-create github repo with terraform .gitignore  
-open editor (vs code) from github desktop via repo in browser  
-create main.tf file  
-create providers block  
-create ec2 instance block  
 -open terraform registry on ec2   
 -use the variables that are required then the ones you know you need (ami, isntance type, key name, security groups, userdata)  
 -for each value make it a variable. HOW?  
-create a variables.tf  
-for each variable in the ec2 block, make a variable in the variables.tf  
-for key pair, i used a preexisting key pair and dragged it into the editor  
-opened terminal in editor and ran 'ssh-keygen -y -f keypair.pem > keypair.pub' to create a .pub file from the .pem key pair  
-created a resource in the variables.tf for the keypair  
-create a bash userdata script to bootstrap jenkins to the instance  
-create s3 bucket  
-create an iam role  
 -create actual role  
 -create trust policy for role  
 -create access policy  
 -create access policy doc  
 -attach policy to role  
 -create iam instance for ec2 to use  
-split files into same services per file  
-add outputs.tf to output the public dns to terminal  
-run terraform commands

Verify:  
-ssh into instnace and get jenkins admin pw  
-get the public ip and go there via browser and input the admin pw   
  
  
  
Obstacles:   
-find the jenkins admin pw at /var/lib/jenkins/secrets/initialAdminPassword. ssh into instance and run 'sudo cat /var/lib/jenkins/secrets/initialAdminPassword' but add 22 to SG first  
  
-making sure the security group youre using (i used a preexisting one) has 8080 open  
  
-was using a vresion of ubuntu (Ubuntu Noble 24.04) that is very new and unsupported yet by Jenkins' APT repo so the user data script wasnt working  
  
-make sure if you do restarts/stops on the EC2 instance you get the new IP address unless you set an elastic IP