

CS 342 Software Design

- **Project #4 will be released tomorrow**
- **Final team list for Project #4, also tomorrow**
- **Design Pattern: MVC**
- **FXML and CSS**

MEAN Stack:

MEAN is a full-stack JavaScript framework ideal for building dynamic websites and applications. It is a free and open-source stack designed for creating rapid prototypes of MEAN-based web applications. One of the main benefits of JavaScript, runs on every level of the application

MongoDB, Express, Angular, Node.js, JS, Socket.IO, jQuery

MEAN Stack:



MongoDB

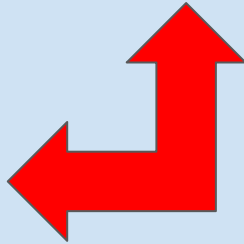


Node + Express



Angular

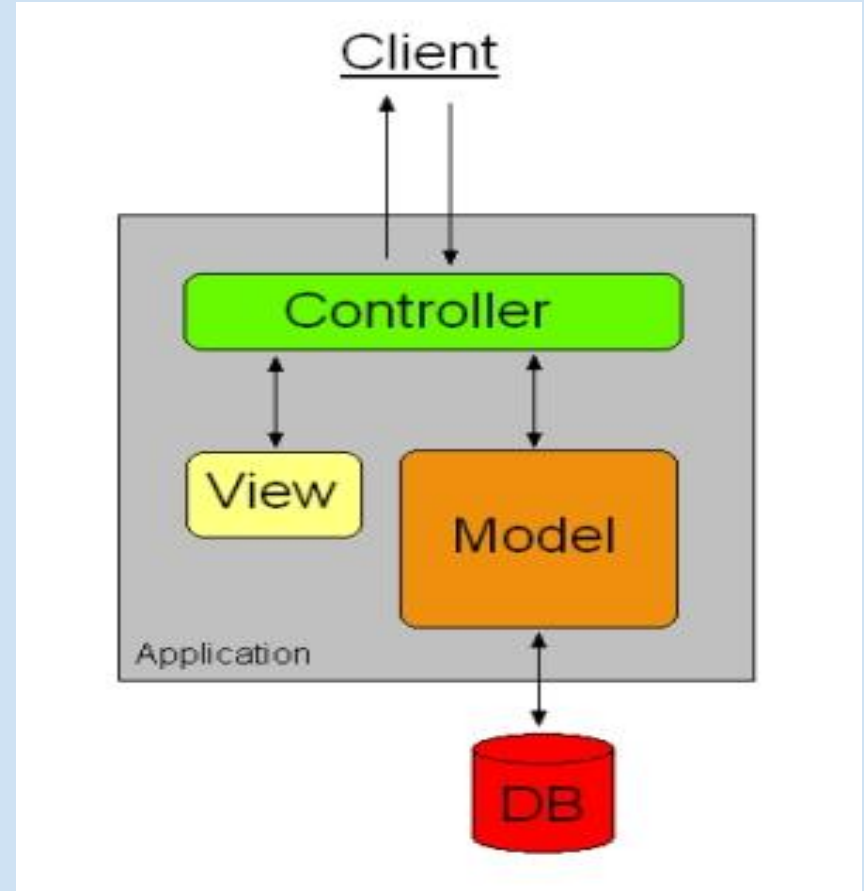
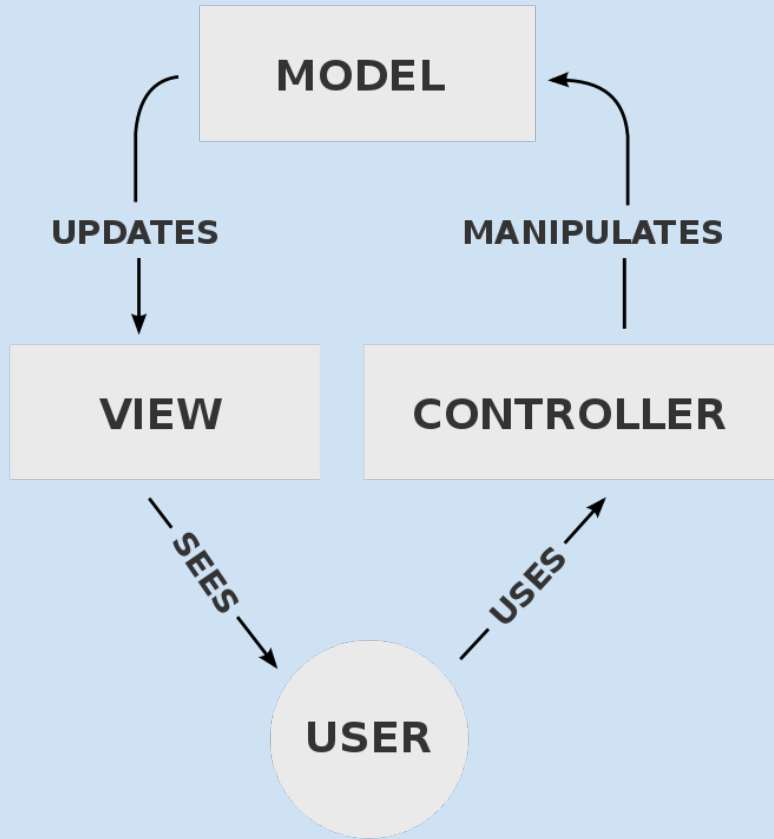
Web App:



Model View Controller:

Essential for building modern web applications and AR/VR systems.

- **Model:** Structured data presented per controllers direction
- **View:** How data is displayed to the user based on their actions
- **Controller:** Takes in user commands, sends commands to the model, updates view for the user.



Model View Controller:



Model



Controller



View

In JavaFX

View = fxml files and css files

Controller = controller class

Model = Java class that models data (Class Student) or database, either local or cloud based.

Install MongoDB: On a Mac

- 1) Download: <https://www.mongodb.com/download-center/community>
- 2) Extract and move into `usr/local/mongodb`
- 3) Create `.bash_profile` and add:

```
export PATH=$PATH:/usr/local/mongodb/bin
```

- 4) Create local data storage location and set ownership

```
sudo mkdir -p /data/db
```

```
sudo chown <username> /data/db
```