**Python and Django Full Stack Web Developer Bootcamp**

This is a Python and Django Full-Stack Training course
This course will allow me to build a website completely from the ground up.

**Begins with the Front-end Technologies**
HTML, CSS, Bootstrap, JS, Jquery

**Back-End**
Python, Django, and SQL

**Lecture 2: Overview**
Download Zip file / new updates to course will be added as time progresses.

**General Curriculum:**

- HTML, CSS, and Javascript
- DOM and JQuery [Front-End]
- Python
- Django and SQL [Back-End]
- Website Clones

If you come across an error or have issues and need help
Use Google
Use Stackoverflow [Programmers Q/A Forum]
Search FAQ / QA Forum
Developers use the tools they have to answer their own questions

When I have questions, make sure to include my code so that questions can be answered per your code.

Go to Q/A Forums to answer other students' questions, this way you can learn to explain as well as share your knowledge.

**Lecture 4: Set-up and Installation**
Get Chrome & Atom Text Editor (IDE - Integrated Development Environment)

**Lecture 6: What is the Web?**

- How the Web Works
    - What happens when we enter a URL into the browser, connect and retrieve a website.
        - You start off by typing the URL into your browser
        - Your computer then sends this request as a packet, which includes the IP address of the website you want; The IP address allows servers to identify what website you are looking for

        - It sends this request through wires, or a satellite which eventually links to wires using your ISP (internet service provider); **Example:** If you are at home, the connection is sent via copper wires or optic fiber wires to the server. A cell phone will link to a satellite, which links back to earth, which then ends up going to a physical wire.Internet is basic wires connecting computers with some sort of protocol.
        - Your ISP will then re-route the request to the appropriate server location, using the IP address as the guide
        - Once your request reaches the server, it can send back the website you asked for.
        - However a full website with content is too big to send as a single packet of data.
        - To solve this, the serve sends back the website split up into many packets
        - The packets come with instructions on how to get back to you and reassemble once they reach you.
        - The packets don't care how they get to you, just the final location; they may take different paths to get to your computer/cell phone; what really matters to them is the fastest way to get back to you.
        - Once the packets reach you, they are reassembled to show the page.
        - All of this moves at close to the speed of light, so it happens very fast.

- What do we mean by "Full-stack" (Full-Stack Web Development)
    - Full-Stack means that we combine the front-end technologies with the back-end technologies so you can create a website from scratch.
    - Two main components of a website:
        - The Front-End
            - The Front-End is what you see as a user on the website; **Example:** Colors and Content are all front end
            - Front-End Revolves around three technologies
                - HTML (Hypertext MarkUp Language)
                    - Every website will have HTML, it is the structure of a page. View-able by right-clicking and clicking on View Source
                - CSS (Cascading Style Sheet)
                    - Is the actual styling of the website.The colors, fonts, borders, etc are all defined by CSS. Not Mandatory, but all sites have it.
                - Javascript
                    - Allows you to add interactivity to the website, including programming logic. Any site with interactivity uses javascript in some way, otherwise the site is "static"
                - jQuery and Bootstrap are front end as well, but they are built on the previous three.

- The Back-End
    - The Back-End is the technology used to actually decide what to show you on the Front-end; **Example:** If you are a user, what pictures/content/comments to retrieve from the database and to show you.
    - Has three components:
        - The Language - Python
            - Python is a great language to learn, it's simple, powerful, and has many libraries.
                - Syntax is based on code readability and clarity, very easy to scale
                - Large library. (AI, Machine Learning, Gaming, Data visualization)
        - The Framework - Django
            - Django is the most popular framework for python, it's fast, secure, and scalable.
                - Pinterest & Instagram & Bitbucket use it.
        - The Database - SQlite
            - SQlite comes with Django and Python making it an easy choice.
        - Other technologies such as PHP, node.js, Ruby.Rails, Java, Python, etc. are all viable options; how do you decide which to use?

**Lecture 7: HTML Level 1**

Learning the basics of HTML

- HTML stands for HyperText Markup Language
- It is the most basic building block of the web and every website will need it.
- It is our First fundamental step in understanding how to build web applications.
- Later on we will learn other technologies such as CSS to style the HTML and Javascript to add functionality.
- Then once we reach the Python and Django sections of the course we will learn how to add Django template tags to HTML and dynamically generate content based off a user's interactions with the website!

For this lecture we will start with level one

- HTML Basics
    - Tagging
    - Lists
    - Divs and Spans
    - Attributes

**Lecture 8: HTML Basics**

What a HTML file looks like and Basics - [**lecture8.html file**]
For filenames, try to use underscore instead of spaces. File names are lowercase

Head constraints metadata; css and javascript linking place
Title is what is shown in the tab.
Body is where we put the actual content.

Ctrl + / = auto comment

**Lecture 9: Basic Tagging**
Going over Basic headings and paragraph tags
[**lecture9.html file**]

**Resource:** https://developer.mozilla.org/en-US/docs/Web/HTML/Element
https://www.w3schools.com/html/html_elements.asp

Heading tags can go from H1 to H6, size and bold is what makes them different. Normal text for paragraph tags.