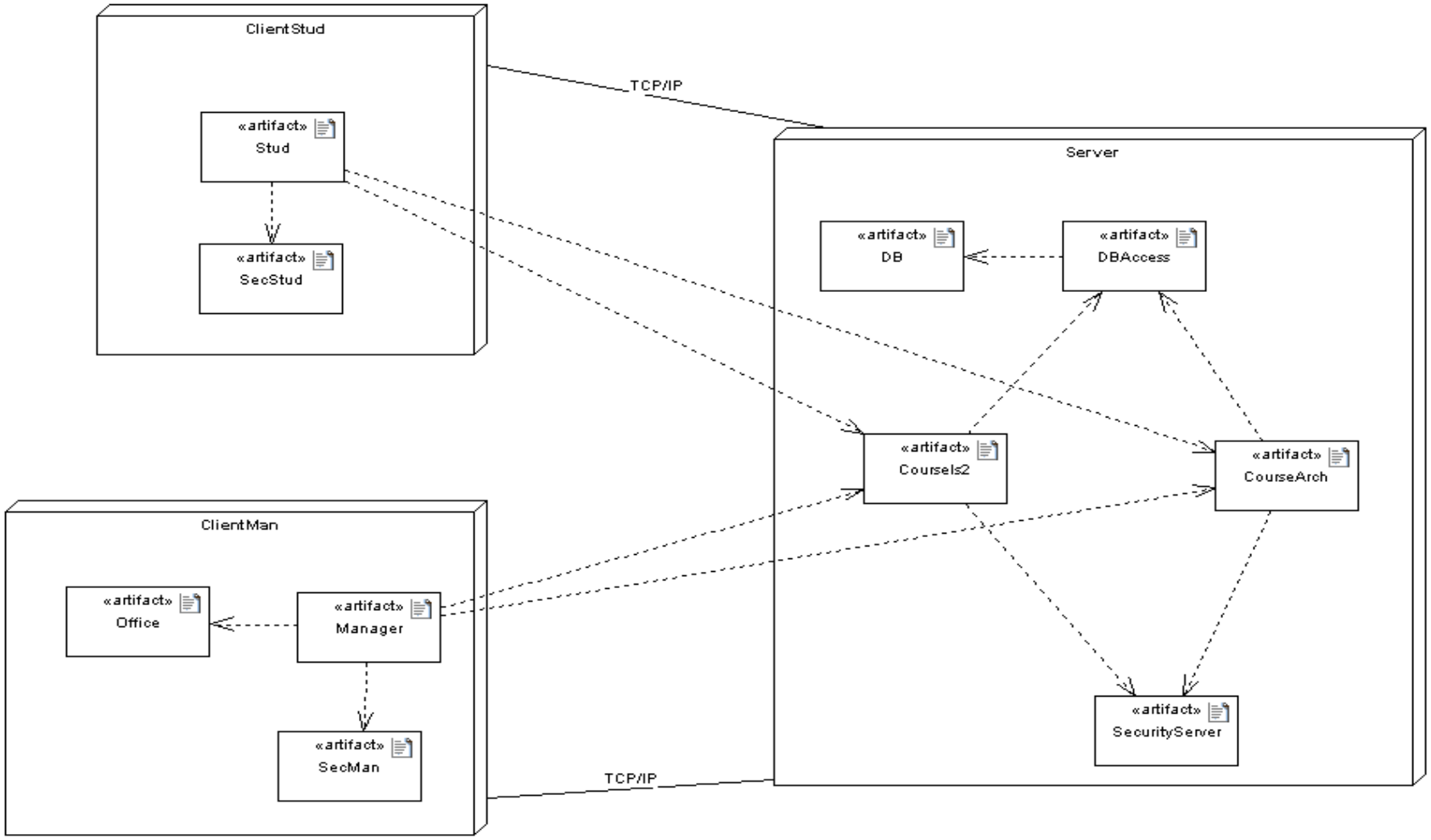


Deployment Diagrams

- An artifact manifest one or more model elements
- However, an artifact may manifest components and other classifiers (i.e., classes). A single component could be manifested by multiple artifacts, which could be on the same or different nodes, so a single component could indirectly be implemented on multiple nodes.
- A <<manifestation>> is the concrete physical of one or more model elements by an artifact
- This model element often is a component
- A manifestation is notated as a dashed line with an open arrow-head labeled with the keyword <<manifest>>



Deployment Diagrams



Thank you

Questions?