Behavioral Model & Interaction Diagrams

Sequence Diagram
Collaboration Diagram

Behavioral Model

Behavioral Model

- Concentrate on behavior of the system based on interaction
- Based on Events
  - An event occurs when an actor and system exchange information
  - An event is not the information that has been exchanged

Interaction Diagram

Interaction Diagram

- Diagrams used for explaining interaction / behavior
- Two diagrams will be discussed
    - Sequence Diagram
    - Collaboration Diagram / Communication Diagram

Sequence Diagram

Sequence Diagram

- Notations used for Sequence Diagram
  - Book has example
  - [GeeksforGeeks](#)
  - [Lucidchart](#)
- Practice sequence diagram
  - [Sequence Diagram website](#)
  - Partial SafeHome security function from book (Page 206, 878, 879)

Collaboration Diagram

Collaboration Diagram

- Another Interaction Diagram
- Also known as "Communication Diagram"
- Show similar information as "Sequence Diagram" but in a different way
- Practice examples
  - Book example (Page 880)
  - Visual Paradigm
  - Wondershare EdwardMax

Interaction Diagram

- Both "Sequence" and "Collaboration" diagram are interaction diagram
- Help observe dynamic behavior of a system
- Help visualize how the processes will work at runtime
- Can be used to explain the architecture of an object-oriented or a distributed system
- Difference between "Sequence" and "Collaboration" Diagram
  - Sequence Diagram - Show time-based object interaction
  - Collaboration Diagram - Show intra-object association

Useful Resources

- Textbook (Software Engineering, A Practitioner's Approach, Roger S. Pressman, Bruce R. Maxim)
- GeeksforGeeks
  - Unified Modeling Language (UML) | Sequence Diagrams - GeeksforGeeks
  - Difference between Sequence diagram and Collaboration diagram - GeeksforGeeks
- Visual Paradigm
  - What is UML Collaboration Diagram?
  - What is Communication Diagram?
- Lucidchart
  - UML Sequence Diagram Tutorial | Lucidchart
  - Communication Diagram Tutorial | Lucidchart

Useful Resources

- WonderShare EdwardMax
- UML - Interaction Diagrams | Tutorials Point
- Interaction, Collaboration & Sequence Diagrams with Examples | Guru99
- Differences between sequence diagrams and collaboration diagrams | IBM

Thank You