

# What is a framework?

LECTURE  
SUMMARY

PRE-PROGRAMMING

## Covered in this lecture:

### What frameworks are good for

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- ▶ **A programming framework is a predefined structure that programmers can use to build upon, by changing existing code or adding code of their own to create a product**
- ▶ Most of the time, what you're trying to create has already been done before
- There is no point starting from scratch every time you build something
- ▶ Frameworks help speed up the process of creating your product
- ▶ They help you set up the basic folder structure and link everything together for you so that you can spend time working on the parts that are unique
- ▶ It's like using a template and changing only the parts you need to be different

*See you next lecture!*

## Covered in this lecture:

### The use of front-end frameworks

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- ▶ Front-end frameworks are template websites that are set up in the most convenient way possible
- ▶ It's easy to modify these templates and it saves time
- Front-end frameworks might provide UI packs (UI = User Interface)
- UI packs include pre-made button designs, forms, fonts, headers, everything you see on the site
- ▶ Front-end frameworks usually provide 3 things:
  - Layouts
  - UI kits (graphic design bits)
  - Interaction snippets

*See you next lecture!*

## Covered in this lecture:

### The use of back-end frameworks

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- ▶ Back-end frameworks do the following things:
  - #1 They help you set up the file and folder structure on the server
  - #2 They give you pre-made code for functions that you're going to use
  - #3 They help you download files
  - #4 They help you optimize images, save, and recall them
  - #5 They help you set up APIs for pulling information from other websites
  - #6 They help you set up a payment terminal
- Back-end frameworks force you to program your app in a specific way that fits with their structure
- ▶ It can be complicated to learn full frameworks, that's why you can also use micro-frameworks
- ▶ Micro-frameworks focus on core functions

*See you next lecture!*

# What's an IDE?

LECTURE  
SUMMARY

PRE-PROGRAMMING

## Covered in this lecture:

What IDEs are and what they do

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- ▶ **IDE = Integrated Development Environment**
- ▶ IDEs are programs that programmers use to make their applications inside of
  - They provide tools that make coding a lot easier, like spellcheck or auto-complete features
  - IDEs help the developer organize and structure the files before they upload them to a web server
  - IDEs also help with version control, keeping track of code updates
- ▶ Inside an IDE, you can write code, test it, and automatically see how it runs for real as if it were uploaded to a live website

*See you next lecture!*

## Covered in this lecture:

What a library is and what it's used for

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- ▶ Libraries are packages of pre-made commands that help you save time
- ▶ JQuery is one of the most popular and famous libraries for JavaScript
- Other JS libraries: Handlebars, Mustache
- There are tons of libraries out there for everything you might need
- There are libraries for front-end, as well as back-end languages

*See you next lecture!*

# What is an API?

LECTURE  
SUMMARY

PRE-PROGRAMMING

## Covered in this lecture:

What APIs are and what they do

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- ▶ **API = Application Programming Interface**
- ▶ APIs are mini applications that run on top of a larger application, and are used to facilitate the transfer of information to external apps that ask for them
- APIs can automatically handle the transfer and fulfil the information requests
- They help save time and they can limit what other apps can ask for
- ▶ Example of using an API: Login to a website using Facebook

*See you next lecture!*