**Django**

What is Django?

It is a free and open source web application framework. Framework is a combination of certain components and packages. For example, if we want to build some complex application there are certain things you need ready made—if you want to build a web application for yourself, you don’t want to do everything from scratch which will consume more time. Hence we will use a framework, Django is not the only framework available for this purpose. There are other frameworks as well, however we are looking at Django here which is considered as a famous one.

Why we have to learn Django? Django is a web application framework which means we can build web applications. Discuss web applications and their importance along with uses ex: amazon.com(buy and sell), uber, google.com etc… for most of the businesses(own web sites) we need online presence. Usually web applications are built using HTML(design the page), CSS(branding) and JavaScript(to make the website interactive) on ***frontend.***

What if you want to make a website as a dynamic website ex: if you go to facebook everyone will get different feeds ex: person x will not see the same page after logging in to the website as person y. If you go to amazon you can pay, transfer amount online all these need certain operations needs to be done on ***backend*** side. That where we need a language that runs on the backend as an example servlet, Javascript, PHP, ASP, python. How do we do it using python – that’s where we have ***Django***. We can use Django to build the web application backend part in python.

When it comes to web application there is something important which is **MVC.** It doesn’t matter which language you learn java, php, asp we have MVC in common **Model View Controller.** Basically we do MVC so that we can separate the concerns, we have ***model for data, view for the html format you see on the screen and controller for controlling the operations.***

In Django we have something similar to MVC which is ***MVT – Model View Template.***

Why we choose Django in the first place considering the other frameworks availability? – because it is

1. Fast – if you want to build something, we do not want to spend much time on the configuration
2. components – number of components available. What are the components to create a video? The same way to build a webapplicaiton we need certain components like login, database connectivity etc.. all of these things comes bundled in Django
3. Security – if you are building an application where user will interact, where user will be sending data and you want to secure them and Django will provide security.
4. Scalability - what if in future your website needs scaling, your business expands and so do the users.

Based on these we are trying to learn Django.

**Django setup**

We will need to consider the Operating system before we install Django. Linux/Mac almost have the same steps, whereas in windows we have different settings to work with. We will look at how to install it on windows.

First we need a setup – to work with Django we need to have python installed on machine. We will install version Django 2.x and to work with it we need latest python 3.x

<https://www.python.org/downloads/> 🡪 will provide the latest version of python. Along with this we need to check the Operating system bit version 32bit/64bit. Make sure you have python and pip installed on your machine. To check it navigate to cmd prompt – ***python –version***

***pip –version will give the pip version***

To check if Django is installed we can run the below command : Django-admin –version

Since we have not installed it we will get an error as shown below.

Text

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If you install Django using cmd prompt it will be available for the entire machine. What if you want to have different configurations of Django for different projects. Imagine a isolated space being created for your specific projects which will not affect the other projects you have. How to achieve this? – to create a isolated environment? Answer is : **virtual environment wrapper**

Below is the command on how to install the wrapper but not the environment.

Text

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To create the environment command is **mkvirtualenv** test(name of the environment) and we can notice that test environment is now created as highlighted below.

Text

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Let’s install Django now as shown in the below screenshot

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After installation, if we want to check the version we can check it with the help command shown below.

Text

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NOTE: Remember that we have installed Django ONLY on test environment but NOT for the entire system, hence if you open the command prompt and check Django version it will not give the Django version.

* Let’s create our first project by running the commands in order, mkdir is for creating directory and cd change directory and Django-admin startproject telusko is for starting the project. Before running the 3rd command make sure the projects folder is empty.

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* After running the 3rd command we will notice that the projects folder is no more empty and there are some things got created. Ex: manage file along with telusko folder in which we have 4 different files.
* Let’s navigate to folder by running the dir command and observe the files.
* As of now we have not done any coding, but still we can run this particular project on the server. Since we have already install Django, it will help with the provisioning of lightweight server and to access that we need to run the below command using manage.py file. The server is up and running without any errors as shown below.

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* Important thing about the above screenshot is “starting development server at <http://127.0.0.1:8000/> which is a localhost address with a specific port number. If we access this on the browser we can see that this is our Django homepage.

Graphical user interface, text, application, website, Teams

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* Take a look at the documentation provided below.