Introduction to web frameworks

Faculty of Engineering
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Agenda

1. Introduction to web frameworks
2. Framework code architecture (MVC)
3. Watching demo
4. Main concepts in web frameworks

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1. Why we need frameworks?

- If we look at a couple different web applications we can see that there are a lot of duplicated features.
- A lot of the time when we build applications we want to format our code in certain ways that help us become more efficient and help other developers understand our code.

To summarize: there's no need to reinvent the wheel.

1. What is web framework

- Web frameworks aim to automate the overhead associated with common activities performed in web development. For example, many web frameworks provide libraries for database access, templating frameworks, and session management, and they often promote code reuse.
- Web frameworks is splitted into two categories:
  - Backend frameworks (Spring, Rails, laravel, node js, ….)
  - frontend frameworks (Vue, React, Angular, …..)

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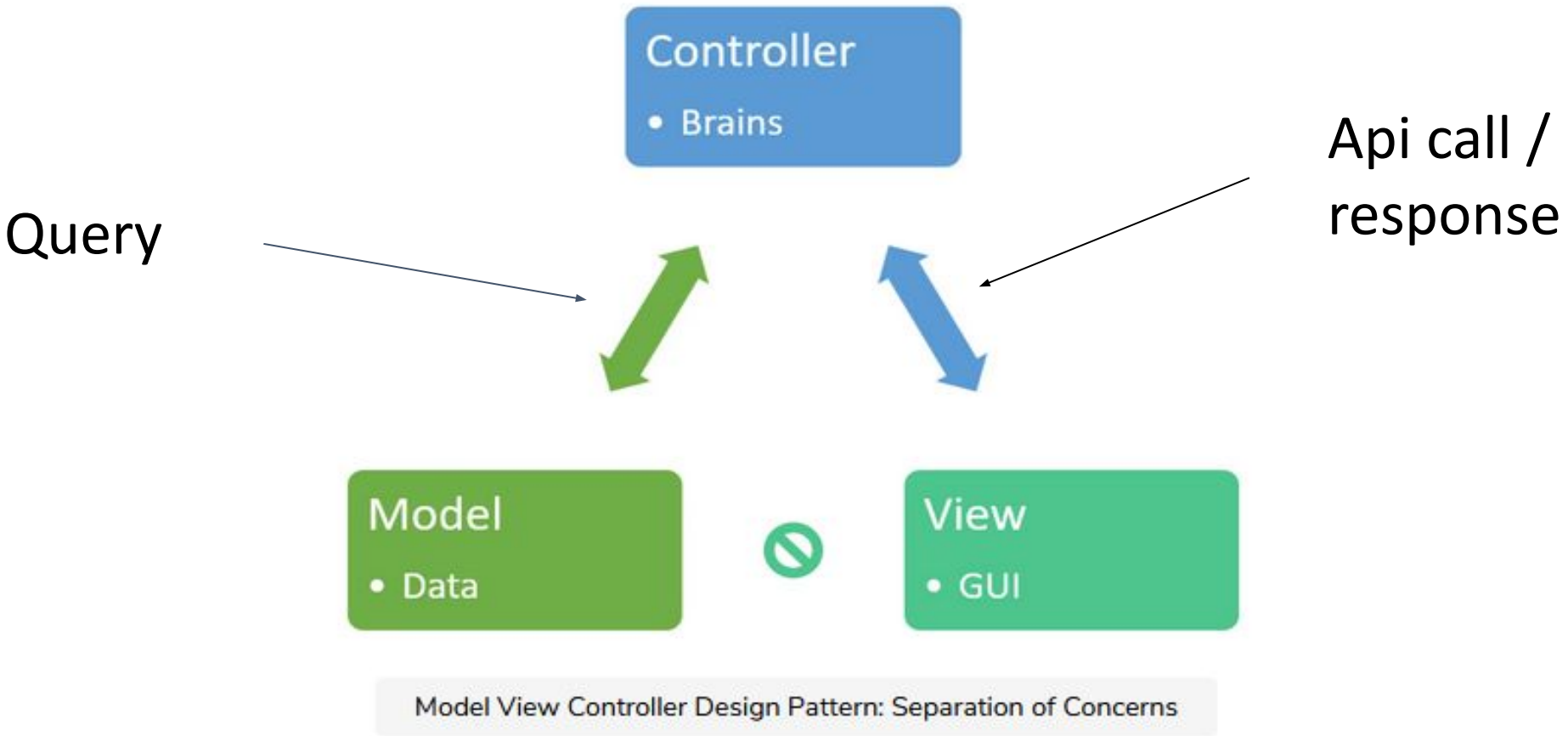
2. Why we need code architecture in web framework

- Make our code more maintainable, readable, reusable and testable
- Unify the code architecture over all projects use the same web framework.
- Apply separation of concern principle and avoid code complexity

2. MVC Architecture



2. MVC Architecture

- Model: stores & manages data
- View: The view is a visual representation of the data- like a chart, diagram, table, form. The view contains all functionality that directly interacts with the user - like clicking a button, or an enter event.
- Controller: Brains of the application. The controller connects the model and view. The controller converts inputs from the view to demands to retrieve/update data in the model.

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3. Demo

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4. Key concepts

1. Front-End
    a. Routing
    b. localhost:port number
    c. Component
    d. Service
2. Back-End
    a. Routing
    b. Request types
    c. Controllers
    d. Services
    e. postman

Questions ?

See also

- https://www.javainuse.com/spring/ang7-hello?fbclid=IwAR2pF1kXiD57790QpZWI1yzCYZDog_qci85pXv7U_8BZY7z0mQZ85AFEUIQ