20 Lecture - CS504

Important Subjective

Q: What is the main purpose of Interaction Diagrams in UML? **A**: The main purpose of Interaction Diagrams is to illustrate the dynamic behavior of a system by showing how objects interact and exchange messages over time. **Q: How does a Sequence Diagram differ from a Communication Diagram?** **A**: A Sequence Diagram focuses on the chronological sequence of message exchanges between objects, while a Communication Diagram emphasizes the relationships between objects. **Q: What do the vertical dotted lines in a Sequence Diagram represent?** **A**: The vertical dotted lines in a Sequence Diagram represent the activation lifeline of an object, indicating its presence and participation in the interactions. **Q: What does the arrowhead in a Sequence Diagram indicate?** **A**: The arrowhead in a Sequence Diagram points in the direction of message flow, indicating the communication path between objects. **Q: How are objects represented in a Communication Diagram?** **A**: Objects are represented with boxes in a Communication Diagram, showing their names and interactions. **Q: What is the purpose of the numbering on messages in a Communication Diagram?** **A**: The numbering on messages in a Communication Diagram indicates the order of message exchanges between objects. **Q: In a Sequence Diagram, how do you depict the return messages from objects?** **A**: Return messages are depicted with a dashed line and a message label in a Sequence Diagram. **Q: How does a State Diagram represent the dynamic behavior of an object?** **A**: A State Diagram shows the different states of an object and the transitions between these states based on events and conditions. **Q: What is the key difference between a Sequence Diagram and a Collaboration Diagram?** **A**: A Sequence Diagram shows the time sequence of message exchanges between objects, while a Collaboration Diagram emphasizes the structural relationships between objects. **Q: How do Interaction Diagrams help in software development?** **A**: Interaction Diagrams provide a dynamic representation of object interactions, aiding in understanding and validating the system's behavior and communication flow during runtime.