The World Islamic Sciences and Education University

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كلية تكنولوجيا المعلومات

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1 / Extends Relationship

- Represents an optional extension of behavior to the base use case

- The base use case is complete and independent on its own

- The extending use case adds optional functionality under specific conditions

- The base use case doesn't know about the extension (unidirectional relationship)

- Used for optional, exceptional, or conditional scenarios

- Arrow direction: from extending use case to base use case with «extends» stereotype

  Example: In an ATM system, "Check Balance" is a complete use case.

2 / Includes Relationship

- Represents mandatory inclusion of one use case in another

- The base use case is incomplete without the included use case

- The included use case is a reusable module of functionality

- The base use case explicitly knows about the inclusion (dependency)

- Used to avoid duplication and promote reuse of common functionality

- Arrow direction: from base use case to included use case with «includes» stereotype

  Example: In an online shopping system, "Check Out" includes "Process Payment" because every checkout must involve payment processing.