## Technology used:

* Python3
* Django
* Pip3
* Pymysql
* Nginx
* UWsgi
* Mysql
* Git

## Basic information of the server:

#### The IP address for the server:

* 54.252.136.227

#### IAM User:

* https://339258046759.signin.aws.amazon.com/console
* username: marker\_user
* password: passwordformarker

#### MySQL server root password at local:

* elec3609

#### MySQL username and password for remote access:

* username: betchya
* password: elec3609

## 

## File structure:

#### Project files folder:

* /home/ubuntu/betchya

#### MySQL configuration file:

* /etc/mysql/my.cnf

#### Nginx configuration file:

* /etc/nginx/sites-enabled/default
* /etc/nginx/nginx.conf

## 

## Steps of deployment:

#### Installing essential packages and building tools (use sudo if requires):

* apt-get update
* install git
* install gcc
* install python
* install pip
* apt-get install libxml2-dev
* apt-get install libpython3-dev
* install python-dev
* pip install django
* pip install pymysql

#### Pulling Django source code and other configuration files from remote github repository:

* cd /home/ubuntu/betchya
* git pull origin master

#### Installing Nginx:

* apt-get install nginx
* change nginx config at:
  + vi /etc/nginx/nginx.conf
* Change user name to ubuntu in nginx.conf to:
  + user ubuntu;
* Modifying the events configuration to:
  + use epoll;
* Then configure the default file in /etc/nginx/sites-enabled to:

*server {*

*listen 80;*

*root /home/ubuntu/betchya;*

*index index.html index.htm index.nginx-debian.html;*

*server\_name (54.252.136.227);*

*location /static {*

*root /home/ubuntu/betchya/betchyaApp;*

*}*

*location /media {*

*alias (/downloads/betchya/betchyaApp/static);*

*}*

*location / {*

*include uwsgi\_params;*

*uwsgi\_pass 127.0.0.1:8000;*

*}*

*}*

#### Installing mysql 5.7:

* wget https://dev.mysql.com/get/mysql-apt-config\_0.8.1-1\_all.deb
* sudo dpkg -i mysql-apt-config\_0.8.1-1\_all.deb
* sudo apt-get install mysql-server
  + during installation, set password to 'elec3609'

#### Configure MySQL database:

* sudo mysql\_upgrade -u root -p 'elec3609'

#### Checking database status:

* sudo service mysql restart
* mysqlcheck -uroot -p'elec3609' --all-databases

#### Configure mysql user and permission:

* mysql -u root -p 'elec3609'
* enter mysql console and enter:
  + CREATE USER 'betchya'@'%' IDENTIFIED BY 'elec3609';
  + GRANT ALL PRIVILEGES ON \*.\* TO 'betchya'@'%';
  + flush privileges;

#### Then adding server configuration to the mysql config at /etc/mysql/my.cnf:

*[client]*

*port=3306*

*[mysqld]*

*port=3306*

*bind-address=0.0.0.0*

* Save and exit
* Restart mysql service using:
  + service mysql restart

#### Performing Django configuration and migration referring to the Django official document:

* <https://docs.djangoproject.com/en/2.1/intro/tutorial02/>

#### 

#### Finally:

* Restart nginx and uwsgi:
  + sudo service nginx restart
  + sudo uwsgi --socket :8000 --plugin python3 --dule betchya.wsgi
* adding a security group to the EC2 instance with permission of allowing sending/receiving data via socket 80 and socket 3306 in order to active the HTTP and mysql service.