Model – View – Controller

Debugging

Slides adapted from Craig Zilles

Model – View – Controller (MVC)

- **A Software Architectural Pattern**
  - Much like a design pattern
  - It uses design patterns

- **Provides low coupling in User Interface systems.**

MVC Key Idea

Break application into 3 logical components

- **Model:**
    - Holds the state of the application and logic/rules of how state can be updated.
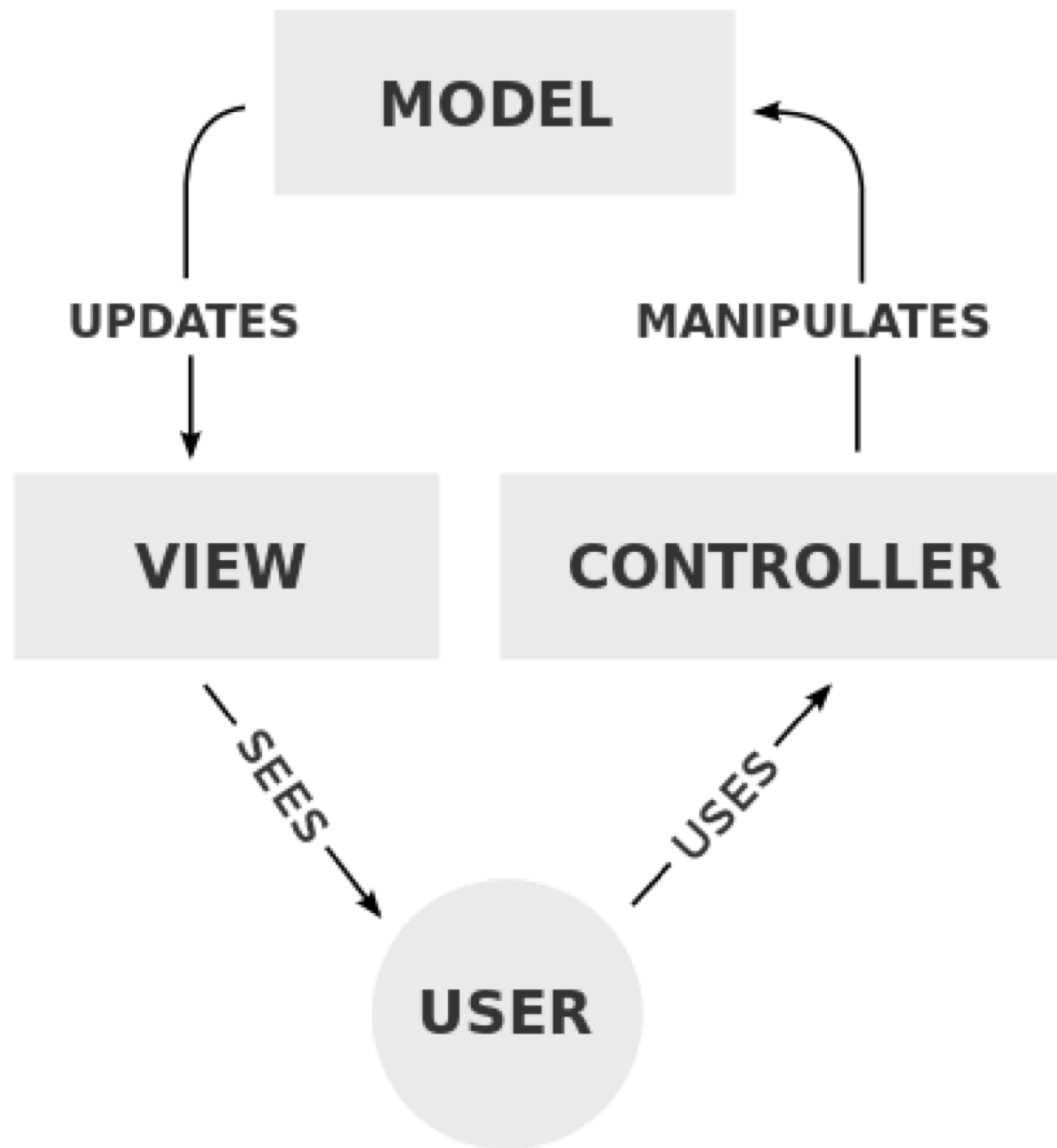
- **View:**
    - Output representation of information

- **Controller:**
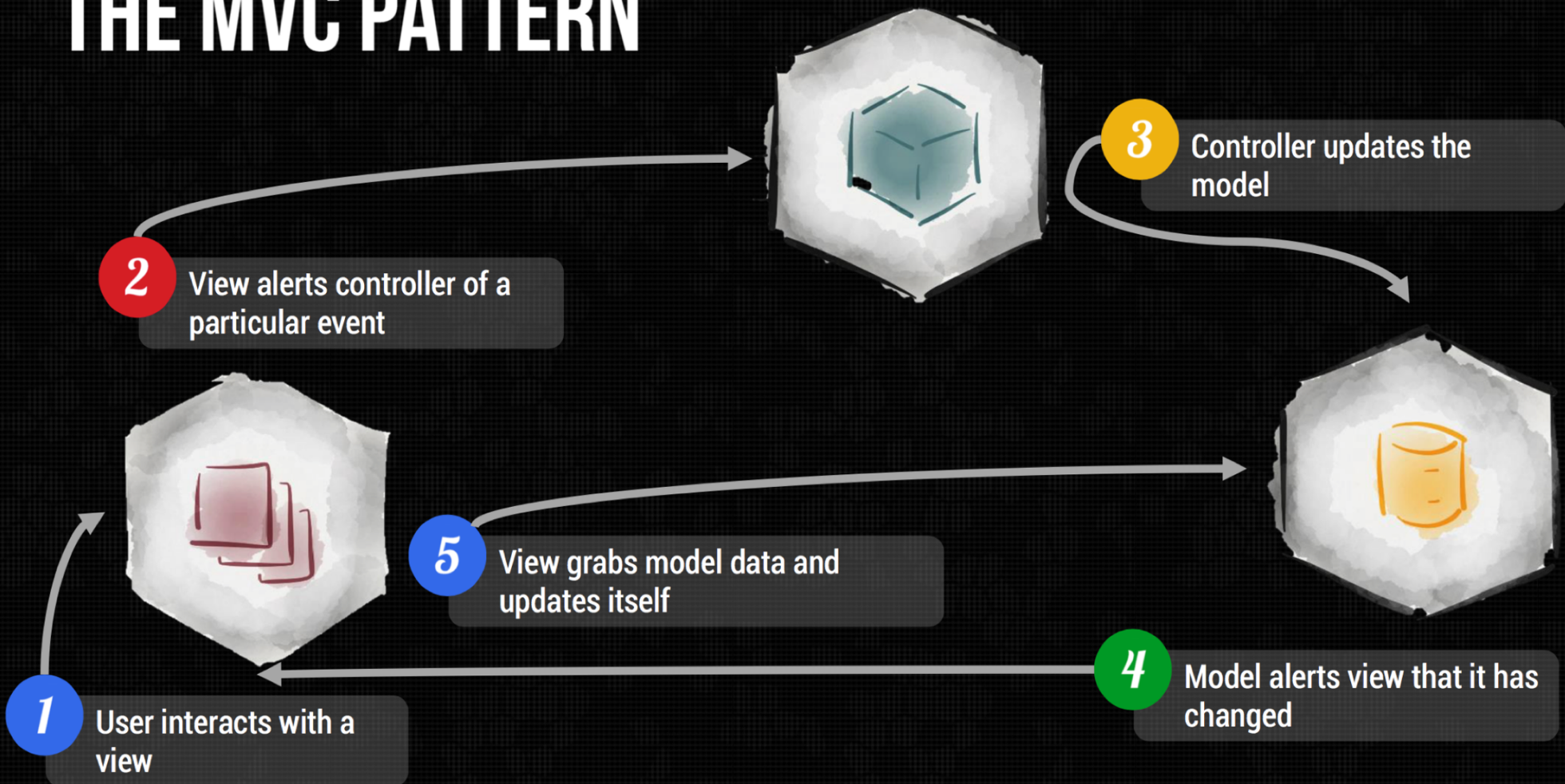   - Accepts user input and translates it into commands for the model or a view

Decouple interface from application state

Low Coupling from Views/Controllers to Model

- **Model code is independent from interface**
- **Can support many different views**
  - Simultaneously or one-at-a-time (e.g., summary vs. detail)
  - Use Observer pattern to attach Views to Model
- **Can support many different controllers**

THE MVC PATTERN

2 View alerts controller of a particular event

3 Controller updates the model

5 View grabs model data and updates itself

1 User interacts with a view

4 Model alerts view that it has changed

How hard was Better Linked List?

A. **Easy**

B. **Moderate**

C. **Challenging**

D. **Unreasonable**

How long did it take to complete Better Linked List?

A. **Less than 3 hours**

B. **3 to 6 hours**

C. **6 to 9 hours**

D. **9 to 12 hours**

E. **More than 12 hours**

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