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WHAT IS MVC

IN JAVASCRIPT AND WEB APPS

MVC
Framework

MVC is an architectural pattern that separates an application into three main logical components **Model, View, and Controller.**

Each architecture component is built to handle specific development aspect of an application.

FEATURES OF MVC

- Easy and frictionless testability. Highly testable, extensible and pluggable framework
- To design a web application architecture using the MVC pattern, it offers full control over your HTML as well as your URLs
- Leverage existing features provided by ASP.NET, JSP, Django, etc.
- Clear separation of logic: Model, View, Controller. Separation of application tasks viz. business logic, UI logic, and input logic
- URL Routing for SEO Friendly URLs. Powerful URL- mapping for comprehensible and searchable URLs
- Supports for Test Driven Development (TDD)

The Model interacts with the database

The model adds to the database and pulls from the database. Then it will report back to the controller. Models are fancy objects and we can customize them using mongoose schema. Mongoose is a MongoDB object modeling tool and schema defines the shape of our documents.

MODEL

The View is all the CSS and HTML displayed to the user

The view does whatever the controller tells it to do. Unlike the model which can interact with the controller, the view cannot.

VIEW

The controller handles all user interaction.

The controller interprets the mouse and keyboard inputs from the user, informing model and the view to change as appropriate. It basically tells the view what to do. It asks for data from the model and gives that data to the view.

CONTROLLER

ADVANTAGES
of MVC

- Easy code maintenance which is easy to extend and grow
- MVC Model component can be tested separately from the user
- Easier support for new types of clients
- Development of the various components can be performed parallelly.
- It helps you to avoid complexity by dividing an application into the three units. Model, view, and controller
- It only uses a Front Controller pattern which process web application requests through a single controller.
- Offers the best support for test-driven development
- It works well for Web apps which are supported by large teams of web designers and developers.
- Provides clean separation of concerns(SoC).
- Search Engine Optimization (SEO) Friendly.
- All classes and objects are independent of each other so that you can test them separately.
- MVC design pattern allows logical grouping of related actions on a controller together.

DISADVANTAGES
of MVC

- Difficult to read, change, unit test, and reuse this model
- The framework navigation can some time complex as it introduces new layers of abstraction which requires users to adapt to the decomposition criteria of MVC.
- No formal validation support
- Increased complexity and Inefficiency of data
- The difficulty of using MVC with the modern user interface
- There is a need for multiple programmers to conduct parallel programming.
- Knowledge of multiple technologies is required.
- Maintenance of lots of codes in Controller

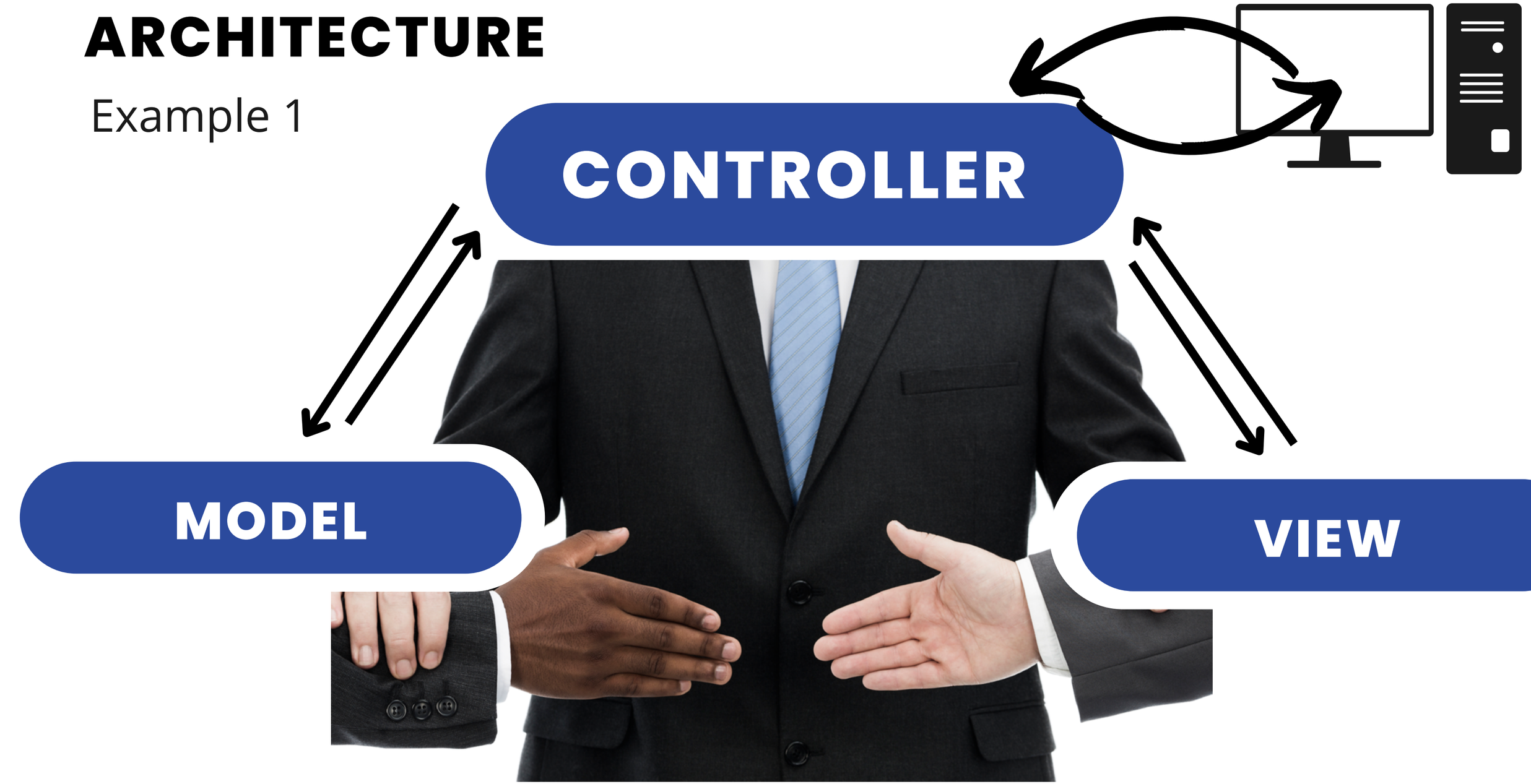
MVC WEB FRAMEWORKS

Here are a few popular MVC frameworks:

- Ruby on Rails
- Django
- CakePHP
- Yii
- CherryPy
- Spring MVC
- Catalyst
- and more...

ARCHITECTURE

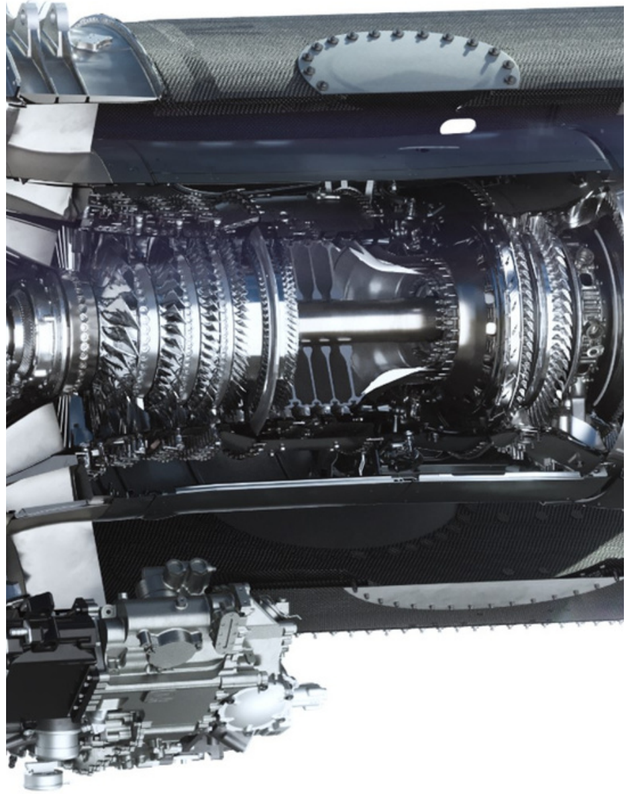
Example 1



MVC
Example 2

(Cockpit &
user controls)
VIEW

(Engine)
CONTROLLER



(Fuel)
MODEL