

# Back End Programming

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# Server Programming course

- Introduction to the server side programming
- See the course description in the moodle
- Course contains
  - Lectures
  - Excercises
  - Project

# Server Programming

- Project
  - Individual server side programming project
  - Topic should be approved by the teacher
  - Project includes
    - Project proposal
    - Planning
    - Programming
    - Testing
    - Documentation & Code comments
    - Final review

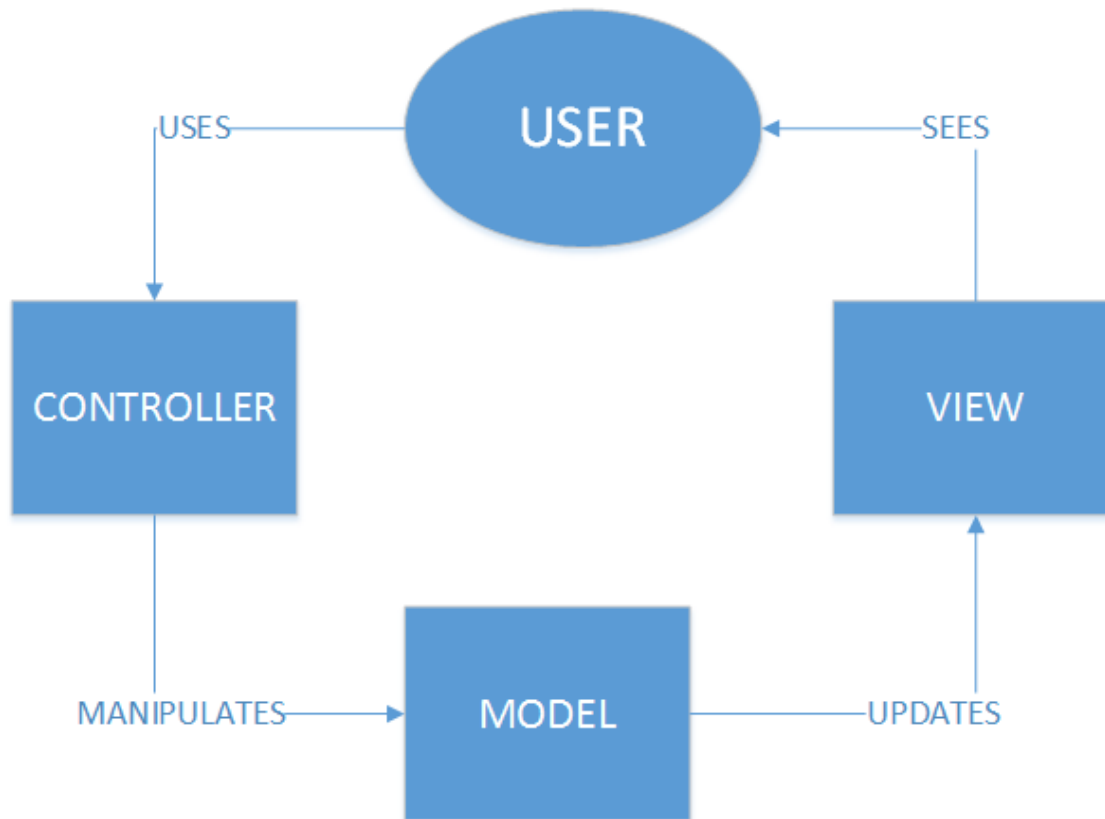
# Basics

- Front-end vs Back-end
  - The difference is not always perfectly clear
  - The Front-end is everything what end users see
  - Common front-end jobs are web designer and user experience designer
  - The Back-end (server side) defines how the site works like updates, content management etc.
  - The Back-end development is required to get dynamic sites
  - During this course we mostly focus on back-end development

# MVC design pattern

- MVC = **M**odel **V**iew **C**ontroller
- MVC is software design pattern which is often used for web application development
- The roles for different parts:
  - **Model**
    - Model is responsible for maintaining the application data
  - **View**
    - View is responsible for viewing data to end users
  - **Controller**
    - Controller handle user inputs and interact with model

# MVC



# MVC

- Popular MVC frameworks
  - Ruby on Rails
  - Django (Python)
  - ASP.NET MVC
  - Express (Node.js)
  - Spring MVC (Java)
  - Struts 2
  - backbone.js (JavaScript)
  - etc...