**Steps for Configuration of the system**

**Create a Key Pair**

* In EC2 Dashboard, under Network and Security choose Key Pair
* Click on Create Key Pair, Name it as you want (project-1-rehan)
* Save it at a secure location in your machine, DO NOT SHARE

**Let’s Configure a Security Group for our Instance**

* In EC2 Dashboard, Under Network and Security choose Security Groups
* Create Security Group
* Name: codex-Securitygroup
* Description: Allow SSH from my machine
* VPC: codex-VPC
* Add Inbound Rule
  + Type: SSH, Source: Anywhere
  + Type: TCP, PORT: 80, Source: Anywhere
  + Type: TCP, PORT: 443, Source: Anywhere
* Create Security Group

**Create EC2 Instance where we will be hosting our web application**

* Go to EC2 Dashboard
* Under Instances, Choose Instances
* Click Launch Instances
* Search for Ubuntu Server 20.04, Choose 64-bit and Select
  + Instance Type: t2.micro (1 vCPU,1GB Memory)
* Proceed to Configuration Instance Details.
  + Keep Everything as default
* Proceed to Add Storage
  + Size: 8 GB
  + Delete on Termination: Checked
* Proceed to Add Tags
  + Click Add
  + Tag - Key: Name, Value: codex-WebServer
* Proceed to Configure Security Group
  + Choose Existing Security Group: codex-Securitygroup
* Click on Launch
  + Choose Existing Key Pair: codex.pem
* Launch Instance

**SSH Connection to your Instance**

* Start your EC2 Instance from EC2 dashboard
* Right click on the instance and click Connect
* Go to the SSH Client
* Open the command line interface
  + cd to the directory where codex.pem file is located in your terminal.
* Copy the command from SSH client and run it in the terminal
  + ssh -i "codex.pem" [ubuntu@ec2-AA-BB-CCC-DDD.compute-1.amazonaws.com](mailto:ubuntu@ec2-AA-BB-CCC-DDD.compute-1.amazonaws.com)

**Installing Nginx on the system**

* Ssh to the instance
* Use these commands to update all the packages
  + sudo apt update
  + sudo apt upgrade
* Run this to install Nginx
  + sudo apt install nginx
* cd to the sites-available directory in nginx
  + cd /etc/nginx/sites-available/
* Create a new file
  + sudo nano codex-website
* Add these contents in the above file

|  |
| --- |
| server {  # Listen - What ports (IPv4 and IPv6) should the server listen on?  listen 80;  listen [::]:80 default\_server;  # Index - What file should be sent if none is specified?  index index.html;  # Root - Where are the website files on disk?  root /var/www/codex-website;  # Server\_Name - What is the DNS name of this site?  # NOTE: This will be fully configured in a FUTURE LAB  server\_name localhost;  location / {  # First attempt to serve request as file, then  # as directory, then fall back to displaying a 404.  try\_files $uri $uri/ =404;  }  } |

* Cd to sites-enabled directory
  + cd /etc/nginx/sites-enabled/
* Create a symbolic link for your website
  + sudo ln -s ../sites-available/codex-website
* To make sure the link is working run this command
  + sudo nginx -t
  + If it runs successful go ahead and restart nginx otherwise create the link again
* To restart nginx
  + sudo systemctl restart nginx
* This would make the website available on the public-IP of the instance and users can access it from their local browser