When you want to make a website for yourself, there are many options than hiring a web designer or developer. Such as many online website builder tools are available with editable templates and host through their servers. What is your best option if you are a developer, wish to make a portfolio website, or want to share your knowledge with the world? The Answer which I found is Python, dash, and Aws

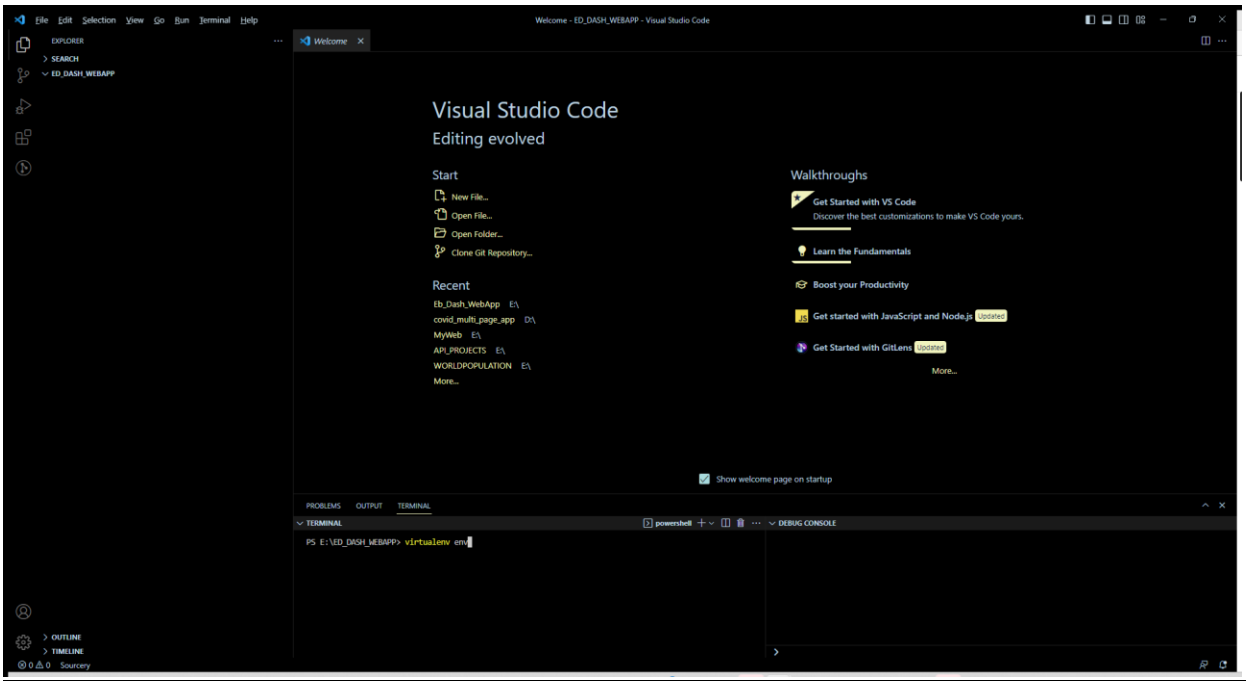
Python is a friendly and easy-to-learn language with many web application frameworks, such as Django, Flask, Dash, Pyramid, and Bottle. Developing full-stack web applications with the dash is effortless using dash html, dash core components, and dash bootstrap components, even though adding CSS and Java scripts to dash apps is straightforward.

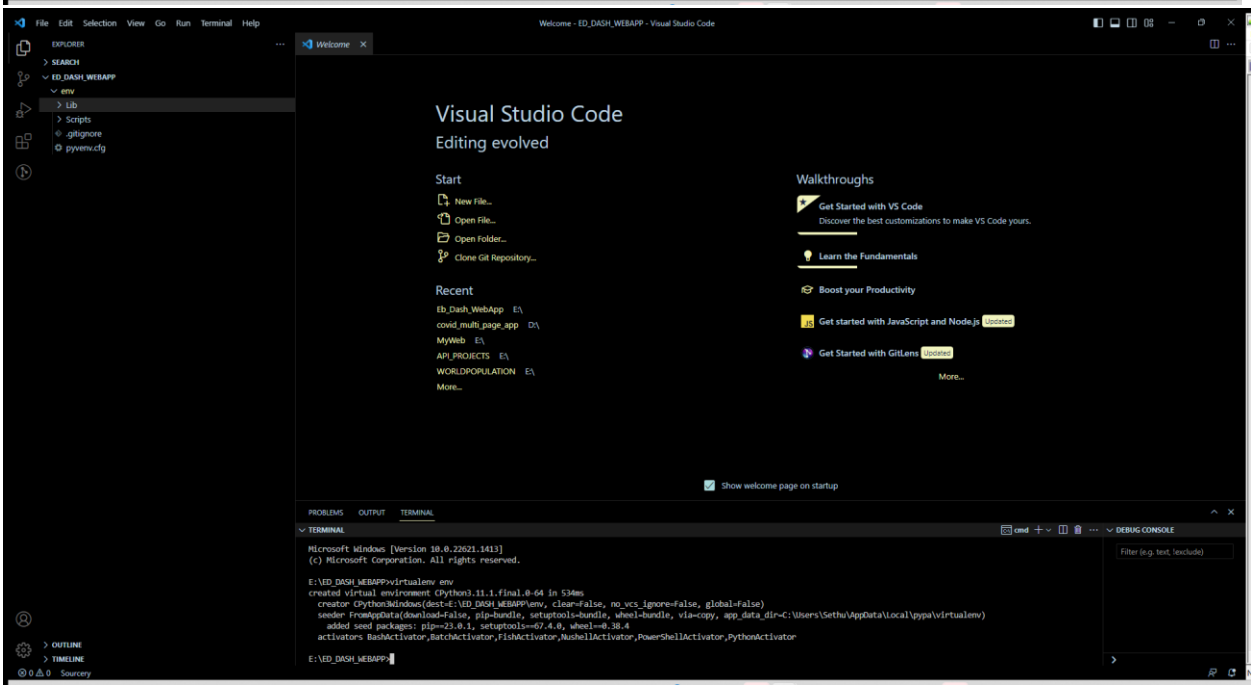
Creating a web application using python dash and AWS ElasticBeanstack has some measurements to fit in the first place; the second part is hosting the web application by getting a domain name from Amazon and registering that through AWS route 53. Finally, the web application would be up and running easily on the Web.

Let's Start with the setup

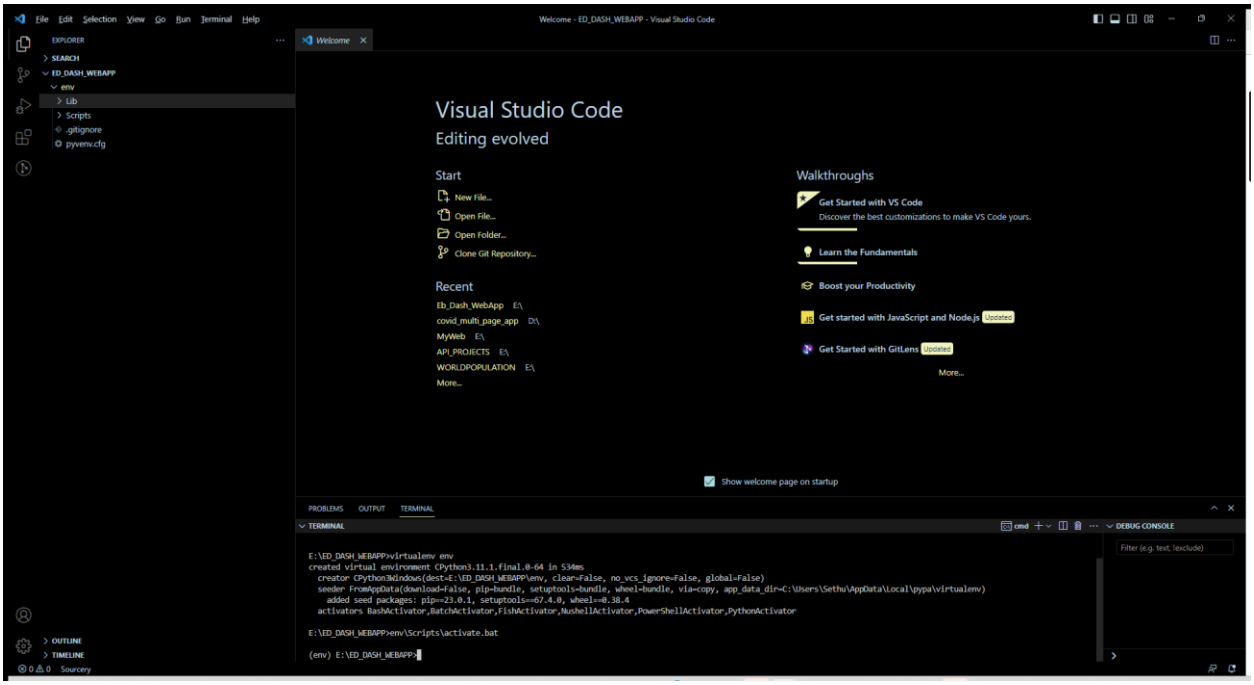
Beginning with Setting up visual studio code for a virtual environment

Write virtualenv env in the vcc terminal

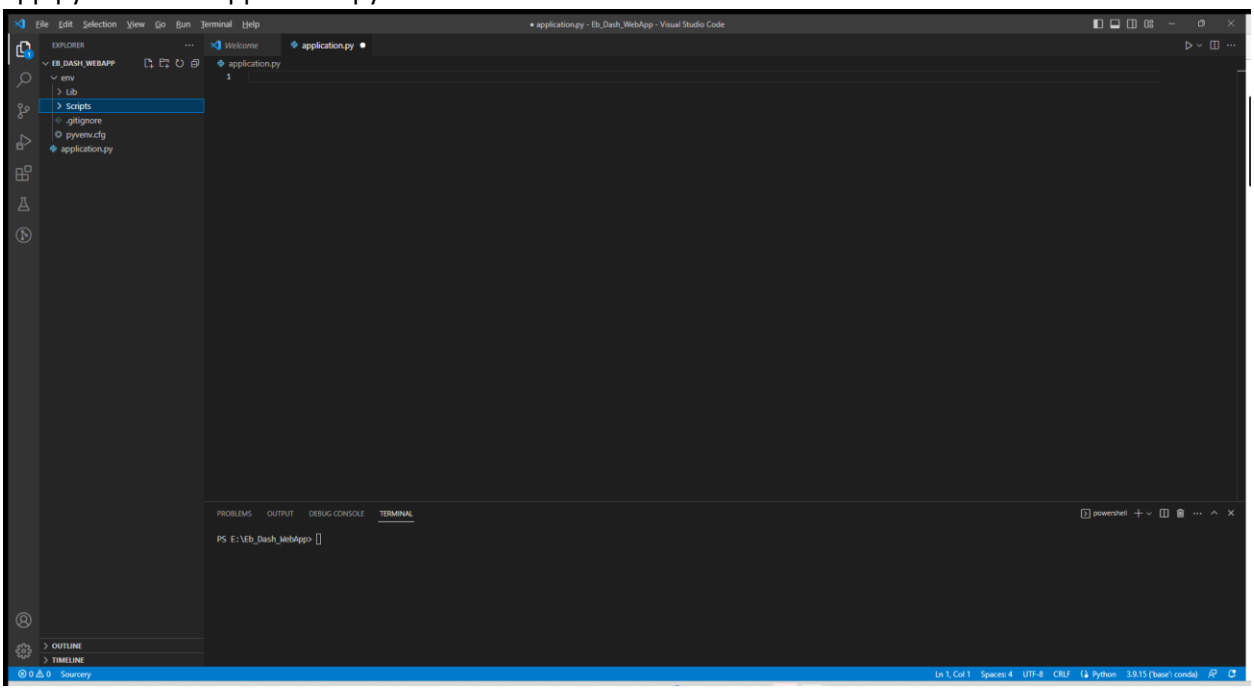




Activate the virtual environment by typing env\Scripts\activate.bat

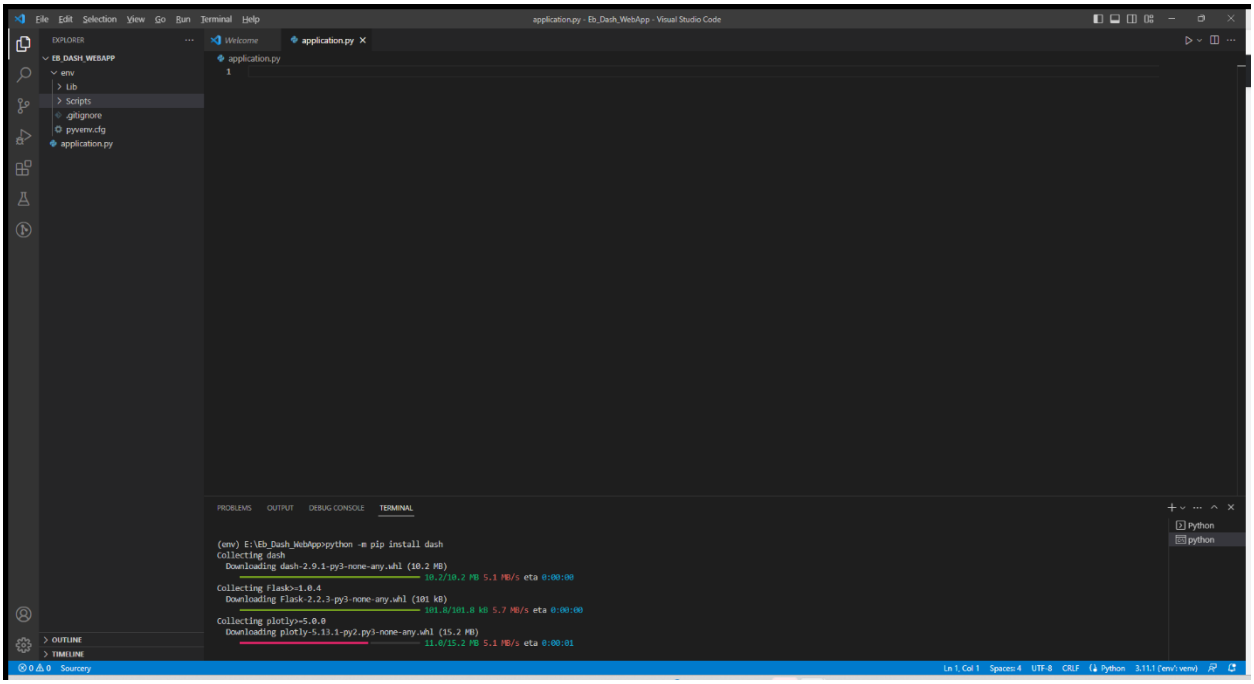


Creating app.py ElastickBeans needs a dash app setup according to ElasticBeans requirement, and app.py should be application.py

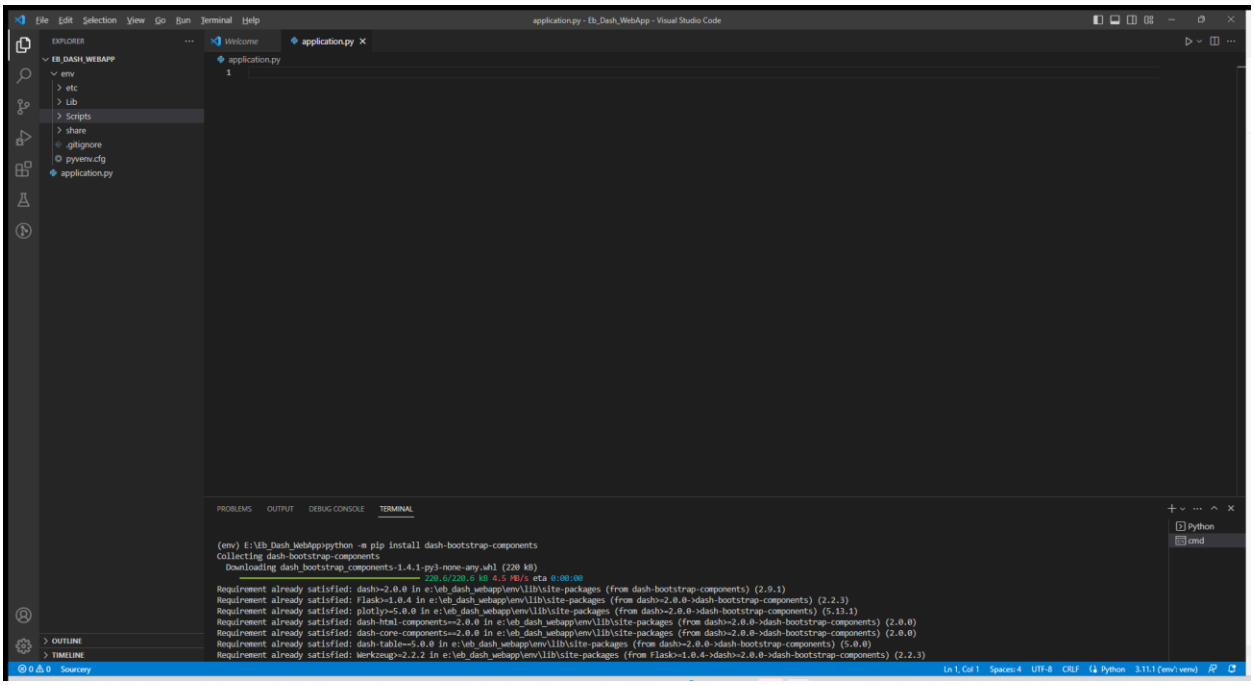


installing dash and dash bootstrap components

python -m pip install dash

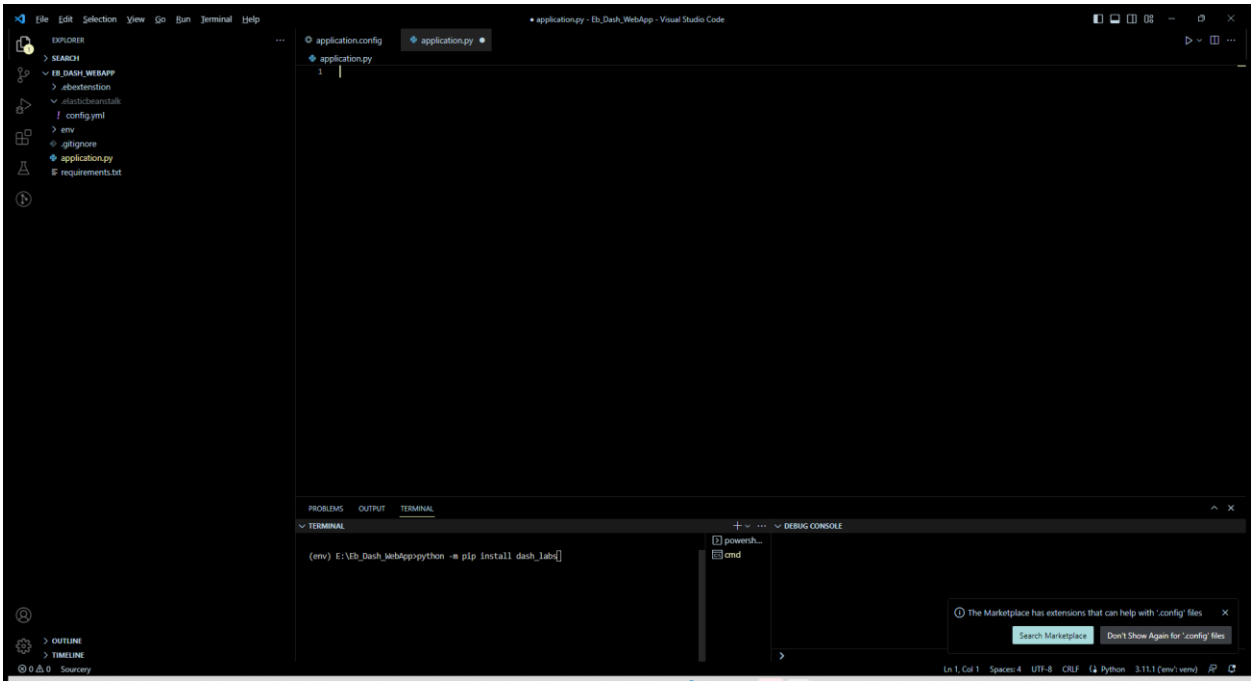


Python -m pip install dash-bootstrap-components



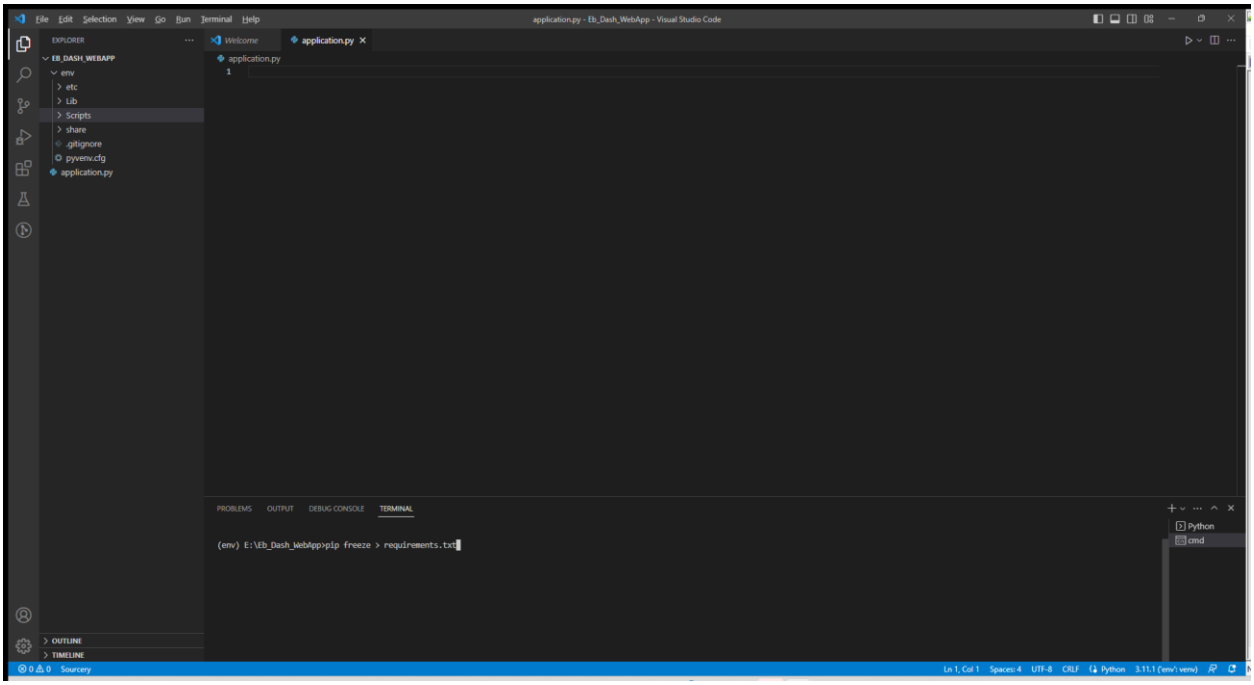
Installing dash_labs to create multipage on the dash application, more about dash-labs found in this link [dash-labs · PyPI]

Python -m pip install dash_labs



pip freeze > requirements.txt

The requirement text is a critical requirement for EB to install all the frameworks and libraries to load the application



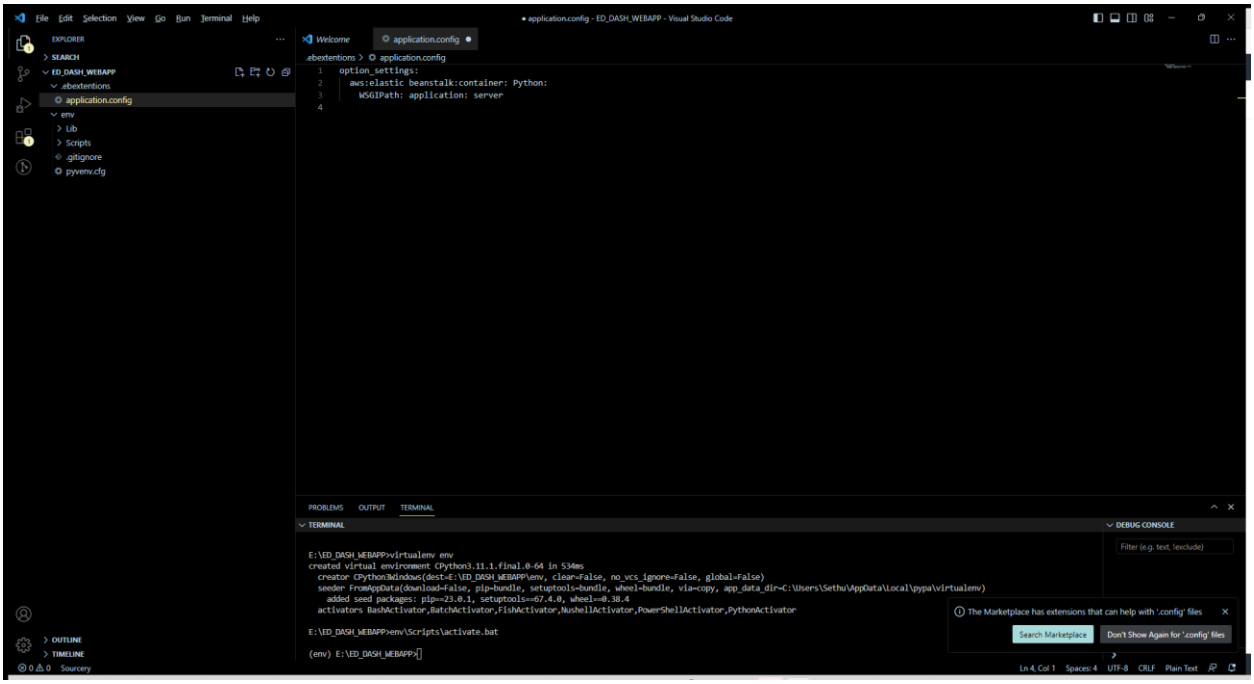
Now create .ebextensions(Advanced environment customization with configuration files (.ebextensions) - AWS Elastic Beanstalk (amazon.com)

And write this inside application.config files

option_settings:

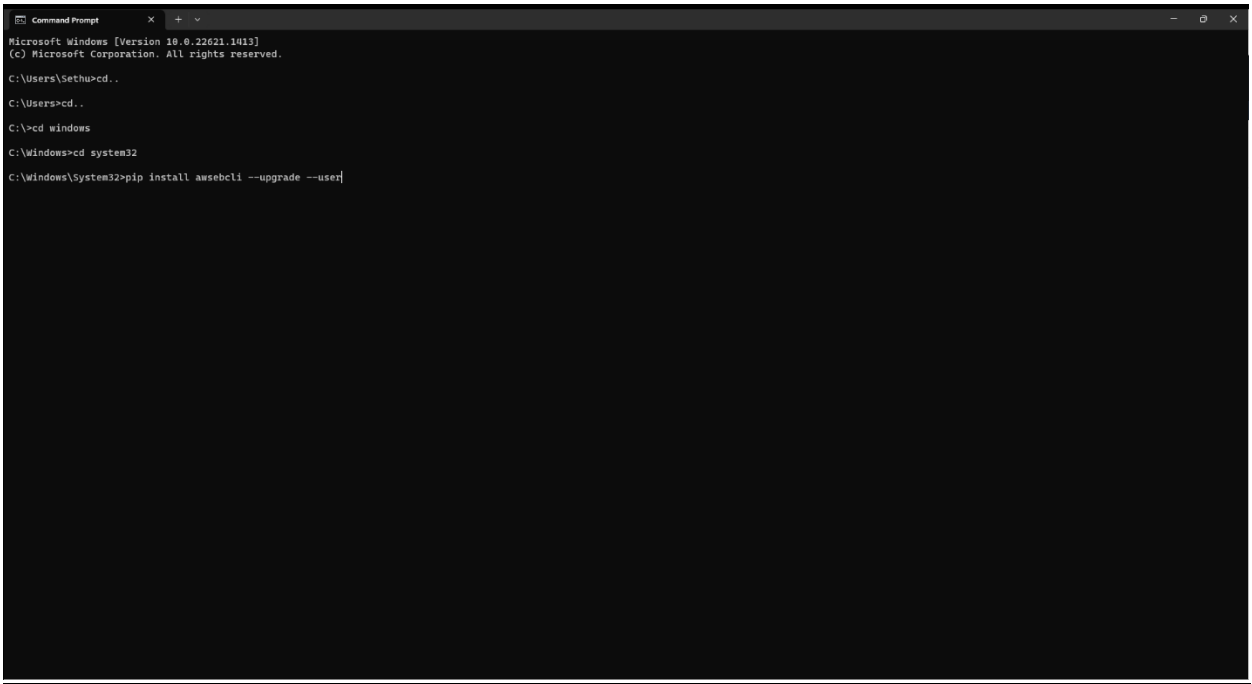
aws:elastic beanstalk:container: Python:

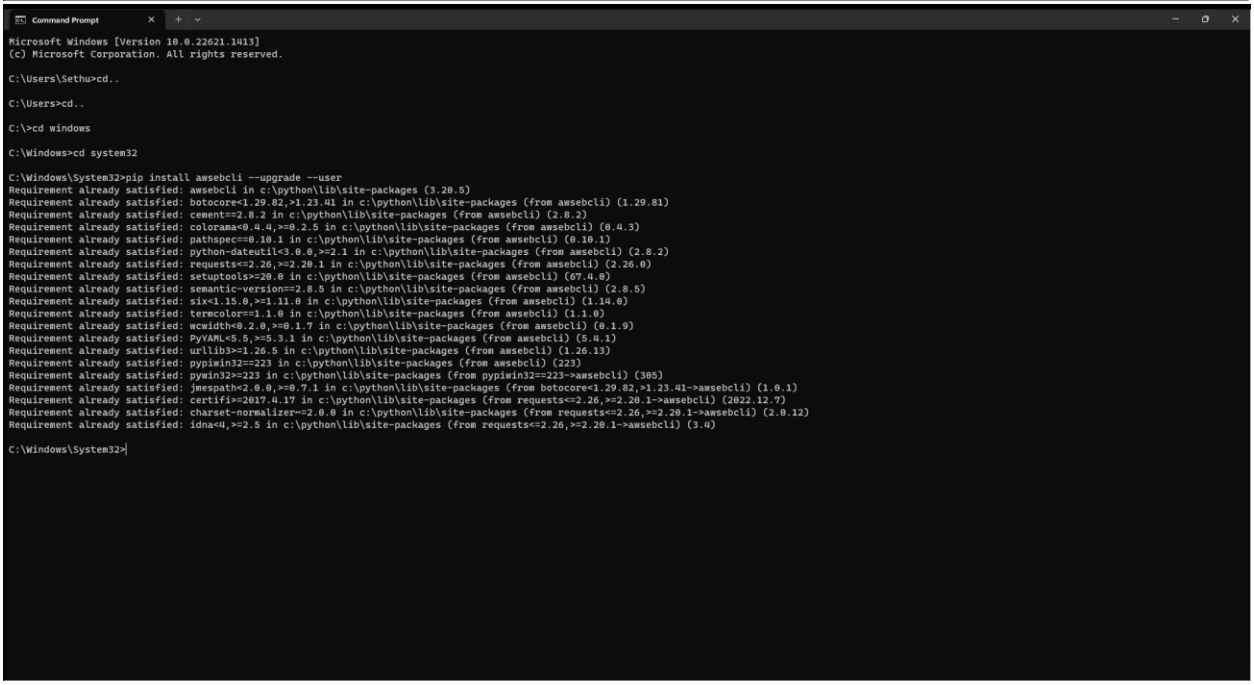
WSGIPath: application: server



Now time to create the application

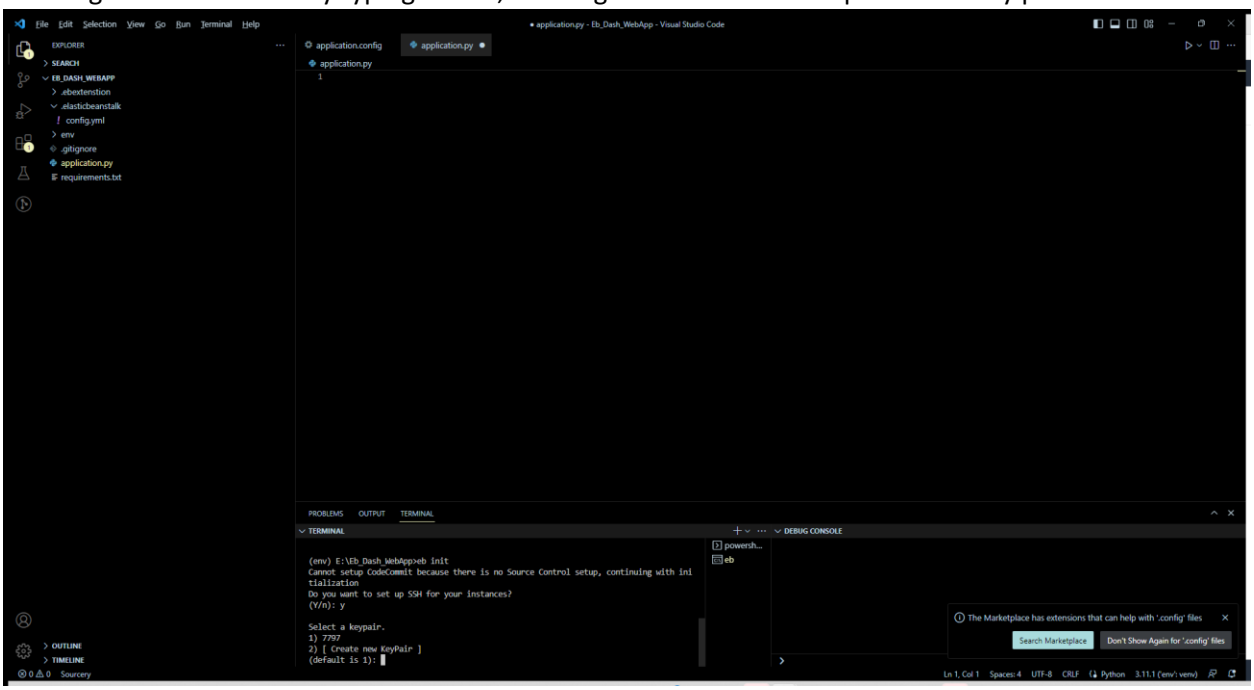
Installing awsebcli for setting up EB environment in VCCode with command line; EB environment setup can be done manually by login to AWS as root user and selecting ElasticBeanstalk in the console [Elastic Beanstalk Management Console (amazon.com)]();



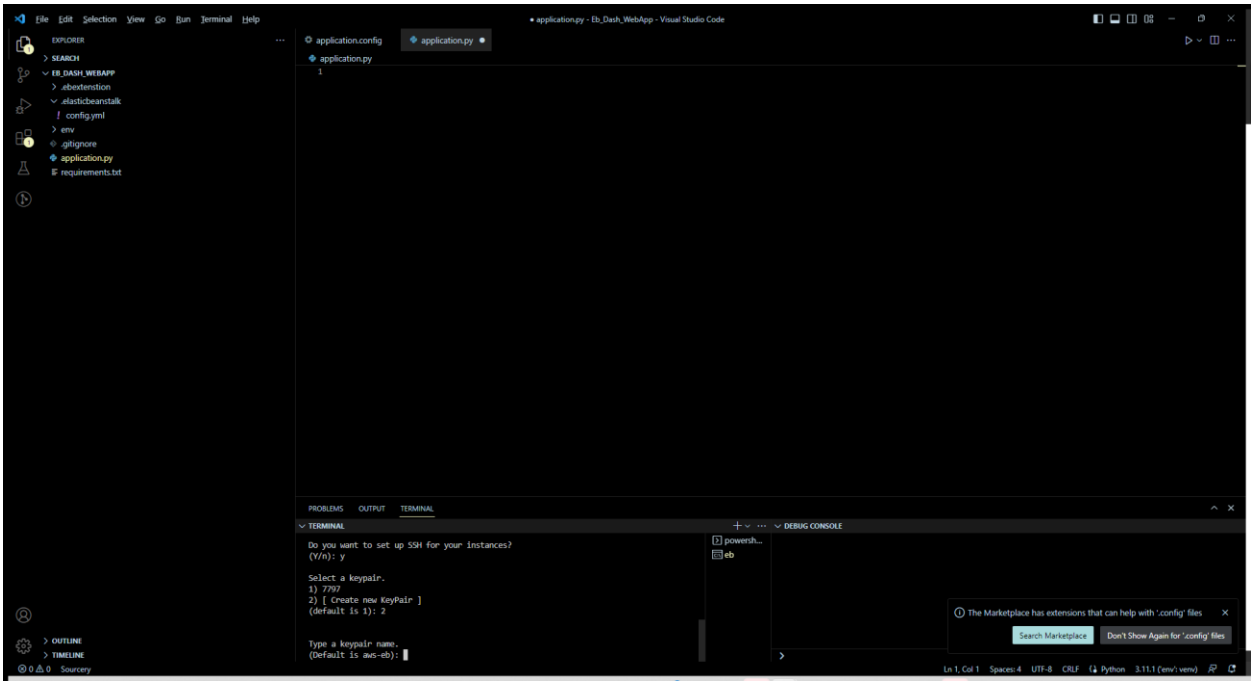


Setup EB environment with eb init command in VCCode terminal and add .elasticbeanstalk extension to the application folder and the config file

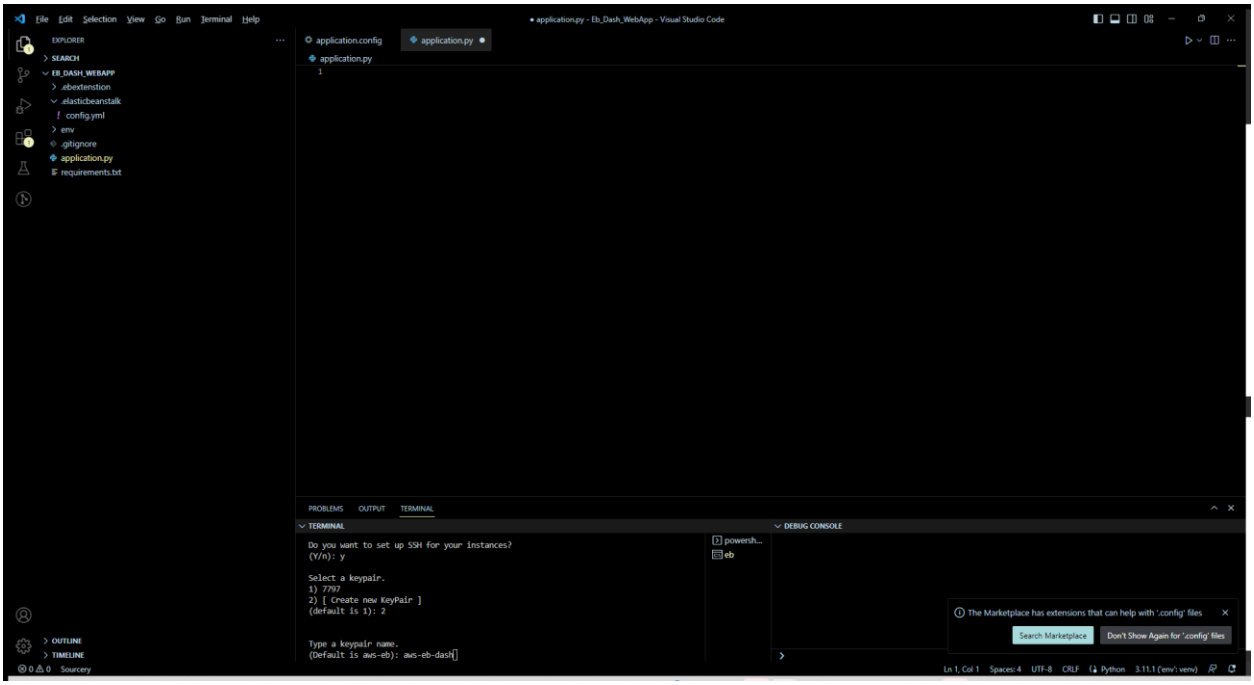
Creating EB environment by typing eb init, creating EB environment required AWSkey pair



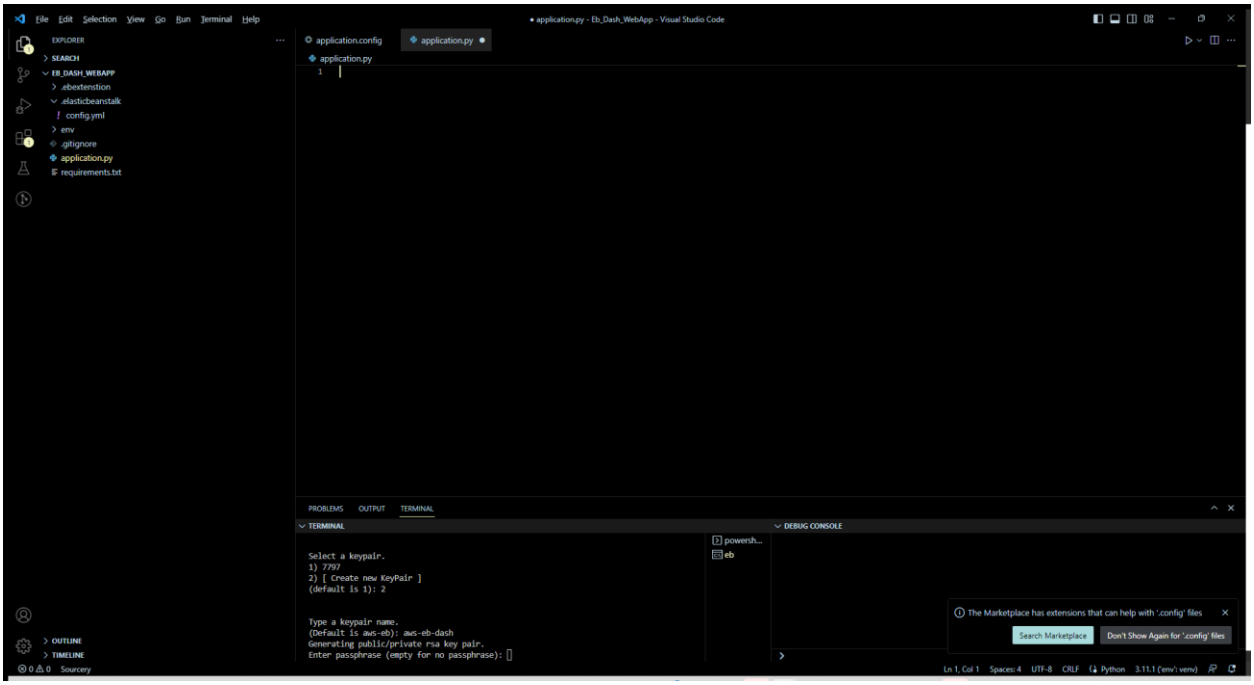
Create a new key pair by selecting option2



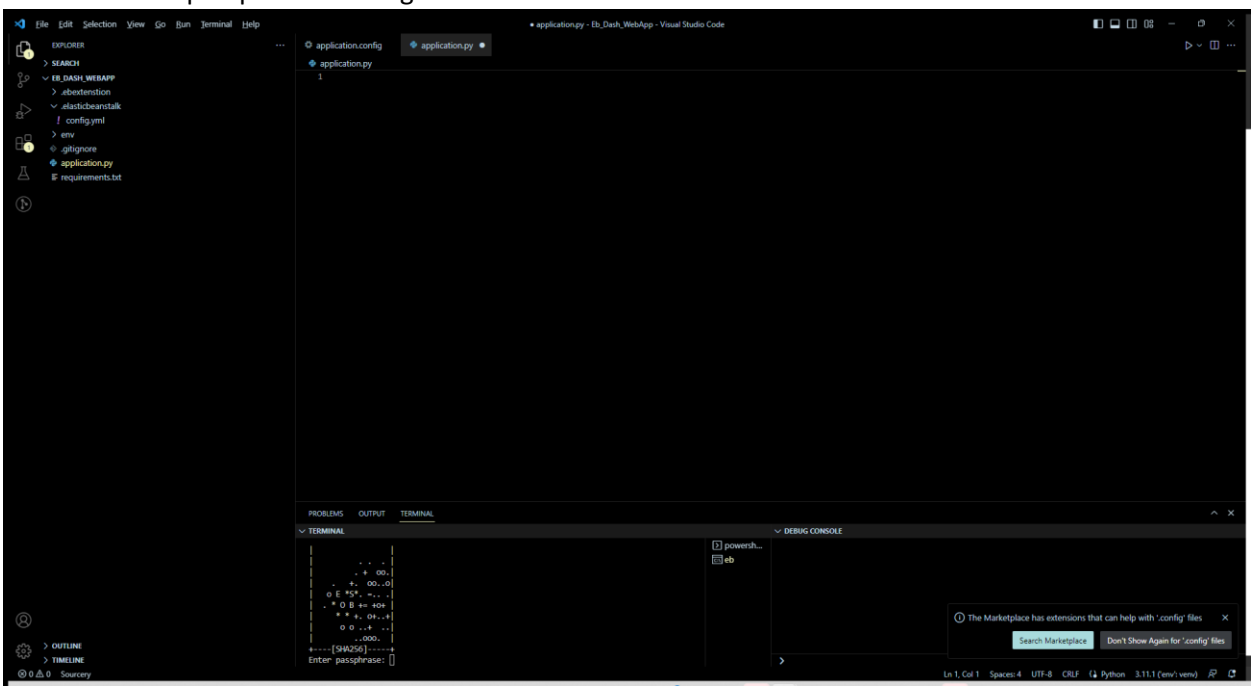
Type a key name



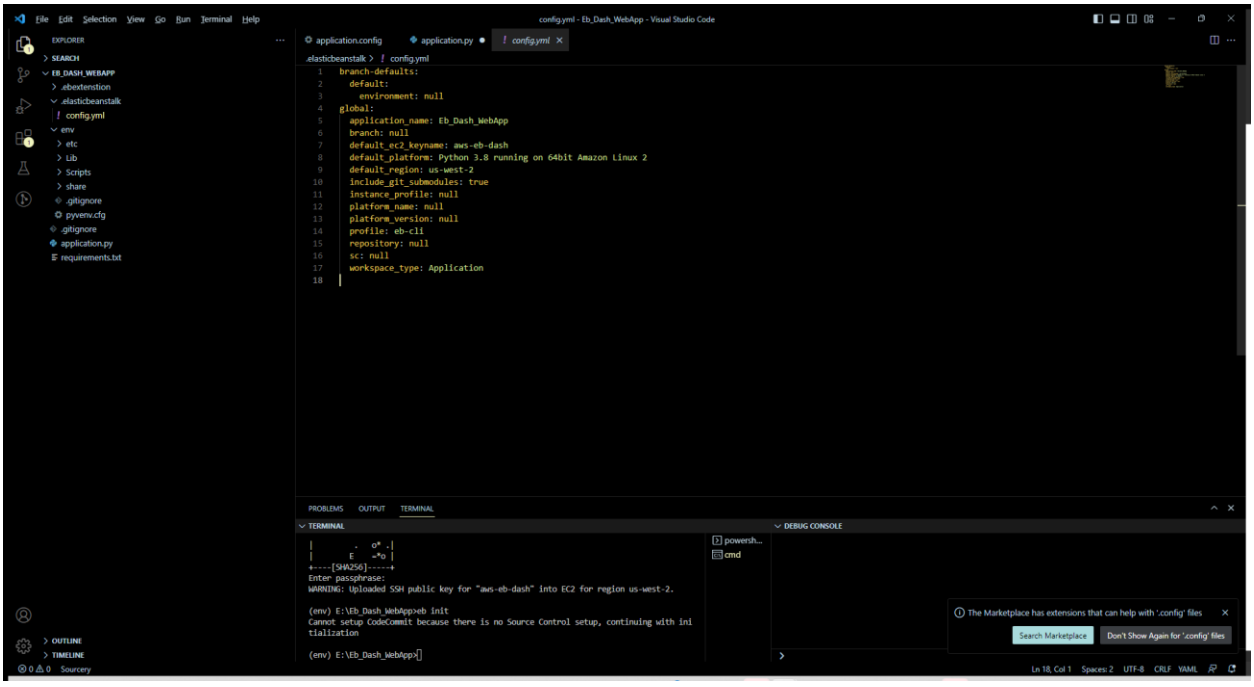
Enter a passphrase



Then enter the passphrase and log in

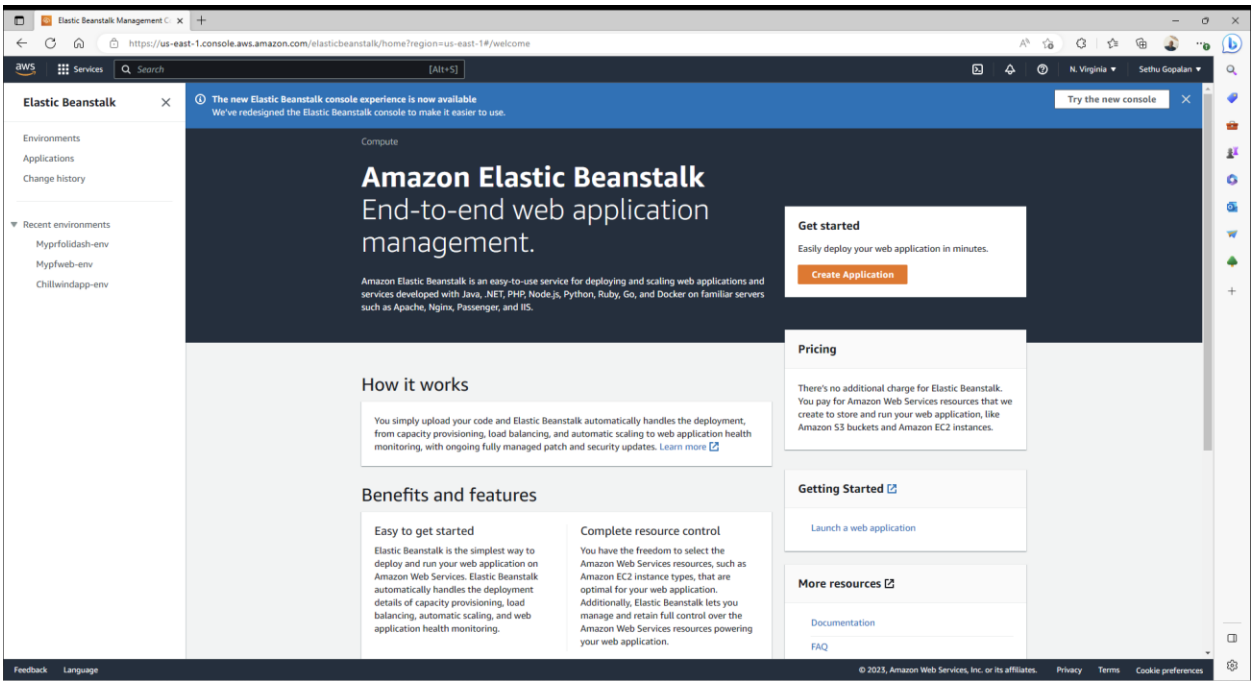


setup with awsebcli added application and configuration, .elastickbeantalk, and config to the code folder

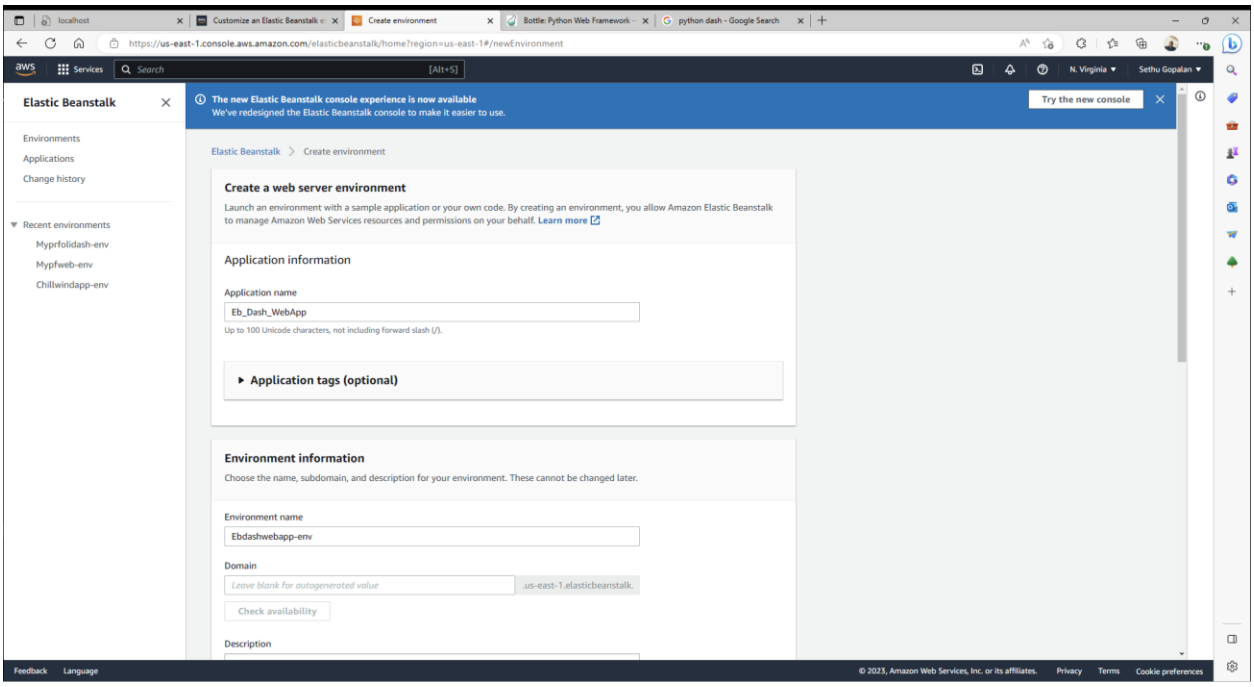


Enter passphrase shows WARNING: Uploaded SSH public key for "aws-eb-dash" into EC2 for region us-west-2, then come out from the setup run eb init again shows the message about CodeCommit because to set up the application through awsebcli; that need Codecommit setup on your AWS; CodeCommit is a paid service, so from here, connect git hub as version control and use amazon code pipeline for CICD

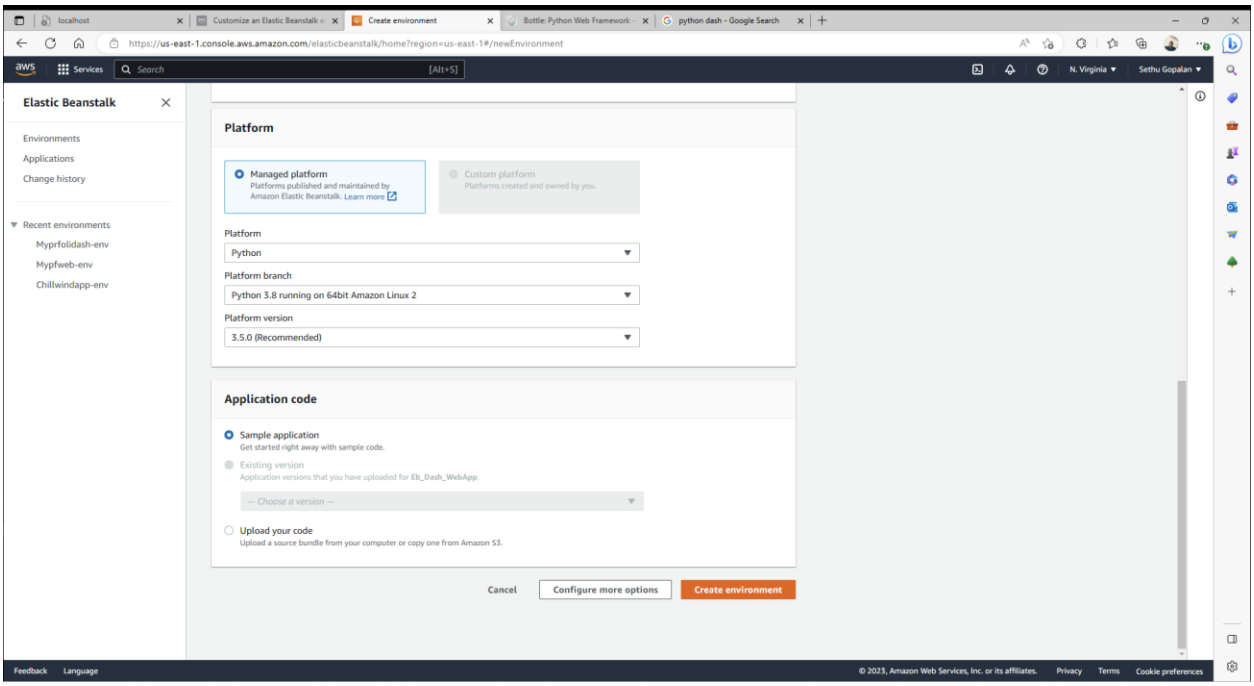
log in to AWS and go to EB, and set up an environment for the application



Type the same application folder name here in the application name, and the environment name is the same as the default



Select the Python platform for this project, and python 3.8 is the highest available version on EB, and select Python running on 64-bit Amazon Linux 2, application code as the sample application for now and select create an environment


Elastic Beanstalk
Environments
Applications
Change history
Recent environments
Myprfolidash-env
Mypfweb-env
Chillwindapp-env
Platform
Managed platform
Platforms published and maintained by Amazon Elastic Beanstalk. Learn more
Custom platform
Platforms created and owned by you.
Platform
Python
Platform branch
Python 3.8 running on 64bit Amazon Linux 2
Platform version
3.5.0 (Recommended)
Application code
Sample application
Get started right away with sample code.
Existing version
Application versions that you have uploaded for Eb_Dash_WebApp.
-- Choose a version --
Upload your code
Upload a source bundle from your computer or copy one from Amazon S3.
Cancel
Configure more options
Create environment
Feedback
Language
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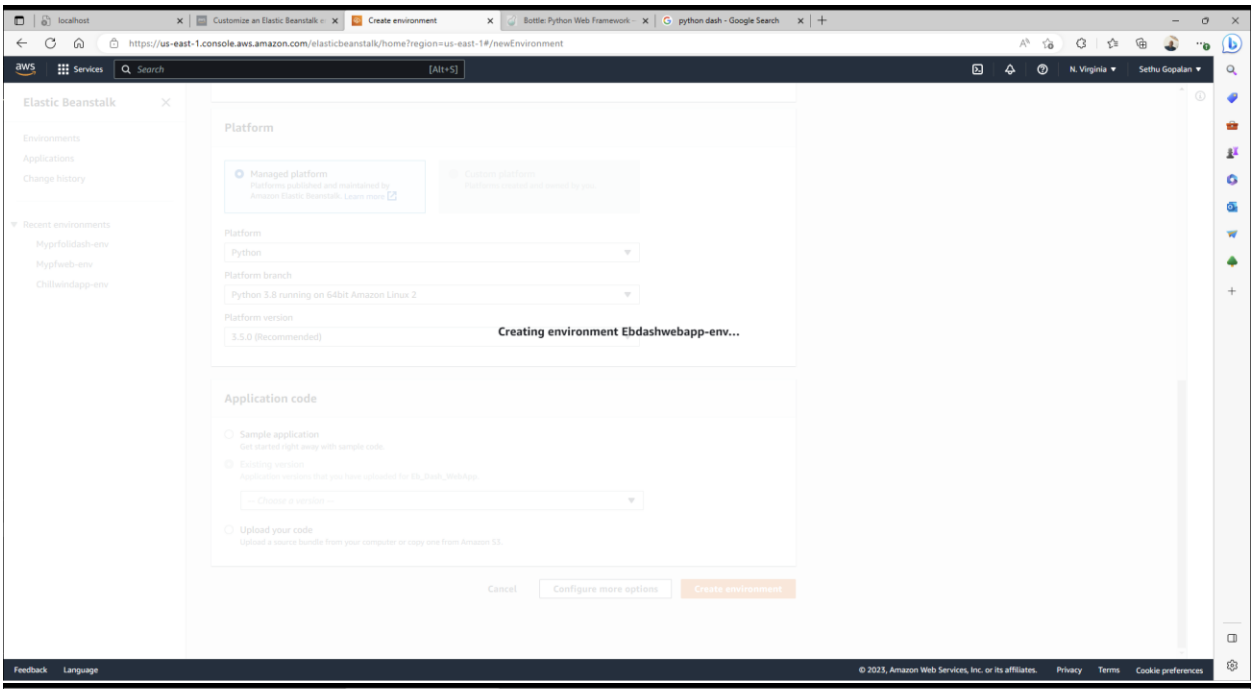
Create environment
https://us-east-1.console.aws.amazon.com/elasticbeanstalk/home?region=us-east-1#/newEnvironment
Elastic Beanstalk
Platform
Managed platform
Platform
Python
Platform branch
Python 3.8 running on 64bit Amazon Linux 2
Platform version
3.5.0 (Recommended)
Creating environment Ebdashwebapp-env...
Application code
Sample application
Upload your code
Cancel
Configure more options
Create environment
Feedback
Language
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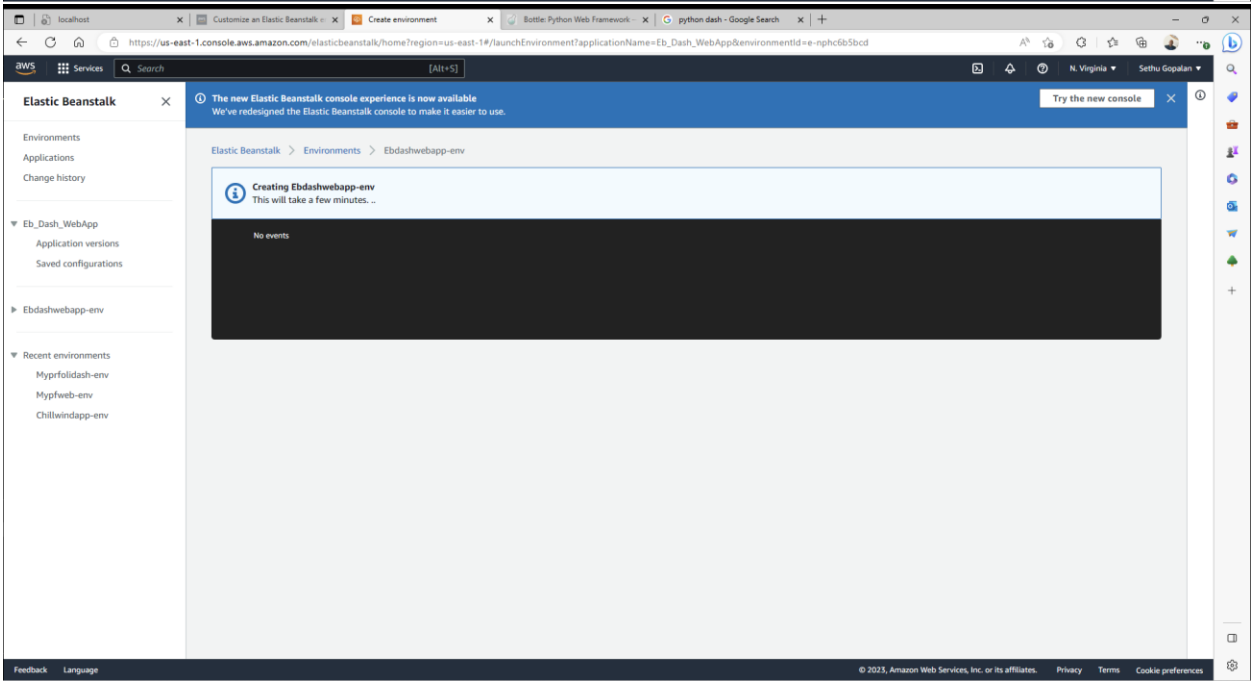
https://us-east-1.console.aws.amazon.com/elasticbeanstalk/home?region=us-east-1#/launchEnvironment?applicationName=Eb_Dash_WebApp&environmentId=e-nphc6b5bcd
Elastic Beanstalk
Environments
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Change history
Eb_Dash_WebApp
Application versions
Saved configurations
Ebdashwebapp-env
Recent environments
Myprfolidash-env
Mypfweb-env
Chillwindapp-env
The new Elastic Beanstalk console experience is now available
We've redesigned the Elastic Beanstalk console to make it easier to use.
Try the new console
Elastic Beanstalk > Environments > Ebdashwebapp-env
Creating Ebdashwebapp-env
This will take a few minutes. ..
No events
Feedback
Language
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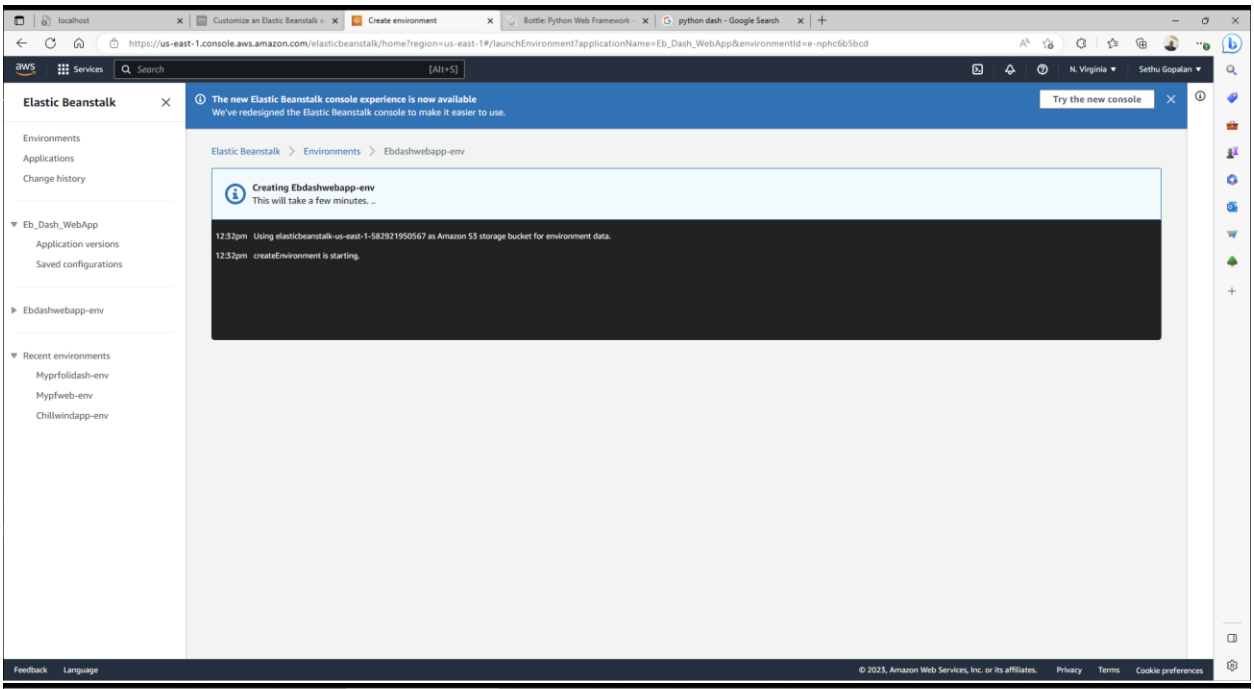
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Elastic Beanstalk > Environments > Ebdashwebapp-env
Creating Ebdashwebapp-env
This will take a few minutes. ..
12:32pm Using elasticbeanstalk-us-east-1-582921950567 as Amazon S3 storage bucket for environment data.
12:32pm createEnvironment is starting.
Feedback
Language
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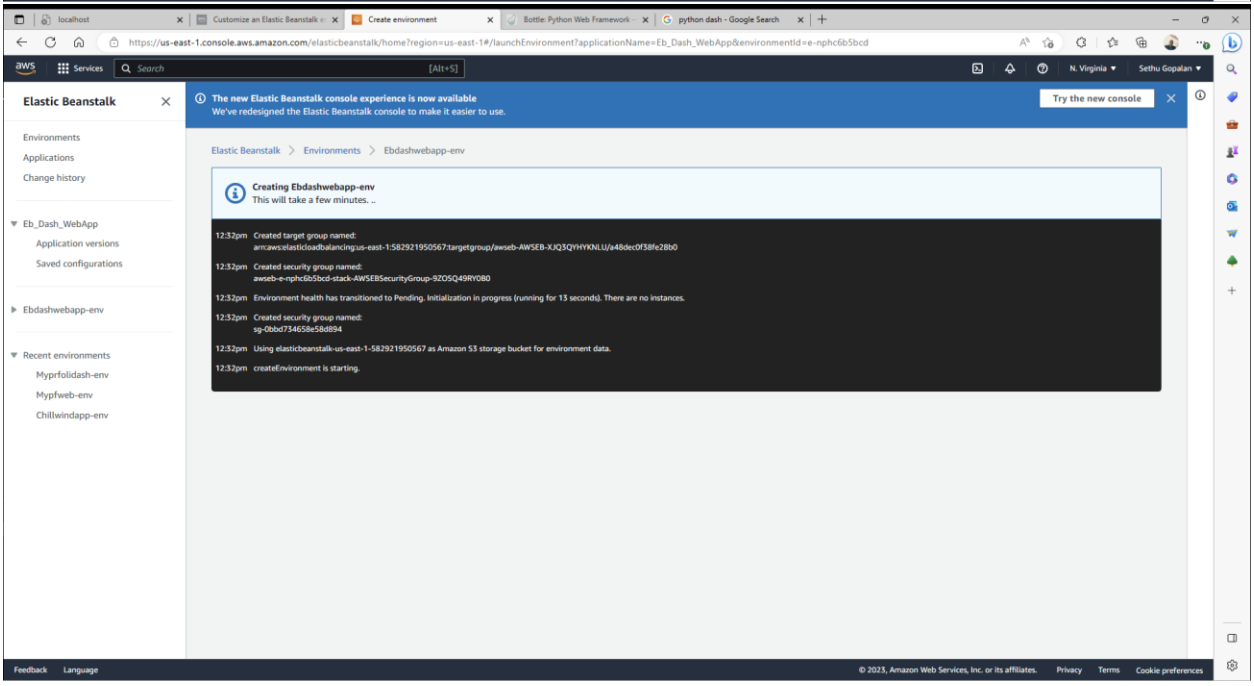
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Try the new console
Elastic Beanstalk > Environments > Ebdashwebapp-env
Creating Ebdashwebapp-env
This will take a few minutes. ..
12:32pm Created target group named:
arn:aws:elasticloadbalancing:us-east-1:582921950567:targetgroup/awseb-AWSEB-XJQ3QYHYKNLU/a48dec0f38fe28b0
12:32pm Created security group named:
awseb-e-nphc6b5bcd-stack-AWSEBSecurityGroup-9ZOSQ49RY0B0
12:32pm Environment health has transitioned to Pending. Initialization in progress (running for 13 seconds). There are no instances.
12:32pm Created security group named:
sg-0bbd734658e58d894
12:32pm Using elasticbeanstalk-us-east-1-582921950567 as Amazon S3 storage bucket for environment data.
12:32pm createEnvironment is starting.
Feedback
Language
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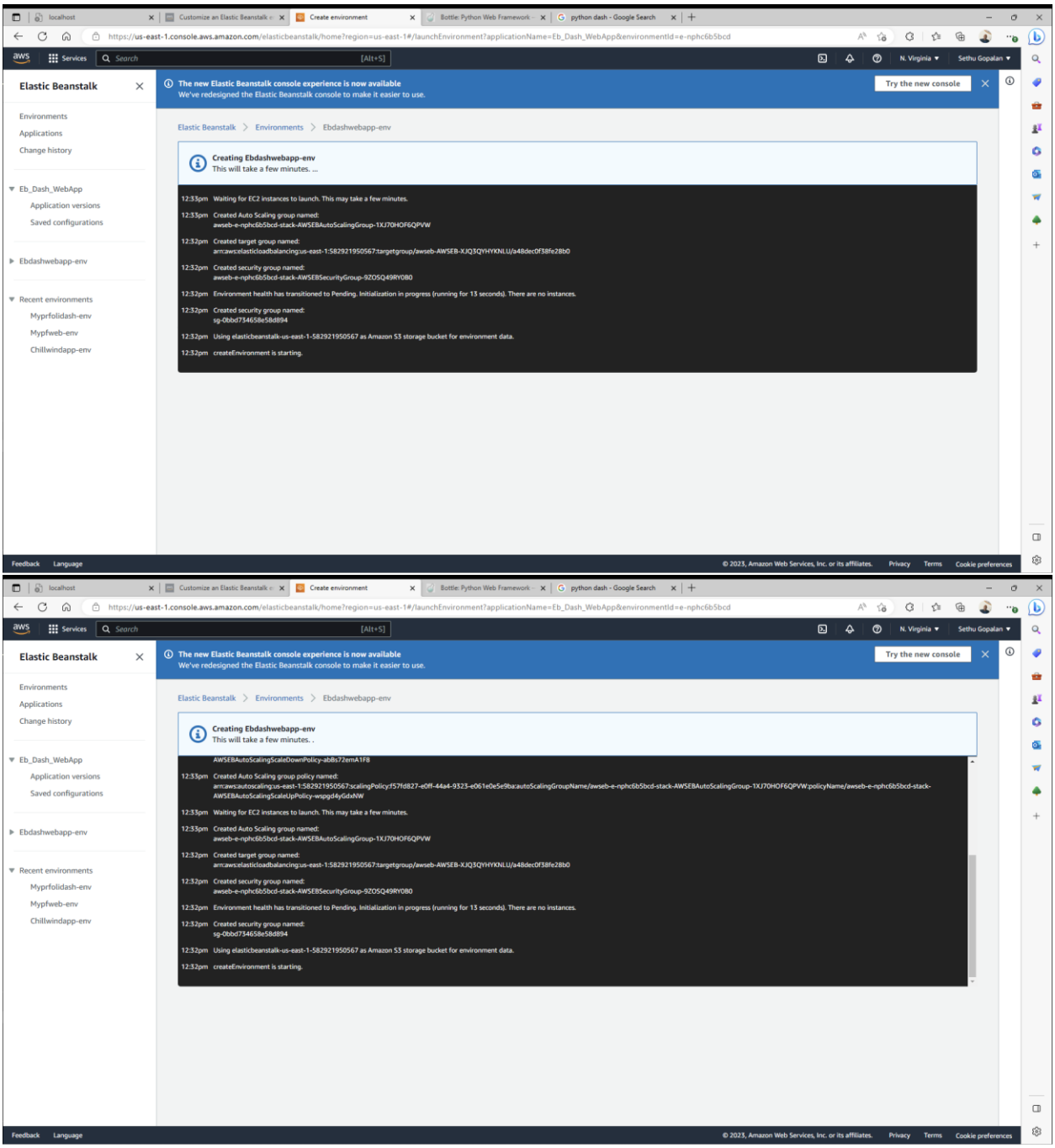
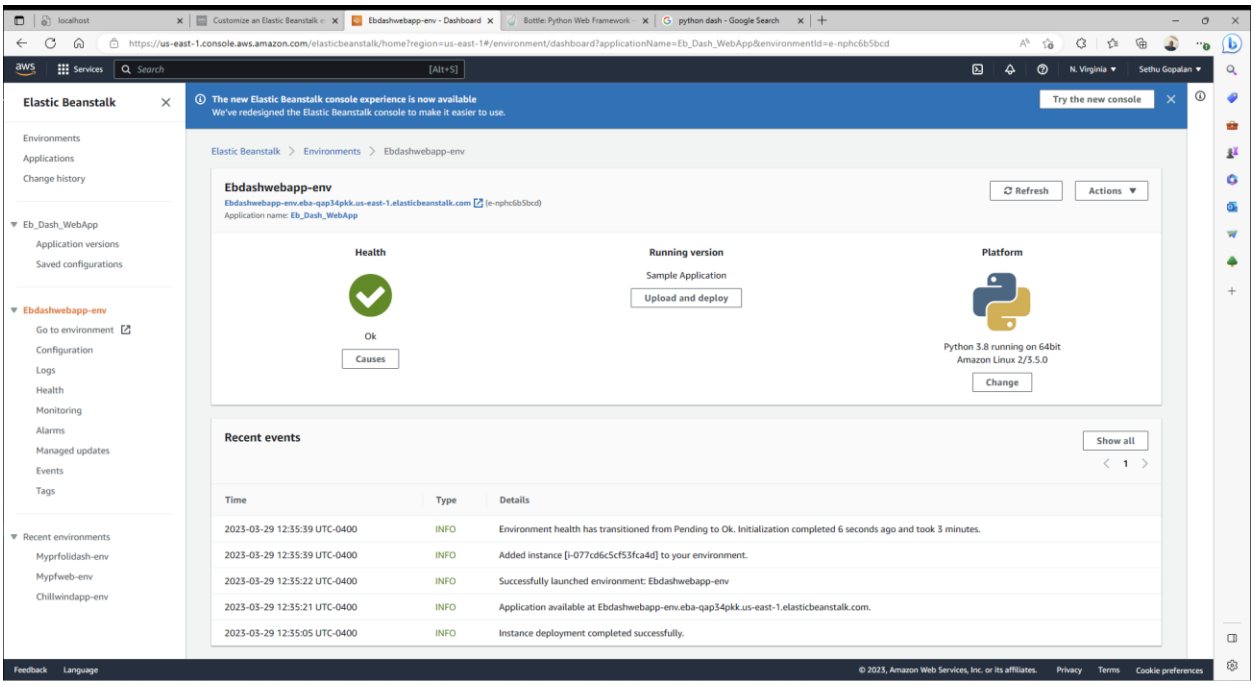


In the end, it shows the same as below the app environment created


Elastic Beanstalk
Environments
Applications
Change history
Eb_Dash_WebApp
Application versions
Saved configurations
Ebdashwebapp-env
Go to environment
Configuration
Logs
Health
Monitoring
Alarms
Managed updates
Events
Tags
Recent environments
Myprfolidash-env
Mypfweb-env
Chillwindapp-env
The new Elastic Beanstalk console experience is now available
We've redesigned the Elastic Beanstalk console to make it easier to use.
Try the new console
Elastic Beanstalk > Environments > Ebdashwebapp-env
Ebdashwebapp-env
Ebdashwebapp-env.eba-qap34pkk.us-east-1.elasticbeanstalk.com (e-nphc6b5bcd)
Application name: Eb_Dash_WebApp
Refresh
Actions
Health
Ok
Causes
Running version
Sample Application
Upload and deploy
Platform
Python 3.8 running on 64bit
Amazon Linux 2/3.5.0
Change
Recent events
Show all
Time
Type
Details
2023-03-29 12:35:39 UTC-0400 INFO Environment health has transitioned from Pending to Ok. Initialization completed 6 seconds ago and took 3 minutes.
2023-03-29 12:35:39 UTC-0400 INFO Added instance [i-077cd6c5cf53fca4d] to your environment.
2023-03-29 12:35:22 UTC-0400 INFO Successfully launched environment: Ebdashwebapp-env
2023-03-29 12:35:21 UTC-0400 INFO Application available at Ebdashwebapp-env.eba-qap34pkk.us-east-1.elasticbeanstalk.com.
2023-03-29 12:35:05 UTC-0400 INFO Instance deployment completed successfully.
Feedback
Language
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