SE 3112

SOFTWARE ARCHITECTURE

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CHAPTER 5:

Modeling Component Diagram

Topic Overview

- Component Diagrams
- Purpose of component diagrams
- Component diagrams Variations
- Audience of component diagrams
- Example using case study
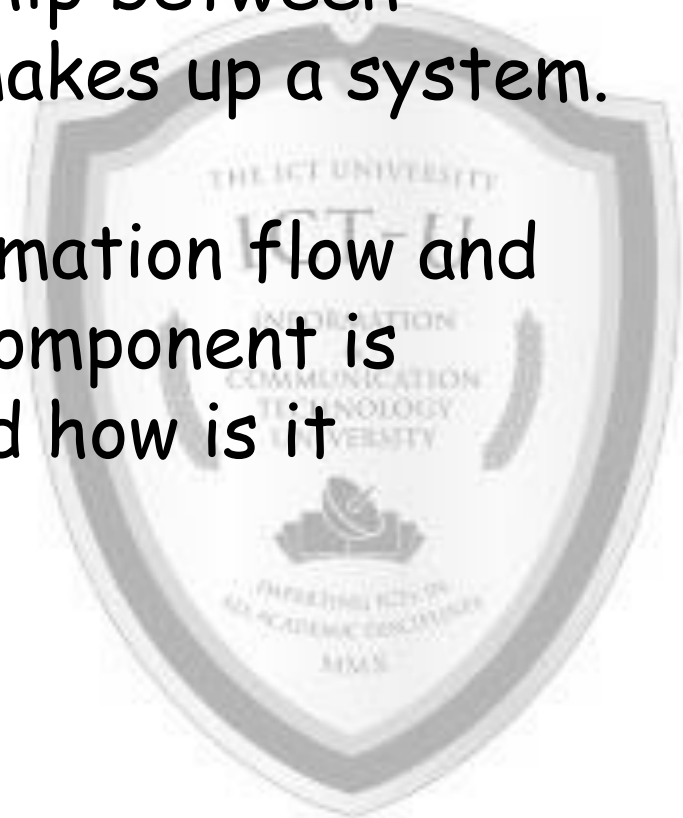
What is Component Diagram?

- Component Diagram shows various components in a system and their dependencies.

- Component represents a physical module of code.

- Typically during implementation, component is often the same as a package

- The components can be a software component such as a database or user interface; or a hardware component
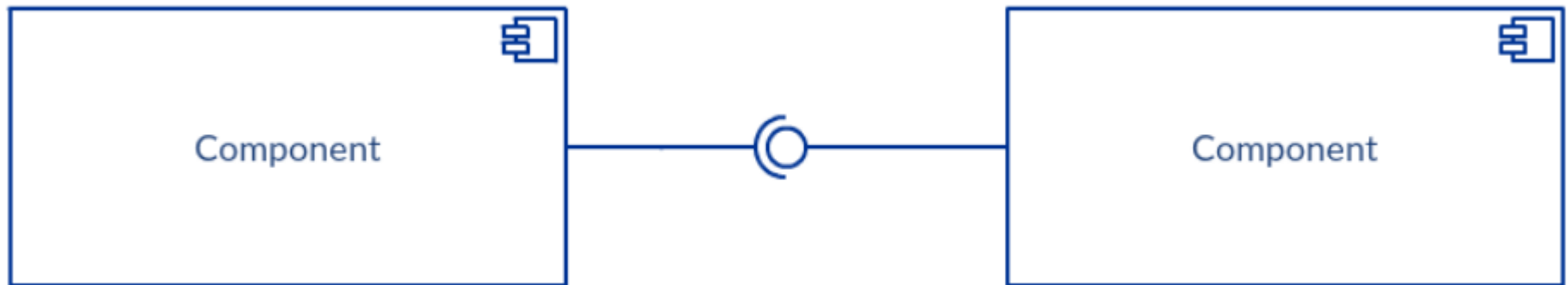
Purpose of a Component Diagram

- Helps in identifying components that make up the system in structure and behavior

- Helps to show the relationship between different component that makes up a system.

- Helpful in showing the information flow and how the functionality of a component is exposed via an interface and how is it consumed or utilized.

Component Diagram Variations

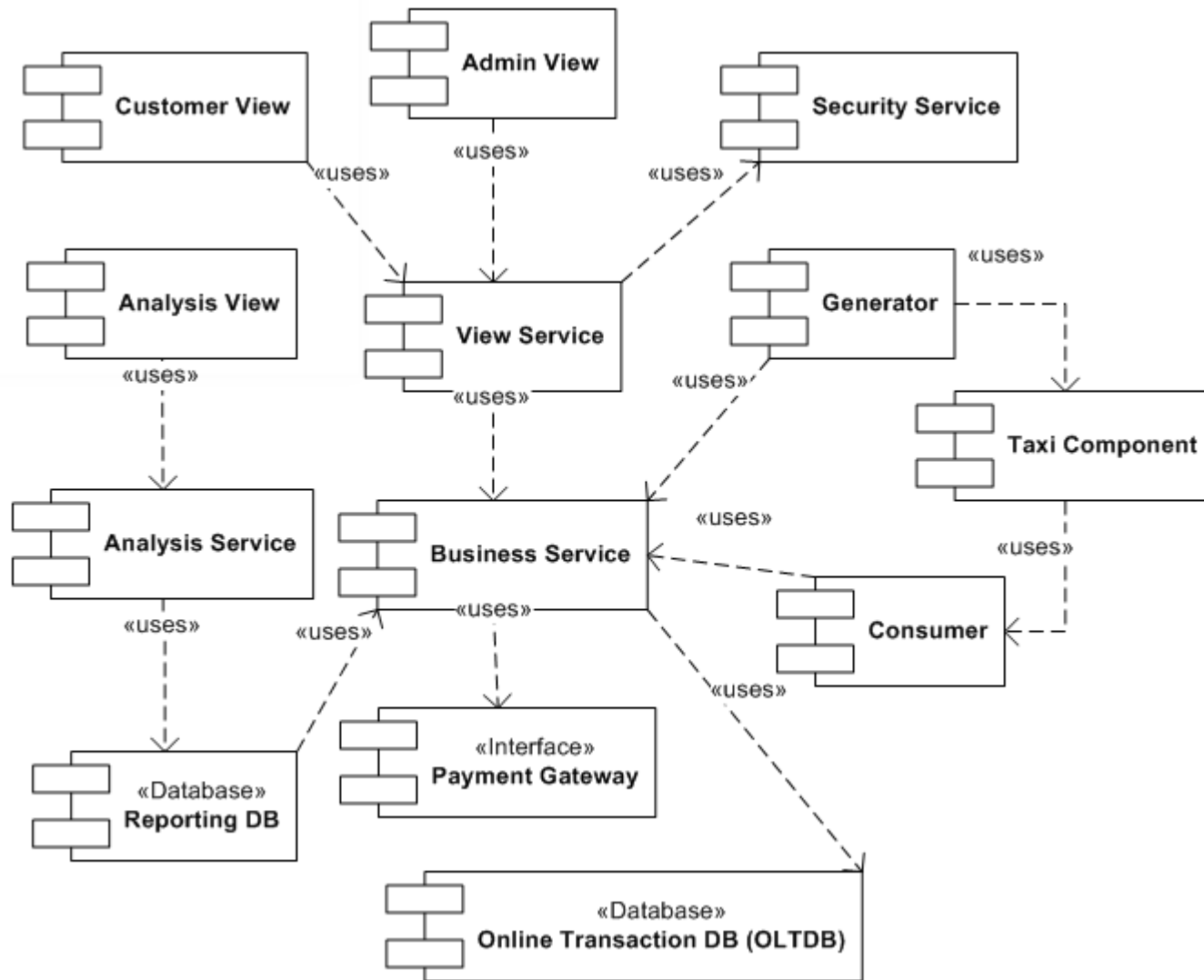- Ball and Socket/lollipop

- Dependencies

Audience of a Component Diagram

- Architects/Architecture team

- Project Manager

- Software Developers/Programmers

Component Diagram Example (AutoCab)

Homework

- Transform the AutoCab component diagram from dependency variation to a ball and socket variation

Keynotes

- Component Diagram provides an avenue for the audience or stakeholders to discuss on:
  - Any missing component.
  - Changing or refining any component
  - Right or wrong component used

- Note:
- This discussions are much cheaper to have early on the project than later.

Q & A