University of Antwerp
Faculty of Applied Engineering

5-Software Design

Lab Session 5

17/11/2025

Jens Duym

Course Outline

Outline labs

- **Part A: UML diagrams**
  Sessions 1 – 2
- **Part B: Design Patterns**
  Session 3 – 5
- **Part C: Projects in groups of 2**
  Session 6 – 9

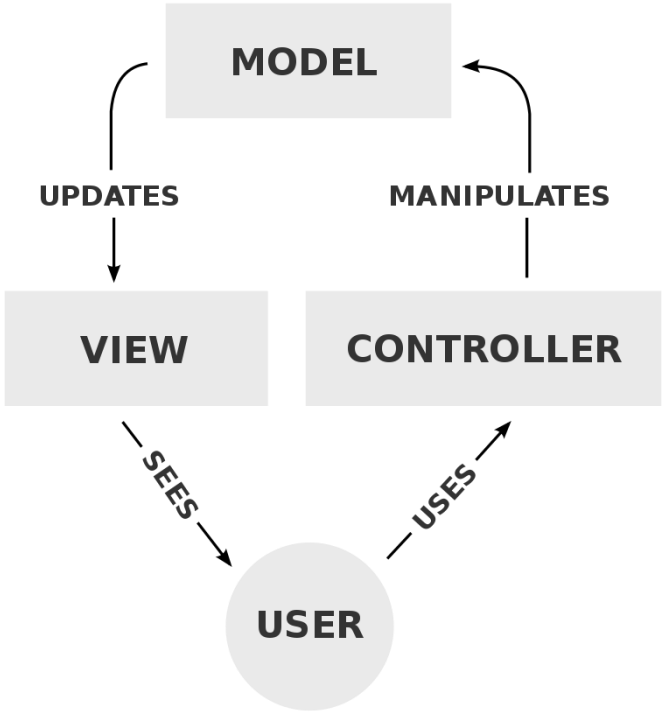
- **Evaluation:**
  - Entire portfolio: zip containing code, UML diagrams, AI usage
    - Submit before 7th lab at defined date
    - Oral defence
  - Defence of projects

Part B
Design Patterns

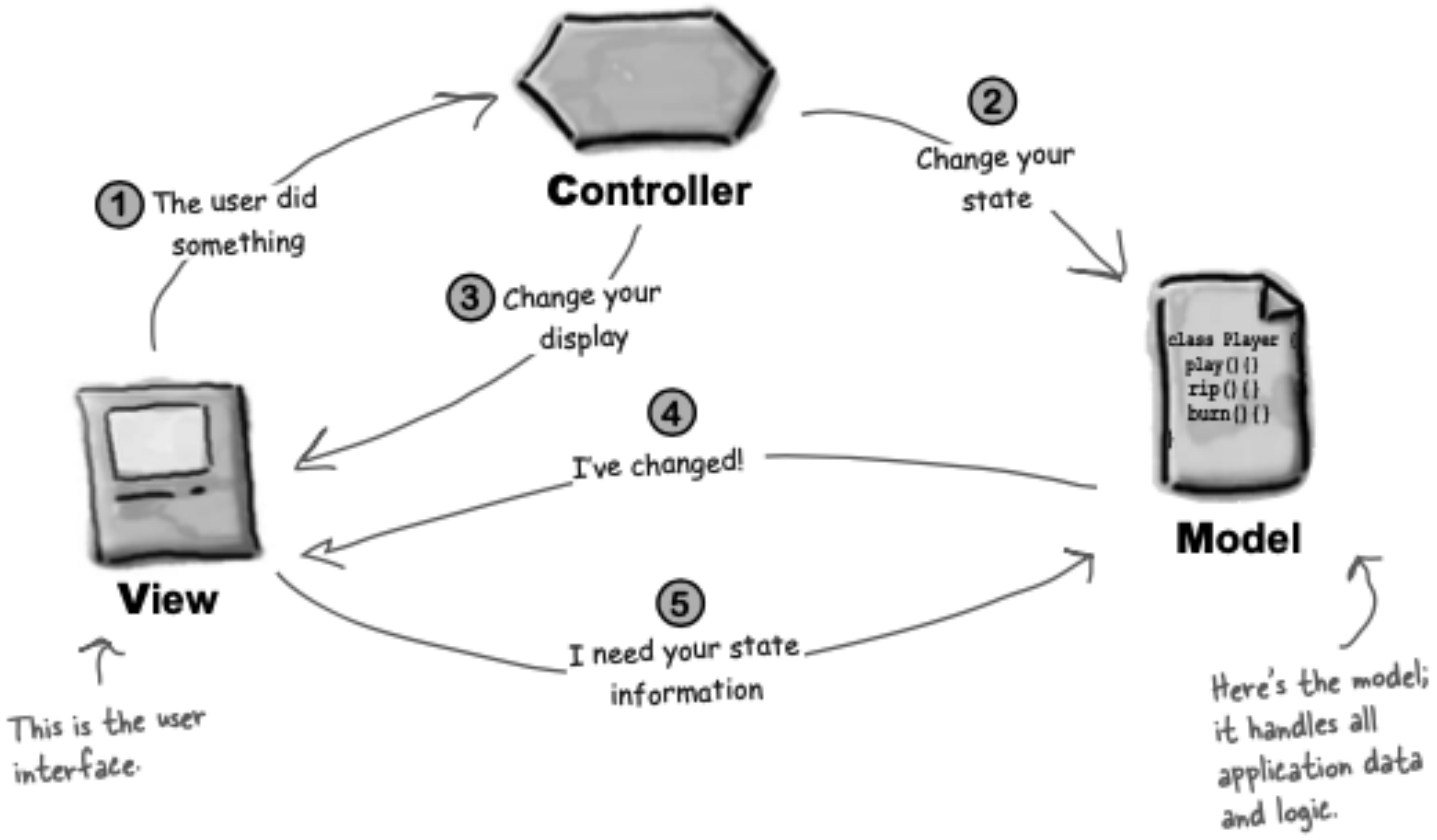
Model-View-Controller Pattern

MVC Pattern

- Used for **developing User Interfaces**
- Divides the related program logic into **three interconnected elements**
- **Separates internal representations** of information
  from the ways information is **presented to** and **accepted from** the user



MVC Pattern



- **Head First Design Patterns: page 529**
- https://www.tutorialspoint.com/design_pattern/mvc_pattern.htm
- https://www.edureka.co/blog/mvc-architecture-in-java/
- Google is your best friend

Assignment

Model-View-Controller Pattern

Assignment

Time Registration Platform

- Different types of employees
- Each employee can check in/out
- Every check in/out is an entry

Assignment

- Implement the view
- Implement the controller
- Wire the MVC in `ViewApp`