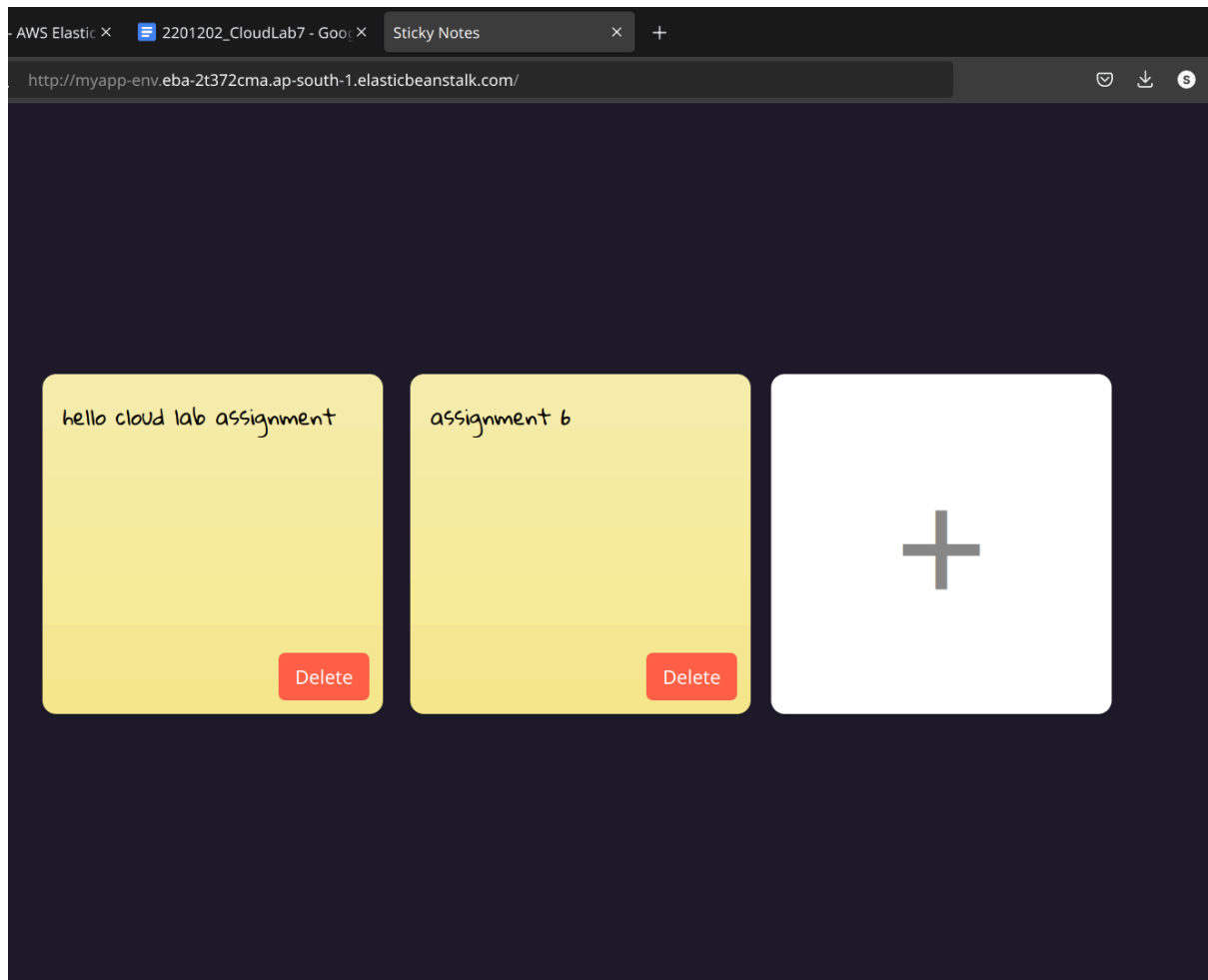


Sridhar Tuli
2201202
Cloud Lab 7

Create a web application (by using the pages you developed earlier) to host your website.

- The application should be dynamic and should have facility to update the information through a web interface.



- Write a Python program using boto to deploy the application using AWS Elastic Beanstalk.

```

code.py x
41 import boto3
40 import time
39
38 s3_client = boto3.client('s3')
37 eb_client = boto3.client('elasticbeanstalk')
36 iam_client = boto3.client('iam')
35
34 s3_bucket = 'bucket-1-2201202'
33 s3_key = 'sample-app.zip'
32 app_name = 'MyApp'
31 env_name = 'MyApp-env'
30 platform_arn = 'arn:aws:elasticbeanstalk:region::platform/PlatformName'
29 role_name = 'NewRole'
28
27 try:
26     iam_client.get_role(RoleName=role_name)
25     print(f"IAM Role {role_name} already exists.")
24 except iam_client.exceptions.NoSuchEntityException:
23     print(f"Creating IAM Role {role_name}.")
22     assume_role_policy_document = {
21         'Version': '2012-10-17',
20         'Statement': [
19             {
18                 'Effect': 'Allow',
17                 'Principal': {
16                     'Service': 'elasticbeanstalk.amazonaws.com'
15                 },
14                 'Action': 'sts:AssumeRole'
13             }
12         ]
11     }
10     iam_client.create_role(
9         RoleName=role_name,
8         AssumeRolePolicyDocument=json.dumps(assume_role_policy_document)
7     )
6     iam_client.attach_role_policy(
5         RoleName=role_name,
4         PolicyArn='arn:aws:iam::aws:policy/AWSElasticBeanstalkFullAccess'
3     )
2
1     print("Creating Elastic Beanstalk Application.")
42 eb_client.create_application(

```

```

code.py x
43     ApplicationName=MyApp,
1     Description='Sample application deployed using boto3'
2 )
3
4 print("Creating application version from S3 bucket.")
5 app_version_label = f'v1-{int(time.time())}'
6 eb_client.create_application_version(
7     ApplicationName=app_name,
8     VersionLabel=app_version_label,
9     SourceBundle={
10         'S3Bucket': s3_bucket,
11         'S3Key': s3_key
12     },
13     Process=True
14 )
15
16 print("Creating Elastic Beanstalk environment.")
17 eb_client.create_environment(
18     ApplicationName=app_name,
19     EnvironmentName=env_name,
20     VersionLabel=app_version_label,
21     SolutionStackName=platform_arn,
22     CNAMEPrefix='myapp-env',
23     OptionSettings=[
24         {
25             'Namespace': 'aws:autoscaling:launchconfiguration',
26             'OptionName': 'InstanceType',
27             'Value': 't2.micro'
28         },
29         {
30             'Namespace': 'aws:elasticbeanstalk:environment',
31             'OptionName': 'ServiceRole',
32             'Value': role_name
33         }
34     ]
35 )
36
37 print(f"Elastic Beanstalk environment '{env_name}' is being created...")

```

Output of the code

```
~/AWS on 🌐 (ap-south-1)
> cd elasticBeanstalk/

~/AWS/elasticBeanstalk via 🍄 v3.12.6 on 🌐 (ap-south-1)
> ls
code.py  Elasticenv

~/AWS/elasticBeanstalk via 🍄 v3.12.6 on 🌐 (ap-south-1)
> python code.py

Creating IAM Role NewRole.
Creating Elastic Beanstalk Application.
Creating application version from S3 bucket.
Creating Elastic Beanstalk environment.
Elastic Beanstalk environment 'MyApp-env' is being created ...
```

Beanstalk environment being created

The screenshot displays the AWS Elastic Beanstalk console interface. The left sidebar shows the navigation menu with 'Elastic Beanstalk' selected. The main content area shows the 'MyApp-env' environment overview. The 'Environment overview' section includes a 'Health' status of 'Green', an 'Environment ID' of 'e-kh6mxemfg5', a 'Domain' of 'MyApp-env-eba-2t372cma.ap-south-1.elasticbeanstalk.com', and an 'Application name' of 'MyApp'. The 'Platform' section shows 'Python 3.12 running on 64bit Amazon Linux 2023/4.2.0' with a 'Running version' of '1' and a 'Platform state' of 'Supported'. Below these sections, the 'Events' tab is active, showing a list of 12 events. The events list includes: 'Successfully launched environment: MyApp-env', 'Application available at MyApp-env-eba-2t372cma.ap-south-1.elasticbeanstalk.com.', 'Environment health has been set to GREEN', and 'Added EC2 instance 'i-0e665f9586501153f' to Auto Scaling Group 'awseb-e-kh6mxemfg5-stack-AWSEBAutoScalingGroup-HizLsf08fjBC'.

Time	Type	Details
October 18, 2024 16:57:06 (UTC+5:30)	INFO	Successfully launched environment: MyApp-env
October 18, 2024 16:57:06 (UTC+5:30)	INFO	Application available at MyApp-env-eba-2t372cma.ap-south-1.elasticbeanstalk.com.
October 18, 2024 16:57:01 (UTC+5:30)	INFO	Environment health has been set to GREEN
October 18, 2024 16:57:01 (UTC+5:30)	INFO	Added EC2 instance 'i-0e665f9586501153f' to Auto Scaling Group 'awseb-e-kh6mxemfg5-stack-AWSEBAutoScalingGroup-HizLsf08fjBC'.

All configuration of Elastic Beanstalk established and Env is being launched.

Console Home

Console - x

Environment overview - ev - x

https://ap-south-1.console.aws.amazon.com/elasticbeanstalk/home?region=ap-south-1#/environment/dashi

90%

Services

Search

[Alt+S]

Mumbai

srldhar_tuli

Elastic Beanstalk

Applications

Environments

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MyApp-env

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New accounts only support launch templates

Starting on October 1, 2024, Amazon EC2 Auto Scaling will no longer support the creation of launch configurations for new accounts. Existing environments will not be impacted. For more information about other situations that are impacted, including temporary option settings required for new accounts, refer to [Launch templates](#) in the Elastic Beanstalk Developer Guide.

Environment successfully launched.

Events (12)

Filter events by text, property or value

Time	Type	Details
October 18, 2024 16:57:06 (UTC+5:30)	INFO	Successfully launched environment: MyApp-env
October 18, 2024 16:57:06 (UTC+5:30)	INFO	Application available at MyApp-env.eba-2t372cma.ap-south-1.elasticbeanstalk.com.
October 18, 2024 16:57:01 (UTC+5:30)	INFO	Environment health has been set to GREEN
October 18, 2024 16:57:01 (UTC+5:30)	INFO	Added EC2 instance 'i-0e665f9586501153f' to Auto Scaling Group 'awseb-e-kh6mxemfg5-stack-AWSEBAutoScalingGroup-HizLsfO8fJbC'.
October 18, 2024 16:57:01 (UTC+5:30)	INFO	Adding instance 'i-0e665f9586501153f' to your environment.
October 18, 2024 16:56:33 (UTC+5:30)	INFO	Instance deployment completed successfully.
October 18, 2024 16:56:29 (UTC+5:30)	INFO	Instance deployment successfully generated a 'Profile'.
October 18, 2024 16:56:06 (UTC+5:30)	INFO	Waiting for EC2 instances to launch. This may take a few minutes.
October 18, 2024 16:55:50 (UTC+5:30)	INFO	Created EIP: 3.6.230.160
October 18, 2024 16:55:34 (UTC+5:30)	INFO	Created security group named: sg-022310faabdcfea23
October 18, 2024 16:55:15 (UTC+5:30)	INFO	Using elasticbeanstalk-ap-south-1-253490756507 as Amazon S3 storage bucket for environment data.
October 18, 2024 16:55:14 (UTC+5:30)	INFO	createEnvironment is starting.

CloudShell

Feedback

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