

Deployment of our application to the live environment

Deployment:- The process of moving an application to the live/production

There are several deployment options are available for django web application. These options will be based on.

- 1.Scalability
- 2.Performance
- 3.Price
- 4.Security
- 5.Easy to use
- etc.....

Various deployment options:

- 1.pythonanywhere.com
- 2.Digital Ocean
- 3.Heroku
- 4.Amazon Cloud

- 1.Version Control System
- 2.Remote Hosting Server
- 3.Deployment Platform

Need of Version Control System:

- >To maintain multiple versions of the same project.
- >At any point of time, we can have backup of previous version.
- >We can see the differences between 2 or more versions in our code base.
- >We can run multiple versions of the same project simultaneously.

Version control software tools:

Git, CVS, SVN, Mercurial.....

Note:Git is a version control system, which maintain and track different versions.

Git vs GitHub:

- >Git is a version control system that helps to track changes in our code.
- >Github is a remote hosting platform to host our files remotely.
- >Github is to host our remote code repository.

Remote hosting platforms:GitHub, bitbucket, gitlab.....

Note:

If our application at remote hosting platform then deployment on various platforms will become very easy.

Deployment platform:

Where we have to deploy our application.

Ex:

pythonanywhere.com
heroku
amazon cloud

Version control system vs Remote hosting platform vs Deployment platform:

How to install GIT:

<https://git-scm.com/downloads>

Activities related to Git repository:

- 1).Create a directory named with my_cwd. It is our current working directory.
- 2).We required a local repository to track our files. For this we have to use the command:

git init:

This command will create a folder named with .git, which acts as local repository.

- 3).By default git wont track any files. We have to add files to the staging area, such files only can be tracked by git.

We can add files to the staging area by using:

git add abc.txt

git add .==>. means all files present in current working directory.

- 4).We have to commit the changes in the files present in staging area. Then the files/changes will be moved to local repository.

git commit -m 'commit message'

- 5).We can find status of files by using

git status

- 6).We can find all commits related to our local repo?

git log

git init-->To create and initialize local repository
git add files-->To add files to staging area
git commit -m 'commit message'-->To commit changes so that changes will be stored in local repo
git status-->To find status
git log-->To see all commits.

github:

Create a new repository 'djangorepo'

push an existing repository from the command line

git remote add origin https://github.com/maheshdj123/djangorepo.git
git branch -M main
git push -u origin main

Deployment on pythonanywhere.com

Virtual Environment:

It is an isolated environment where we can install our project specific required softwares. We can develop and run our application in this environment.

Creation of virtual environment:

Consoles-->Bash

\$ mkvirtualenv --python=python3.10 myproj
Here myproj:Name of the virtual environment.

(myproj) 14:50 ~ \$

It means virtual environment created and currently active.

\$pip list

Check django version:

```
C:\Windows\System32>py
>>> import django
>>> django.__version__
'4.1'
```

\$pip install -U django==4.1

Copy our application from github to virtual env(pythonanywhere.com)

github:<https://github.com/maheshdj123/djangorepo.git>

command:

```
$git clone https://github.com/maheshdj123/djangorepo.git
$ls
$cd djangorepo
$ls
$cd firstproject
$pwd
```

configure on the web tab:

source code path:/home/maheshproject/djangorepo/firstproject

virtual env:/home/maheshproject/.virtualenvs/myproj

.virtualenvs----->. means hidden directory

WSGI configuration

maheshproject_pythonanywhere_com_wsgi.py

Remove all hello world related configuration

```
import os
```

```
import sys
```

```
path = '/home/maheshproject/djangorepo/firstproject'
```

```
if path not in sys.path:
```

```
    sys.path.append(path)
```

```
os.chdir(path)
```

```
os.environ.setdefault('DJANGO_SETTINGS_MODULE','firstproject.settings')
```

We will get an error:

DisallowedHost at/

in settings.py:

```
ALLOWED_HOSTS = ['maheshproject.pythonanywhere.com']
```

Reload app and refresh browser.