Q3,Q4
Create iam user, give custom password,then **create group,give user and grp cloud9environment permission. -> attach policy directly -> cloud9environmentmember**.
-> create user.
Open the console log-in link in incognito tab.
Go to cloud9 -> main browser tab -> save a random file. Share ->invite user u made ->now open environment link in incognito tab.
Collab in chat box

Q5, Q6, Q22
S3 bucket -> iam role -> elastic beanstalk -> create pipleine

S3 -> create Bucket-> give name and create bucket -> **create iam role** -> create role and use case ec2 -> next -> give permissions -> AWS elasticbeanstalk webtier -> role name -> create -> **Elastic beanstalk** -> create application -> give name -> choose platform PHP -> use existing role -> choose your role -> key pair (NO CHANGES) -> ec2 instance profile (choose your role) -> Skip to review (skip step 3, 4, 5) -> submit -> AFTER ENVIRONMENT IS LAUNCHED -> **create code pipeline** ->step1 - only give pipeline name -> step2 - add source stage (Github version2) -> connect to github -> authorize -> install a new app -> wait for installing -> connect-> give github repo link -> branch name -> step3 - skip build stage -> step4 deploy stage -> aws elastic beanstalk -> app name and env name -> step5 - create pipeline
Check output -> pipeline deploy -> link -> elastic beanstalk -> domain link -> see output
(If any changes in output. Go to repo and change in index.html)

Q7
Download terraform -> set path -> create iam user -> custom password -> attach policy directly -> administrator access -> next -> create user -> go to user -> click access key (blue color) -> use case (cli) -> give description (any) -> create access key -> same folder create file (.tf extension) -> copy paste code -> change the access key and secret key in code -> open cmd in terraform folder -> “terraform init” -> “terraform plan” -> “terraform apply” -> Check output on ec2 instances ->“terraform destroy”

Q8,9,10
Set path for sonarqube and sonar path “bin->windows->lib” is the path to be given in env variable
Sonarscanner path is given till bin , path to be given in environment var and “PATH” ->new
Go to c->sonarqube->bin->windows->start sonar
Local9000
Create new project->give name,key is generated and generate token(command is generated with token)
Now go to sonarscanner->conf->sonarscanner-> open and give sonar.projectKey=TypeScript
sonar.projectName=TypeScript sonar.projectVersion=1.0
sonar.sources=C:\sonar-scanner-5.0.1.3006-windows\conf
Open sonarscanner->conf(where the code is) open terminal and paste token command

View op on dashboard

Q11,12,13

-> Search Lambda -> Create Function -> Use a blueprint -> (Blueprint name) Hello world Python 3.10 -> give function name -> create function

Q14, Q15, Q16

(Execution role) -> Create a new role from AWS policy templates (s3 full access, cloudwatch full access, lambda basic execution role) -> role name -> Create bucket -> create function -> author from scratch -> function name -> select python 3.7 -> change default execution role -> use an existing role -> choose your role -> create -> code copy paste -> deploy -> configure test event -> give name -> save and test -> after success go to s3 bucket to check the object added -> download the file and check output in vs code.

Test -> Configure test event -> Event name -> Edit event JSON

```
import json
import boto3
s3=boto3.client('s3')
def lambda_handler(event,context):
    bucket="q14bucket"
    dataToUpload = {}
    dataToUpload['PID'] = '211121'
    dataToUpload['DEPT'] = 'INFT'
    dataToUpload['NAME'] = 'Brijraaj'
    dataToUpload['FILE'] = 'brij'
    fileName = 'brij' + '.json'
    uploadByteStream= bytes(json.dumps(dataToUpload).encode('UTF-8'))
    s3.put_object(Bucket=bucket,Key=fileName,Body=uploadByteStream)
print('an object has been added')
```

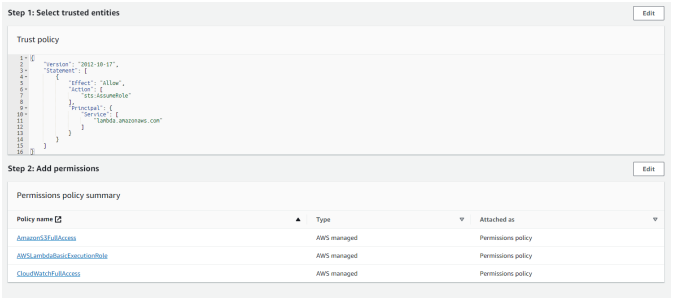
Search IAM -> Roles -> Create role -> (Usecase) Lambda -> Next

Permissions policies

CloudWatchFullAccess

AWSLambdaBasicExecutionRole

AmazonS3FullAccess

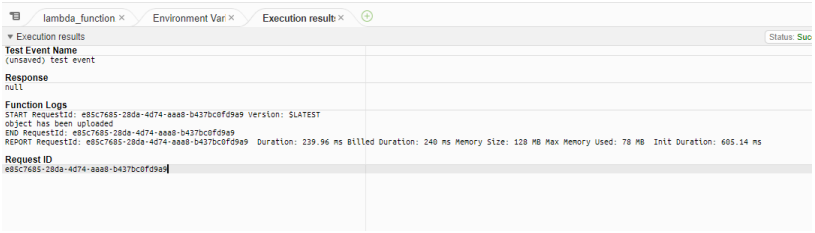


->Enter Role Name -> Create Role

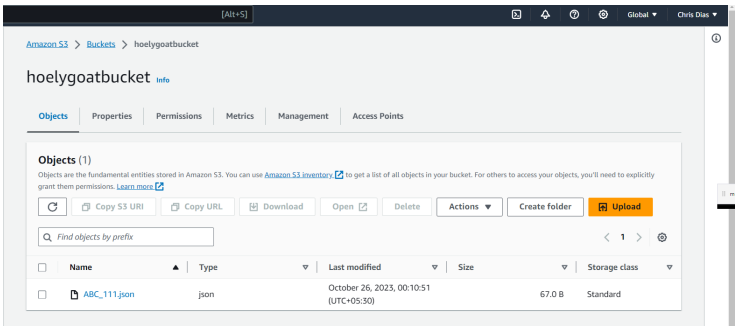
->Search S3 -> Create Bucket -> Enter Bucket name -> Create

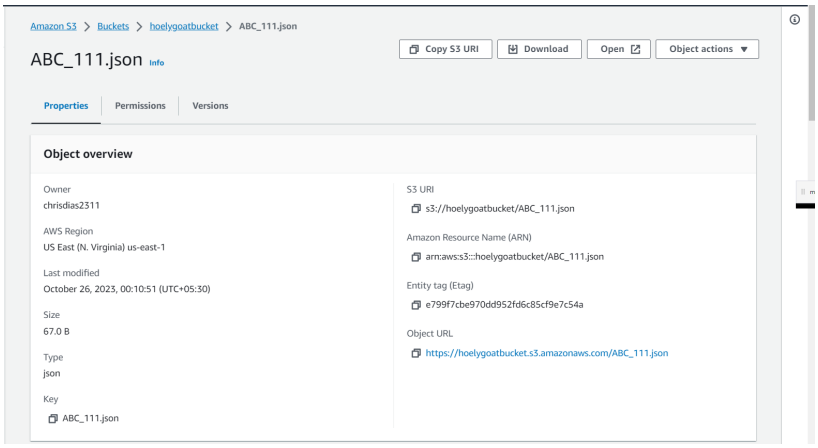
->Search Lambda -> Create function -> Enter name -> Change default execution role -> Use an existing role -> role1->Create function

Click on Deploy -> click test -> Invoke



Search S3 ->





Q15

Search Lambda -> Create Function -> Use a blueprint -> (Blueprint name) Hello world Python 3.7

(Execution role) -> Create a new role from AWS policy templates -> role name -> Create function

Test -> Configure test event -> Event name -> Edit event JSON

Use invoke instead of run/save. Next go to monitor for visualization

Q16

Search Lambda -> Create Function -> Use a blueprint -> (Blueprint name) Hello world Python 3.7

(Execution role) -> Create a new role from AWS policy templates -> role name -> Create function

Test -> Configure test event -> Event name -> Edit event JSON

Index.mjs is the automatic code,change it,invoke it and test.op will be generated in logs

Q17

Create instance -> give name -> ubuntu -> t2 micro -> key pair -> create key pair -> key name -> .ppk -> create -> create -> connect the made instance -> ubuntu terminal will be opened

Display present working directory in cloudshell- pwd

Q18

Q19

Easy

Q20

Same as 14

Q21

Same as q3

Q22