Use Case Requirements: Overview
Requirements Engineering

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Learning Objectives

By the end of this video, you will be able to

• Name the three main parts of user case requirements.
• Explain the relationship between a use case and a scenario.
• Identify actors from given informal requirements.
• Draw a use case diagram given informal requirements.
Use Case Requirements

• **Use case**: the system’s intended functionality
  - A complete course of events in the system, from the user’s perspective
• **Actors**: surroundings – external to/interacting with the system
• **Use case diagrams**: relationships between use cases and actors

• Scenario-based requirements
  • **Scenario**: sequence of actions that illustrates behavior
  • A use case == multiple scenarios (each as execution of a use case instance)
Actors

- Represented in UML as a stickman
  - People, “provider,” “knowledge worker”
  - Not “people,” e.g., “mainframe,” “post office”

- NOT part of the system, but anyone or anything that must interact with the system
  - Only provide inputs to the system
  - Only receive outputs from the system
  - Both provide inputs and receive outputs of the system

[Diagram showing Provider and Mainframe]
Use Case

- A **sequence** of events that happen when the system responds to a request/action to yield **values** for a particular actor
- A major piece of functionality being **complete** from beginning to end
- Use cases that an actor “wants” begin with **verbs**

- Easy to read
  - Short but still tell a story
  - Full sentences with active verb phrases
  - Actors made visible in each sentence
  - Avoid GUI: write in terms of goals, not details of the GUI
Use Case Diagram

- Provider
  - Submit Paper Claim
  - Submit Fax Claim
  - Submit Electronic Claim
  - Adjudicate Failed Claim

- Adjudicator

- Knowledge worker
- Mainframe
- Post office

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Use Case Diagram Stereotype: Include

• Use Case X **includes** Use Case Y:
  • X has a multi-step subtask Y. In the course of doing X or a subtask of X, Y will always be completed.

• Represented as a dashed arrow with an open arrowhead
The End