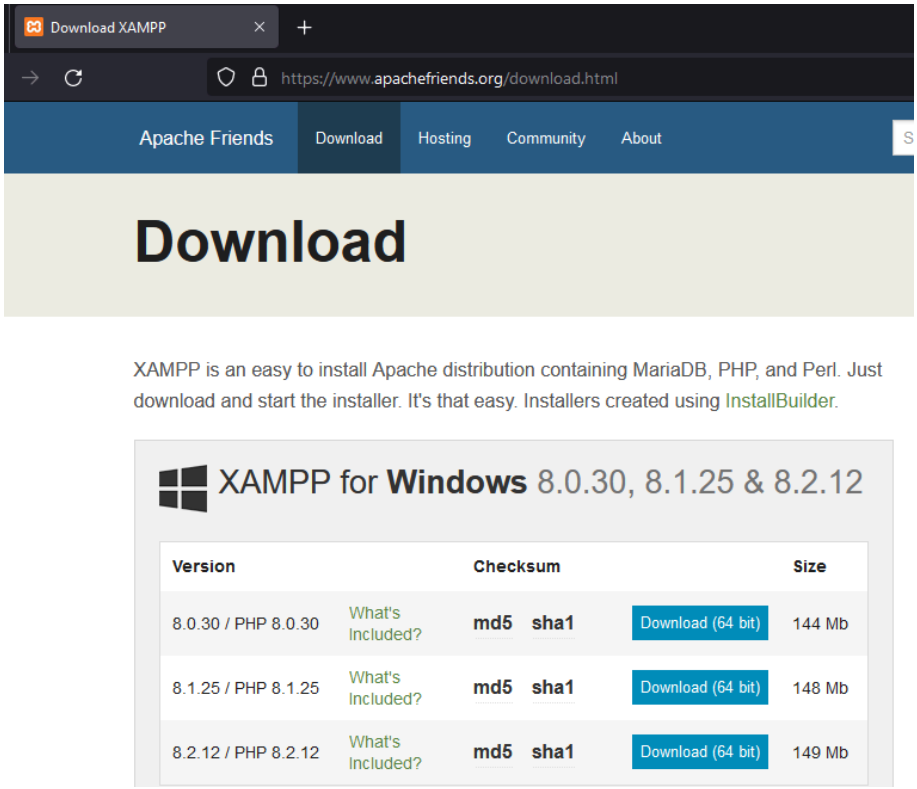
Name: Alok Yadav Div: D15C Roll No.: 59

Experiment No. 1(A)

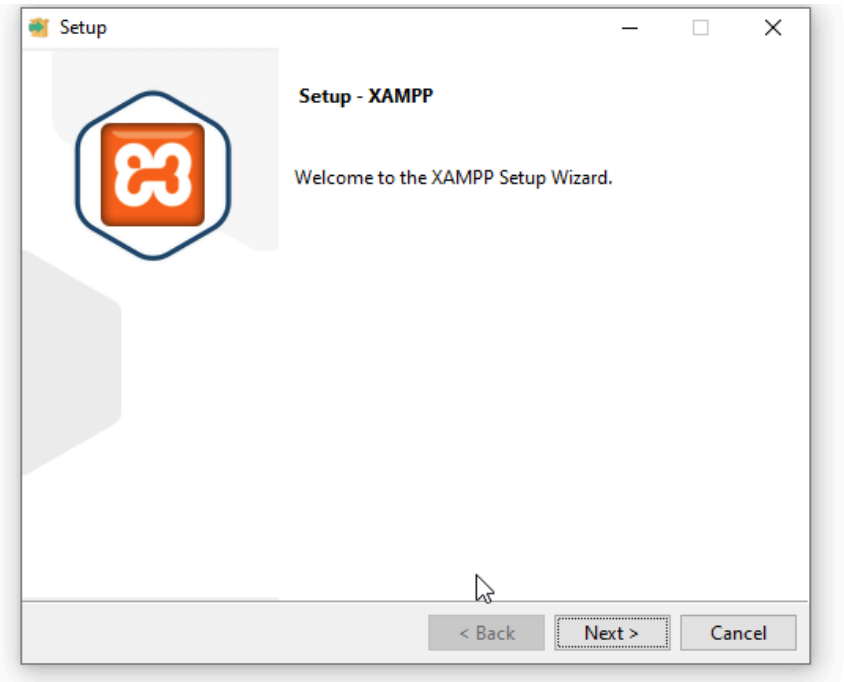
Aim: To develop a website and host it on local machine or virtual machine and Hosting a static website using Amazon S3 Bucket

1. To develop a website and host it on your local machine on a VM using XAMPP

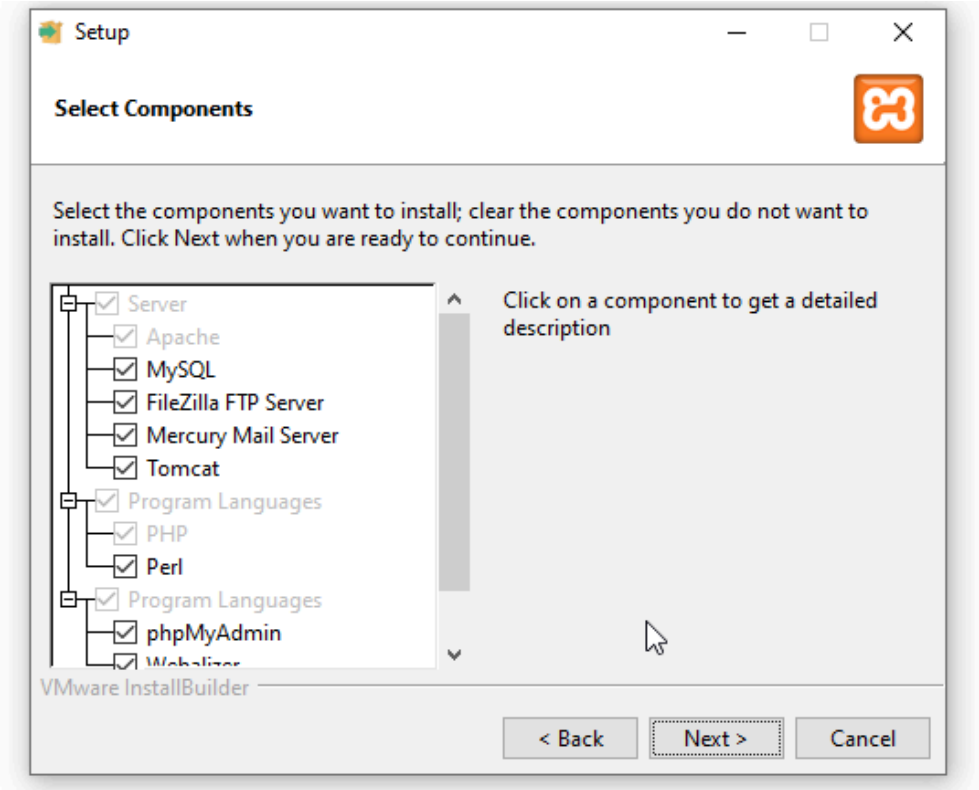
1) Goto official website of XAMPP and download the software as per your OS



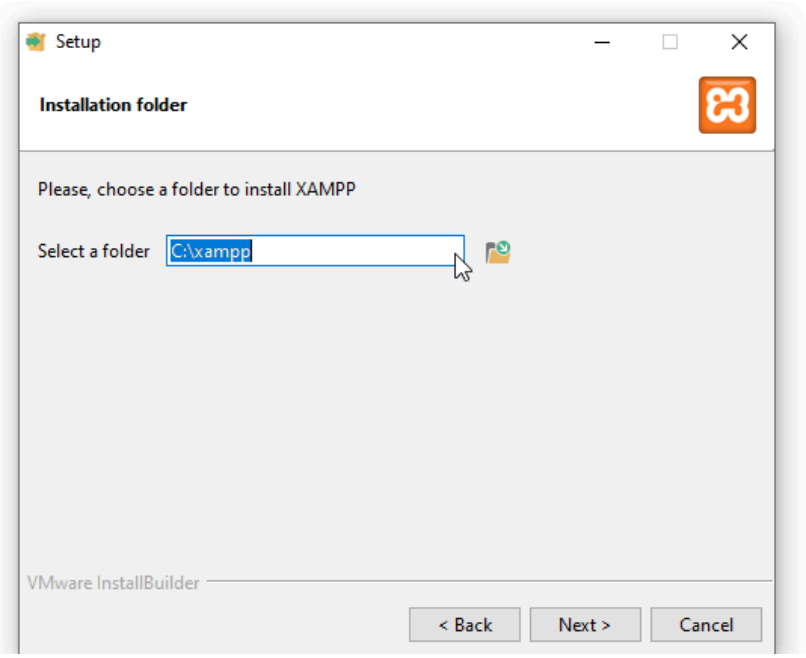
2) After Downloading, open it for installation, Click on next



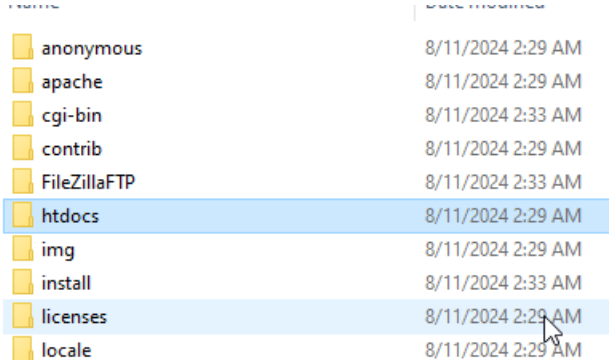
3) Select components to install



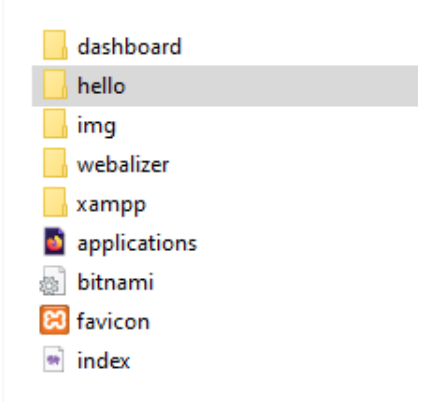
4) Select installation location, and confirm it



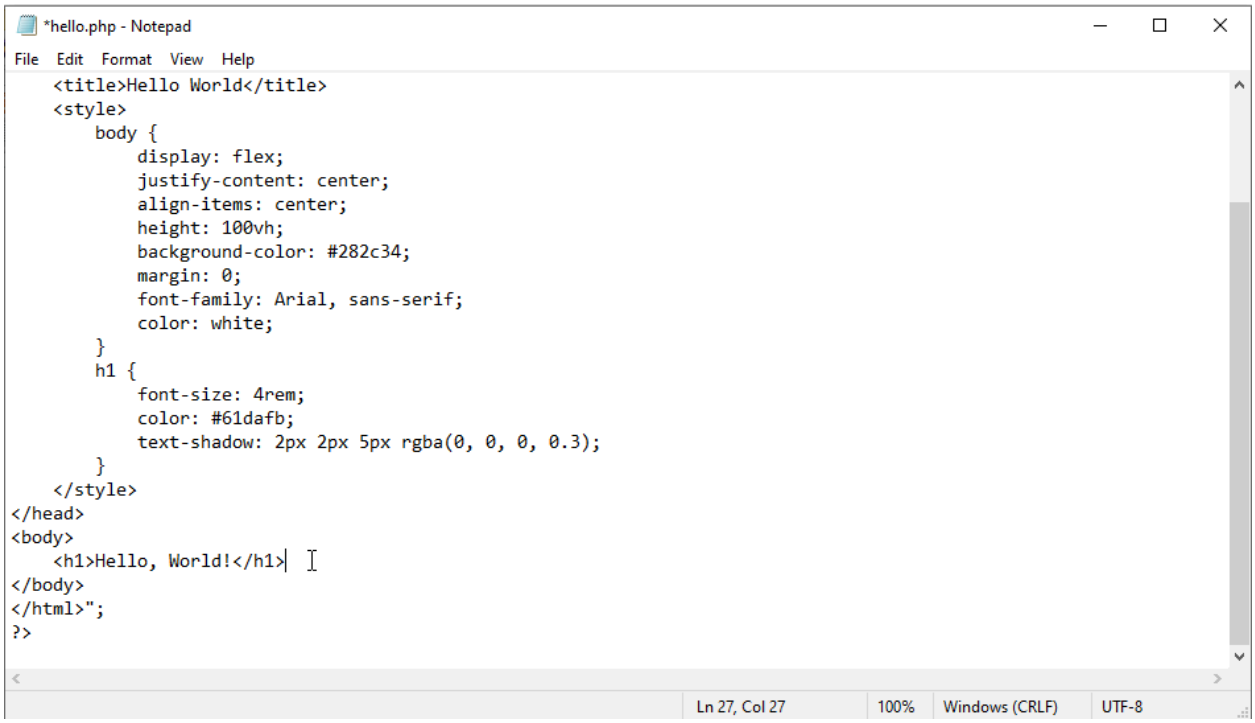
5) After installation, goto folder where XAMPP is installed, go to htdocs



6) Create new folder named anything we want our URI to be.

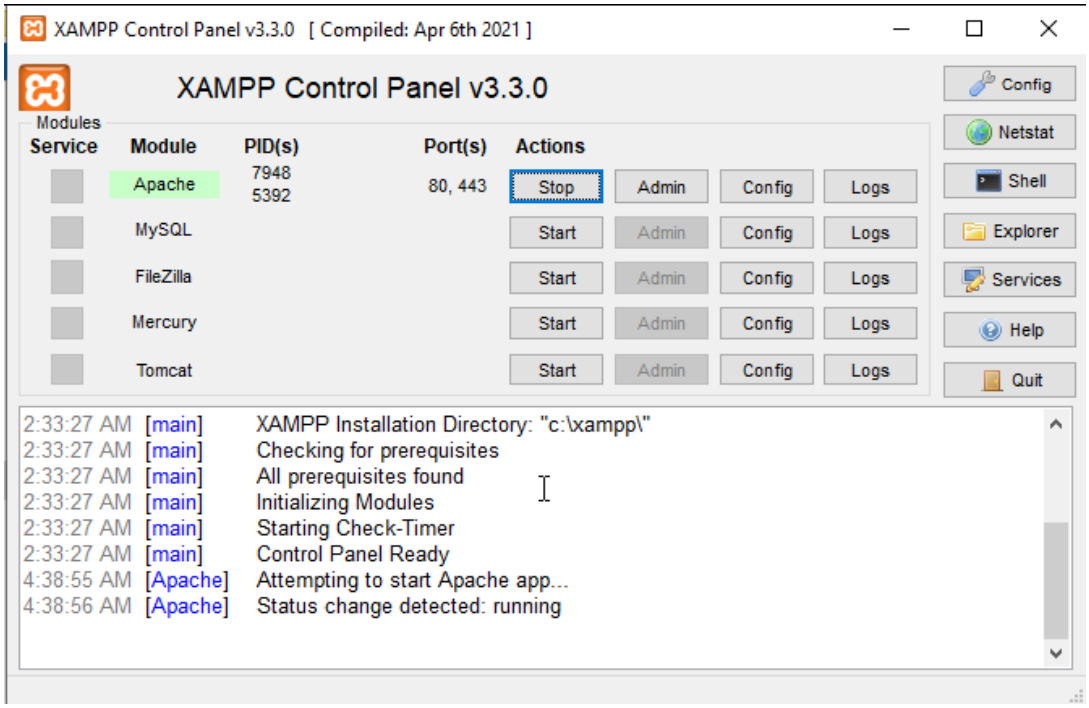


7) Create a file index.php and paste the following code.

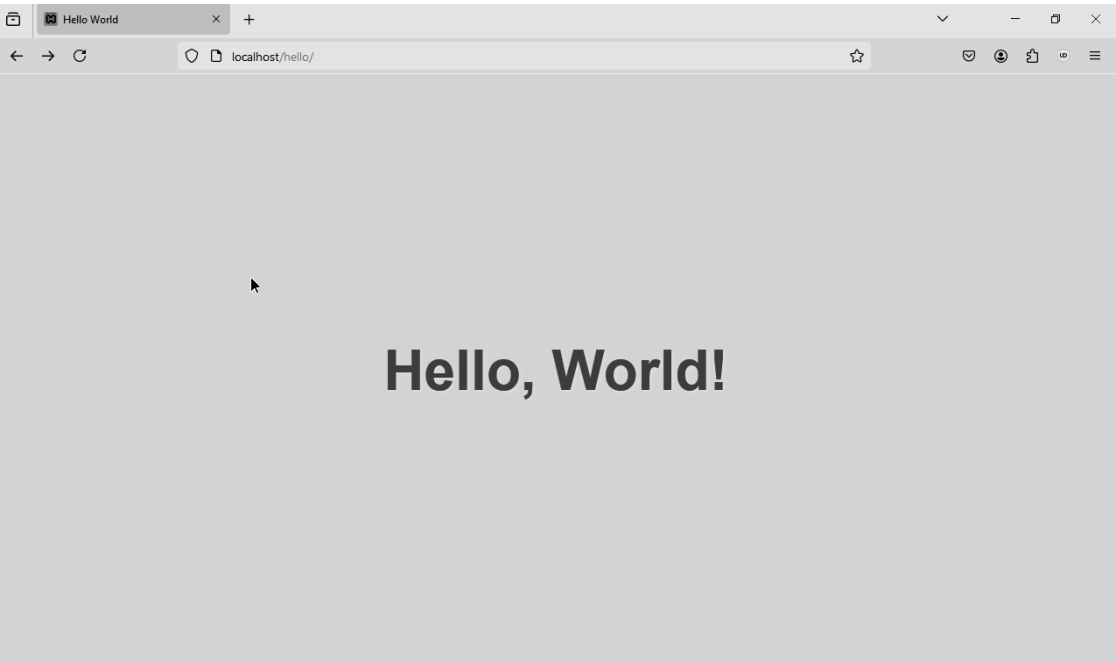



```
    <title>Hello World</title>
    <style>
        body {
            display: flex;
            justify-content: center;
            align-items: center;
            height: 100vh;
            background-color: #282c34;
            margin: 0;
            font-family: Arial, sans-serif;
            color: white;
        }
        h1 {
            font-size: 4rem;
            color: #61dafb;
            text-shadow: 2px 2px 5px rgba(0, 0, 0, 0.3);
        }
    </style>
</head>
<body>
    <h1>Hello, World!</h1>
</body>
</html>";
?>
```

8) Now go to XAMPP control panel and start Apache server

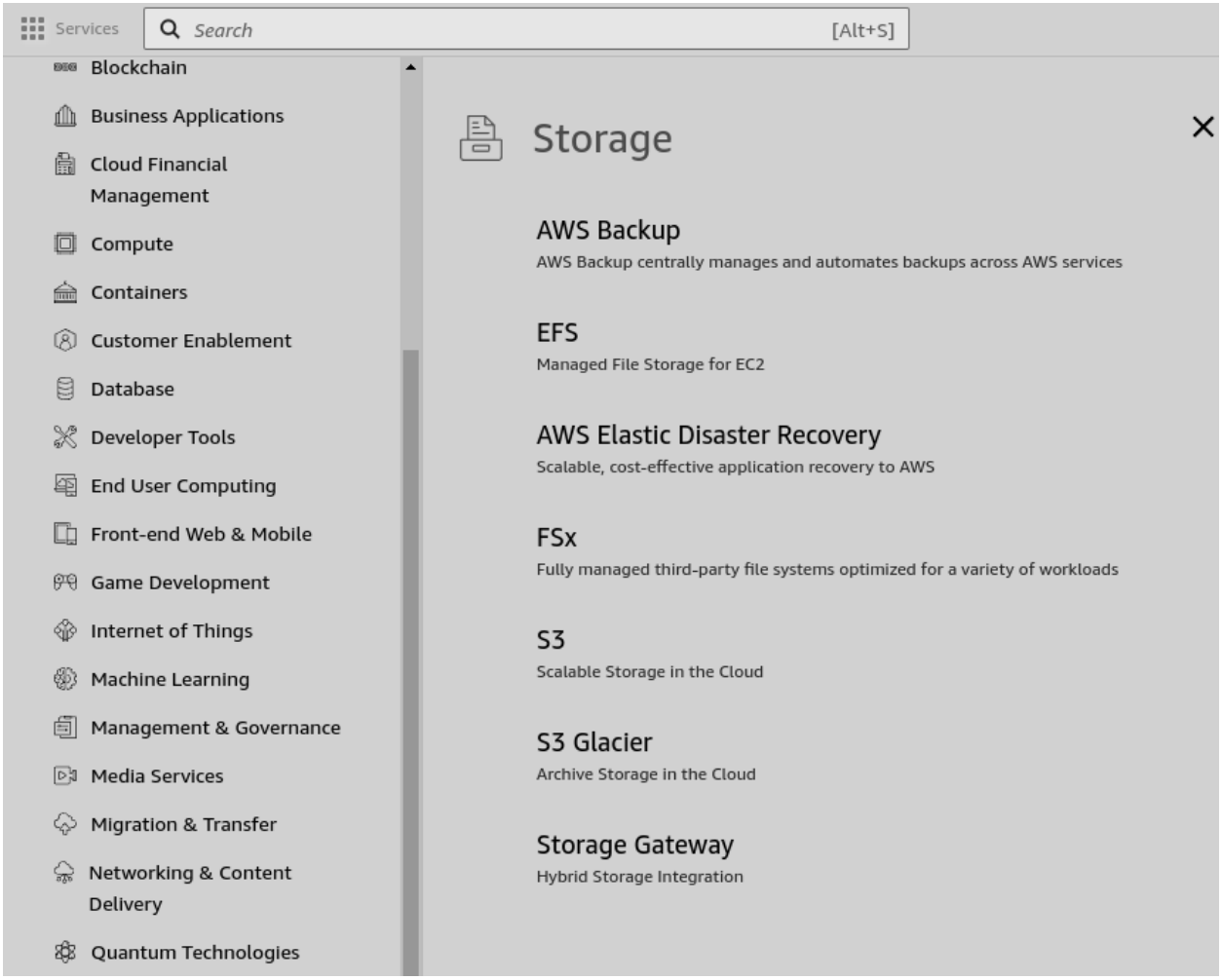


9) Now open browser and enter http://localhost/folder_name. This will open webpage locally on our machine



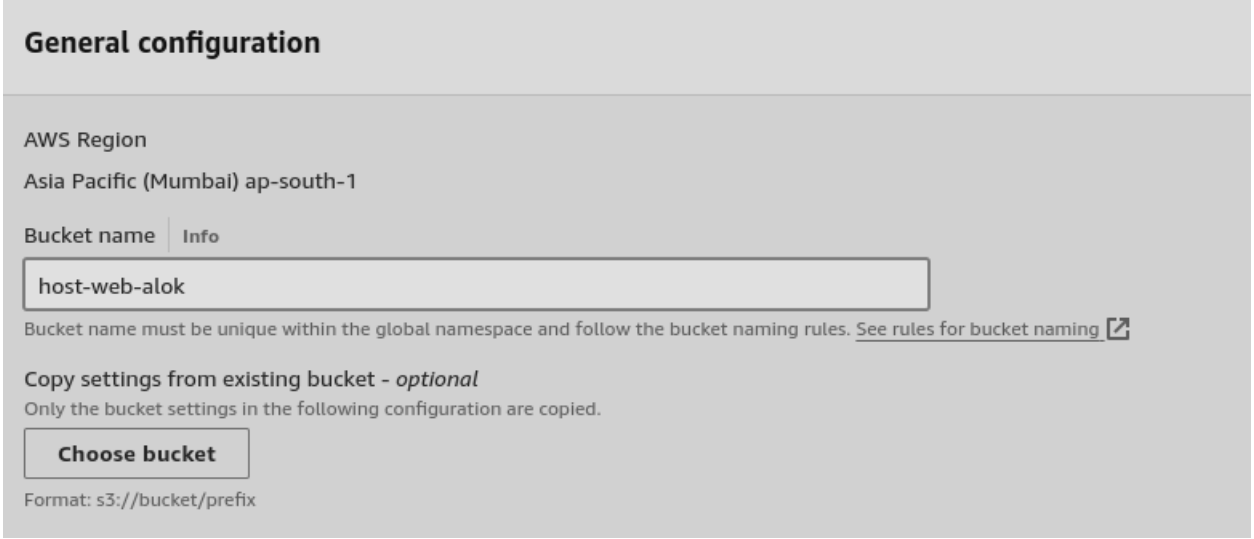
2. Hosting a static website on Amazon S3

1) Go to services then under Storage, select S3

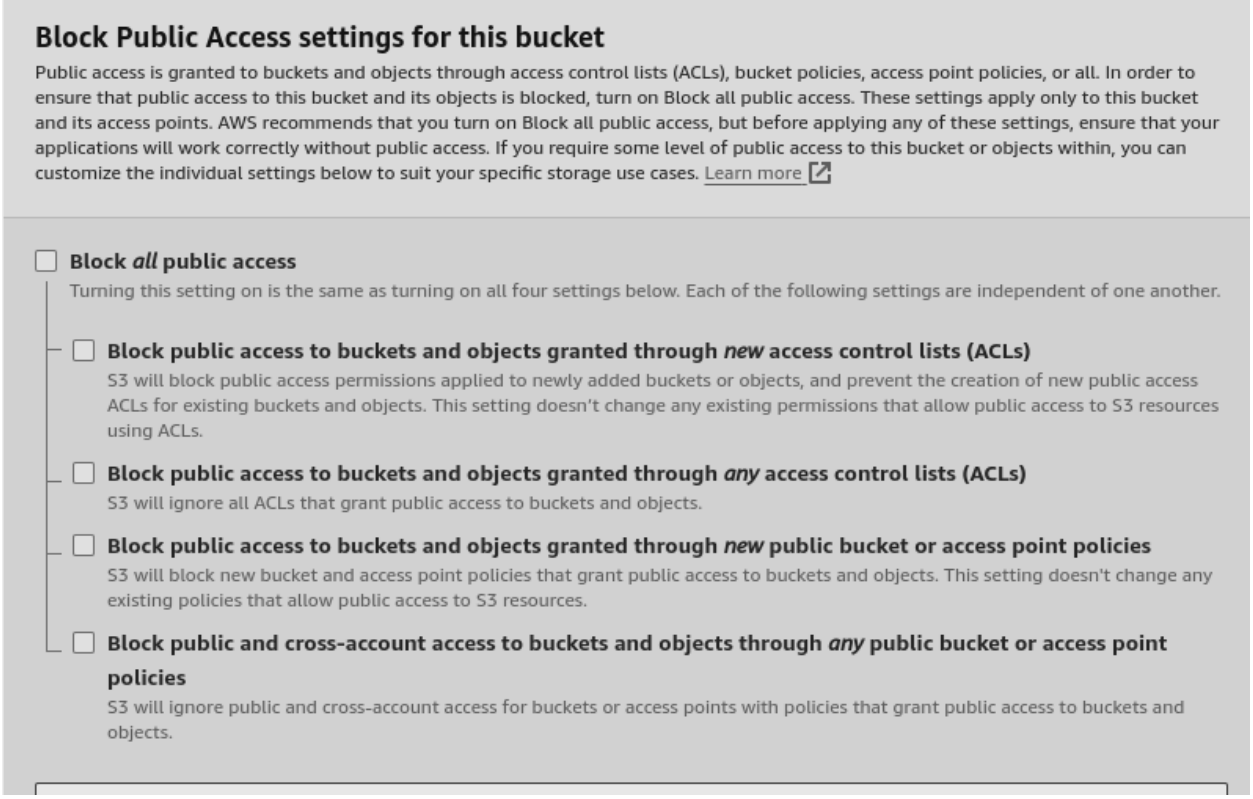


2) Create a new bucket

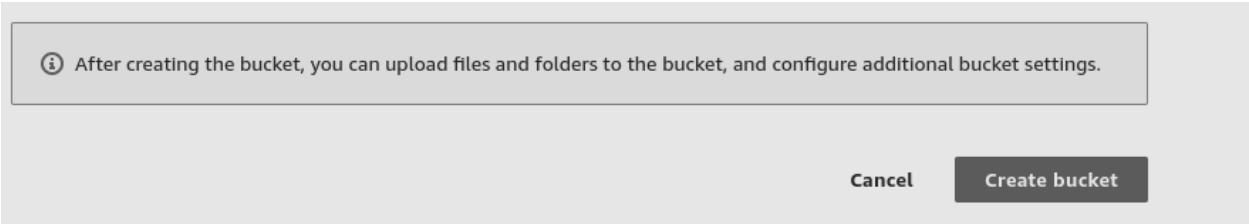
3) Enter Name of the bucket



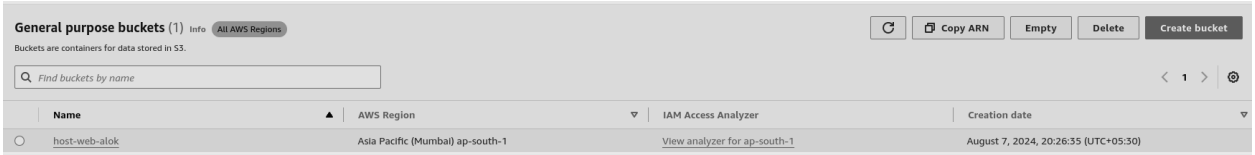
4) Disable “Block all public access” to make the contents of bucket publicly accessible



5) Leaving the remaining configuration to it’s default, click on Create Bucket

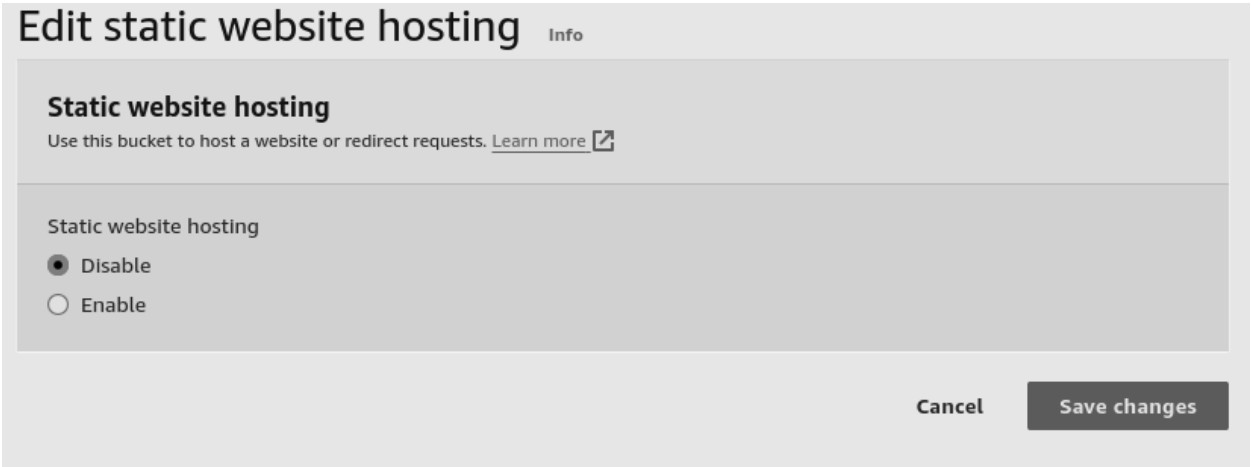


6) A new bucket will be created

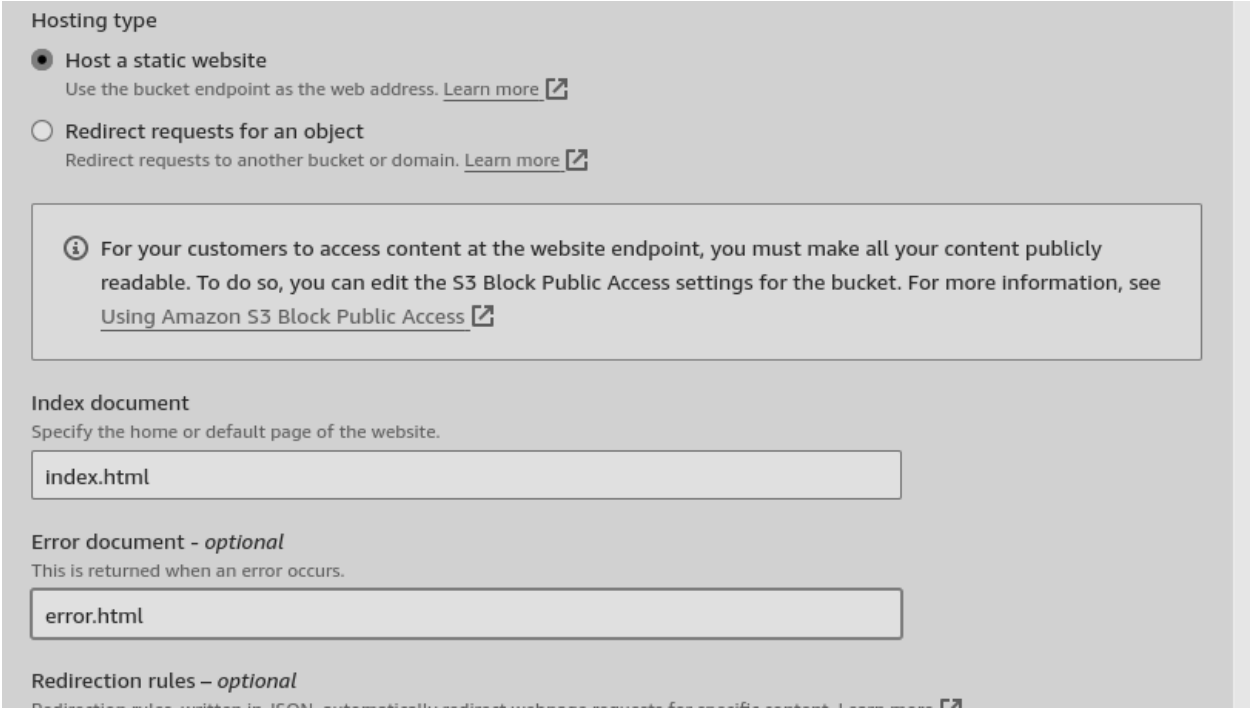


7) Now to host a static web page, open the bucket we created, goto Properties, edit "Static Web hosting settings"

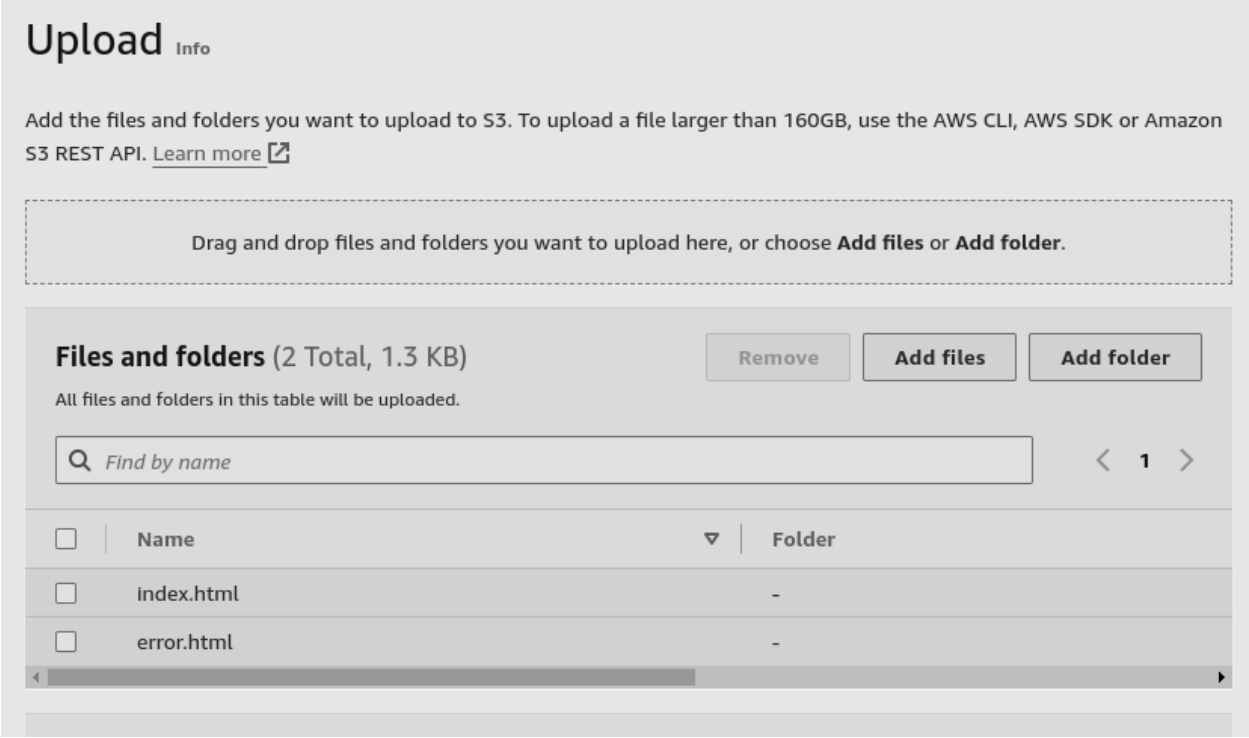
8) Enable Static web Hosting



9) After enabling, we need to enter the names of files two files, one for main file that would be displayed when page loads and the other when some error occurs. Name those files and save it



10) After naming, go to objects and upload the files you mentioned in the static web hosting settings page



11) Now to make sure our page is accessible to public, we need to change bucket policy. To change it, go to permissions and edit Bucket policy.
Change resource arn as per your bucket name

Policy

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadGetObject",
      "Effect": "Allow",
      "Principal": {
        "AWS": "*"
      },
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::host-web-alok/*"
    }
  ]
}
```

12) Now we can go to home page of our bucket and our static page will be loaded

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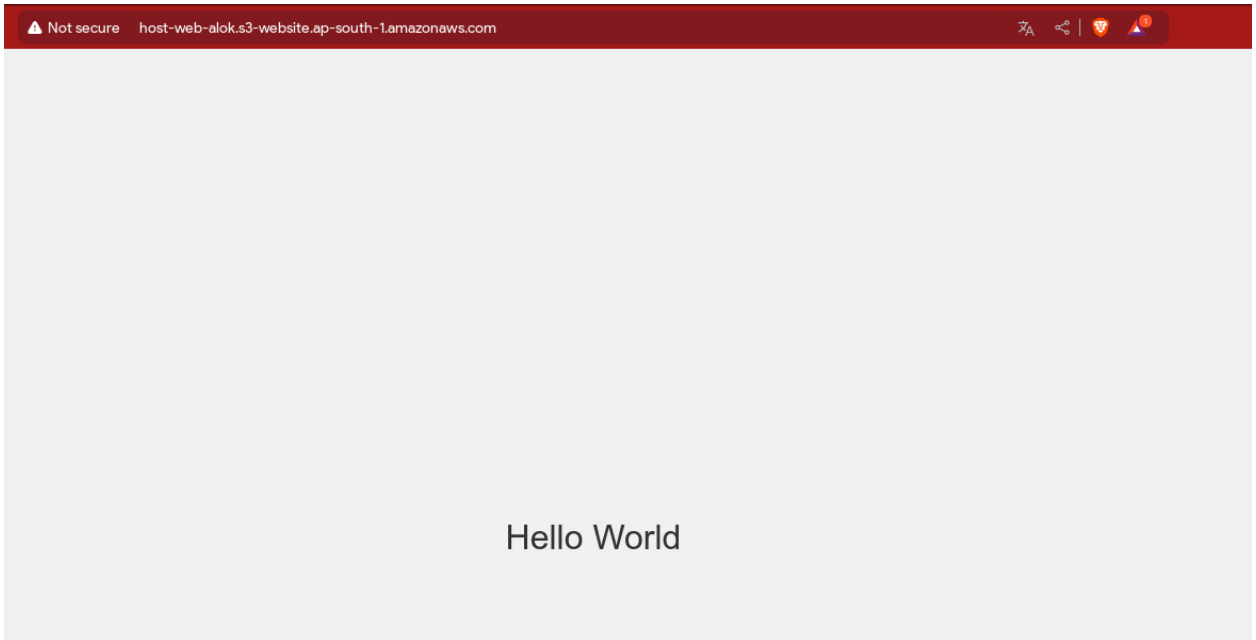

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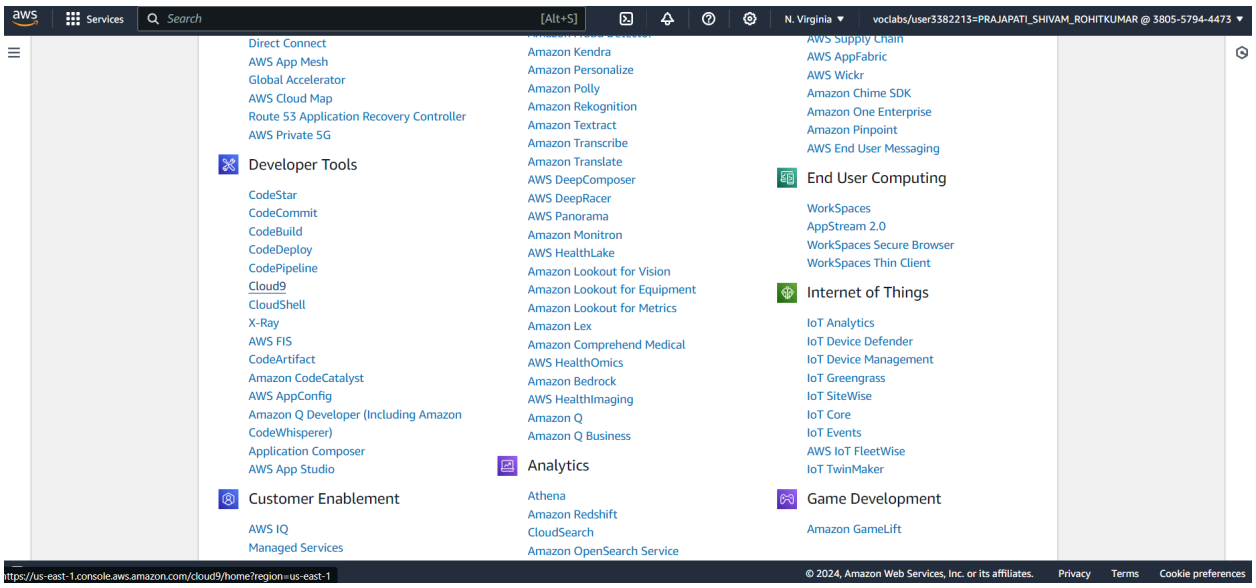
Experiment No: 1(B)

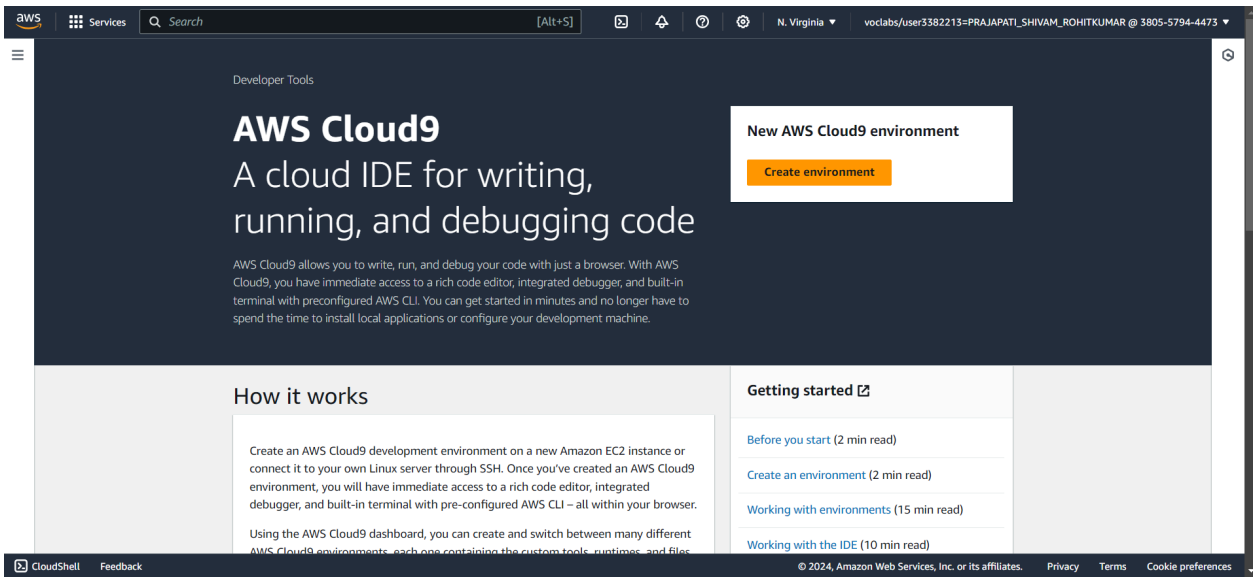
Aim: To understand the benefits of Cloud Infrastructure and Setup AWS Cloud9 IDE, Launch AWS Cloud9 IDE and Perform Collaboration Demonstration.

Step 1: Set up a Cloud9 environment.

1) Go to Cloud9 services under developers tool in All services



2) Click on create environment



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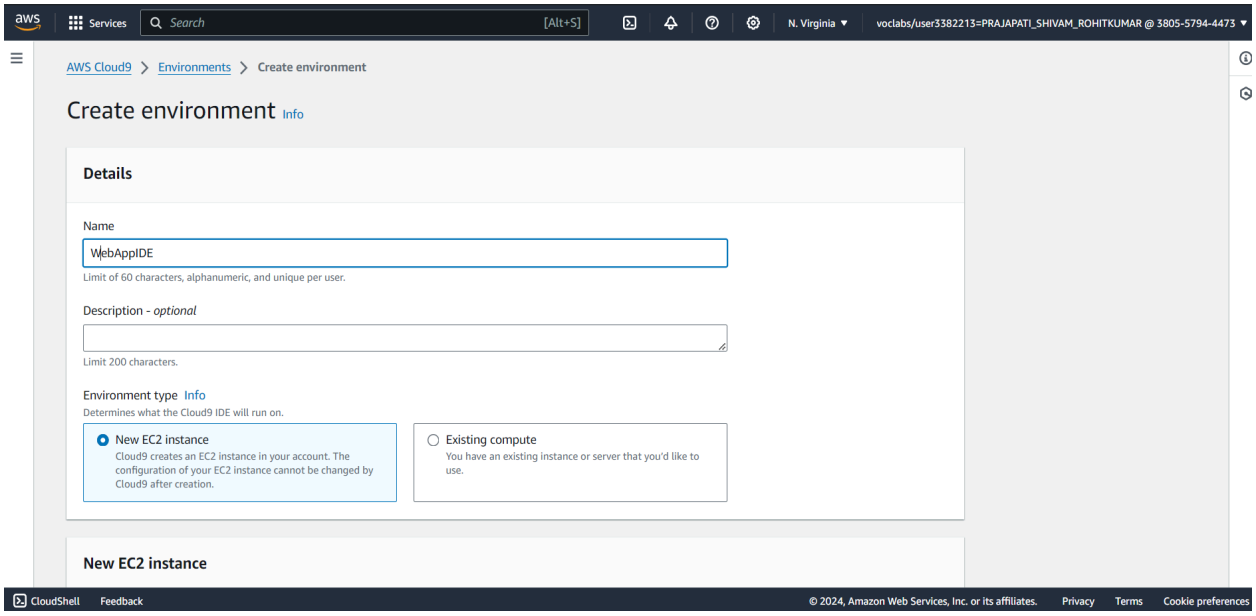
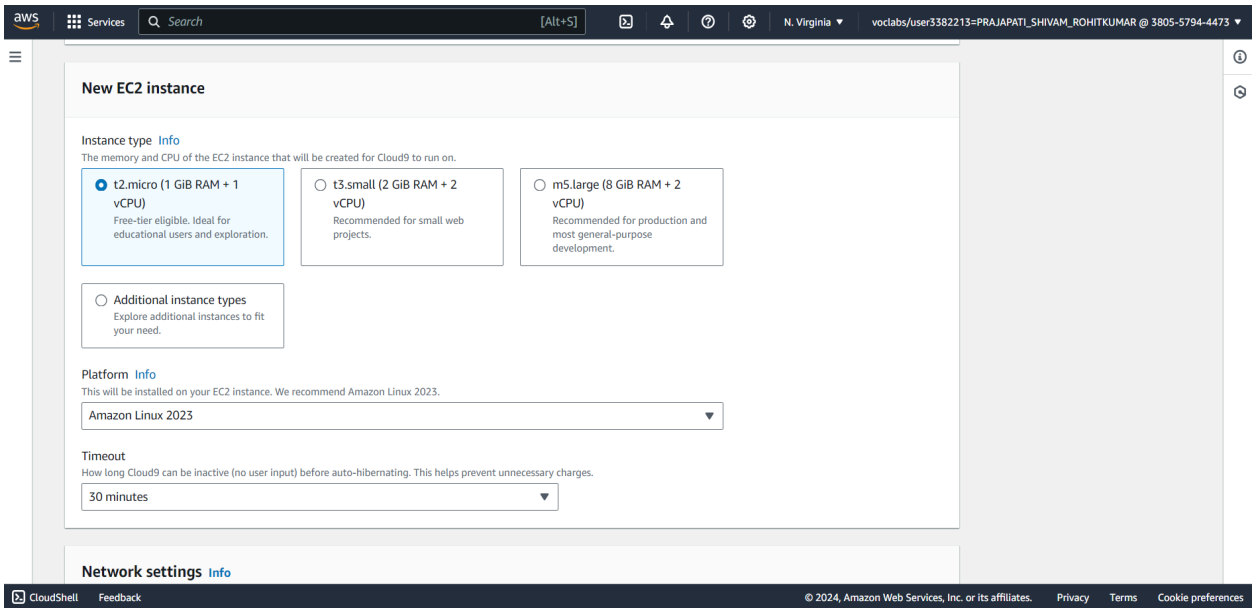
3) Give the name to your Environment ,keeping the other settings as default like environment type should be New EC2 instance

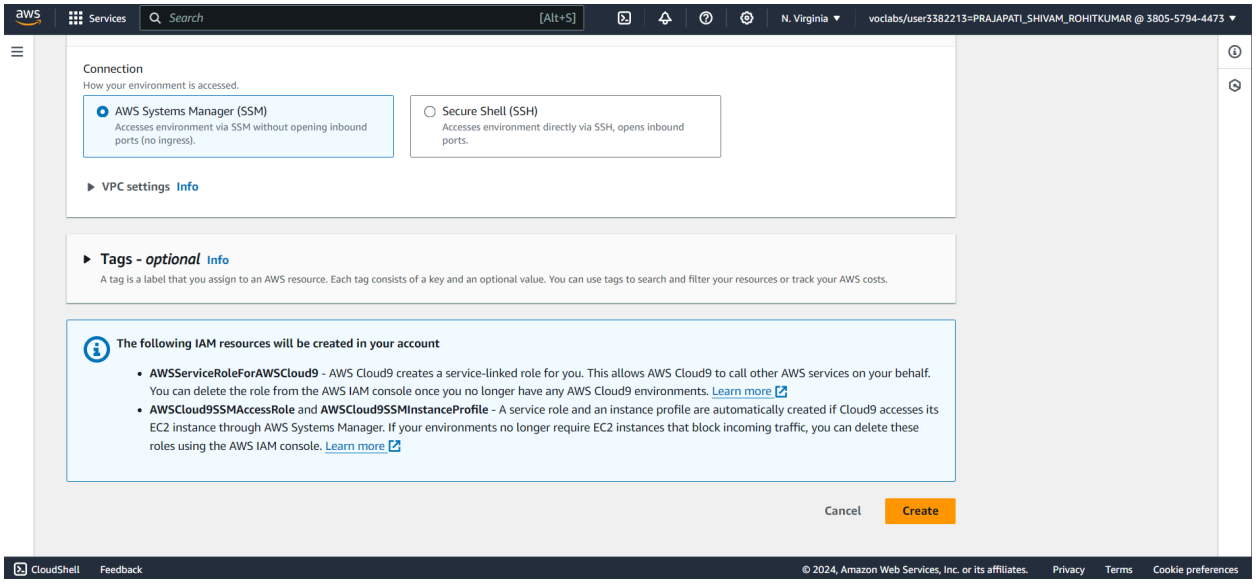


4) Select the correct platform type as shown below and keep the others details as default like instance type as t2.micro which gives the user 1GB RAM + 1 Virtual CPU

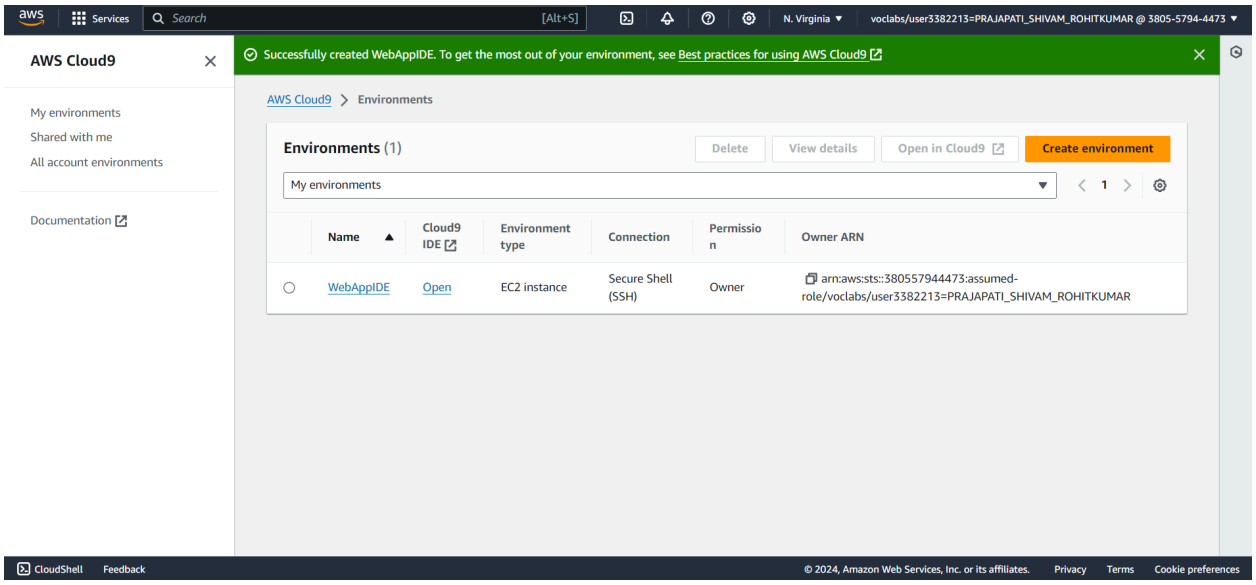


Name: Alok Yadav Div: D15C Roll No.: 59

5) Click on SSH under connection type in network settings if we go for AWS Manager(SSM) then it won't allow to create an environment then click on Create



6) Successfully created the environment so now click on open



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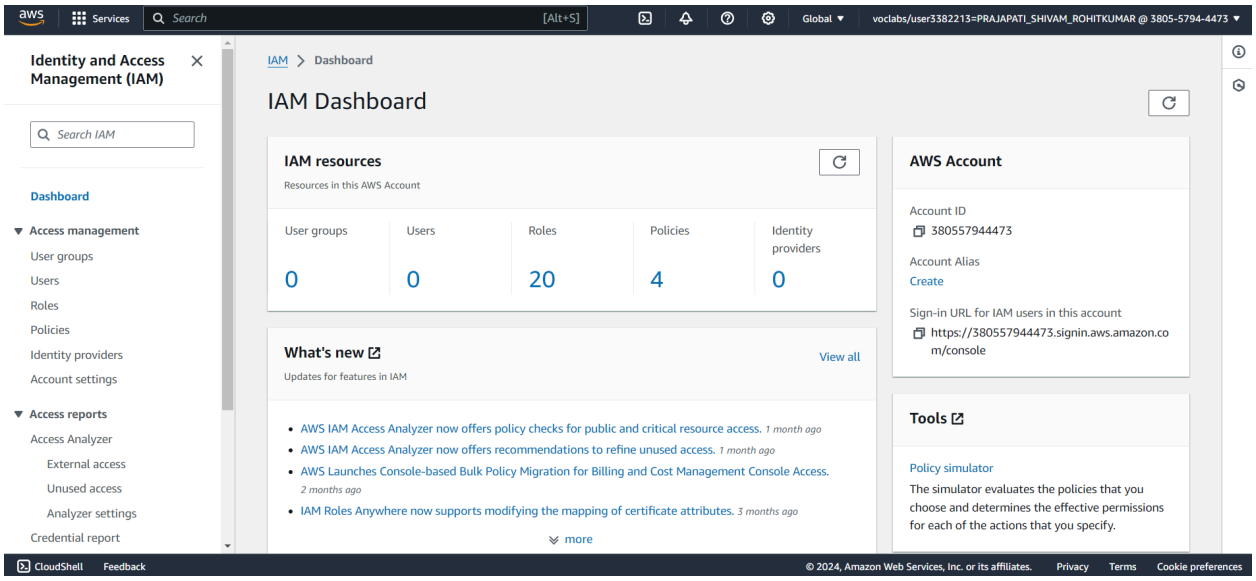
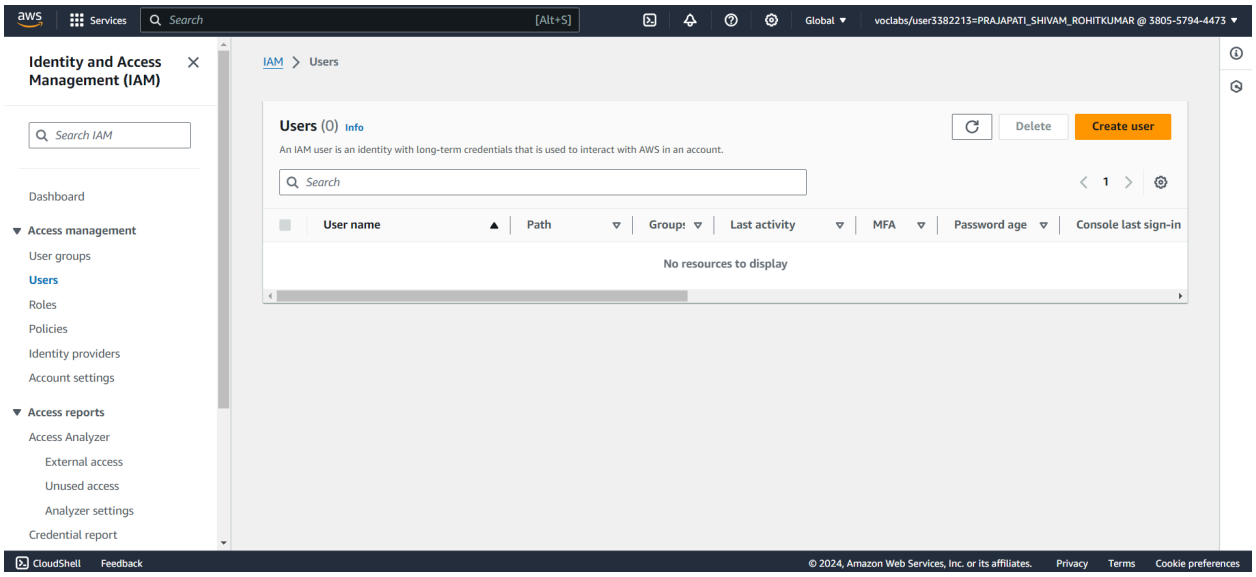
Step 2: Creating IAM user.

1) Search IAM on the services search bar and open it. Click on Create User



2) Click on the create user



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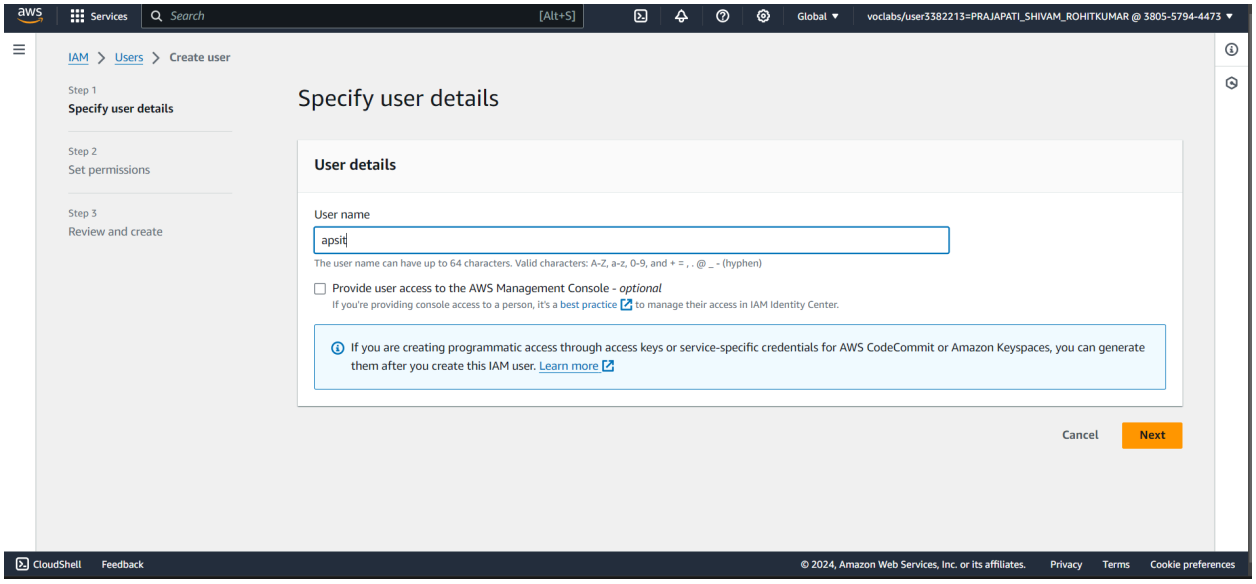
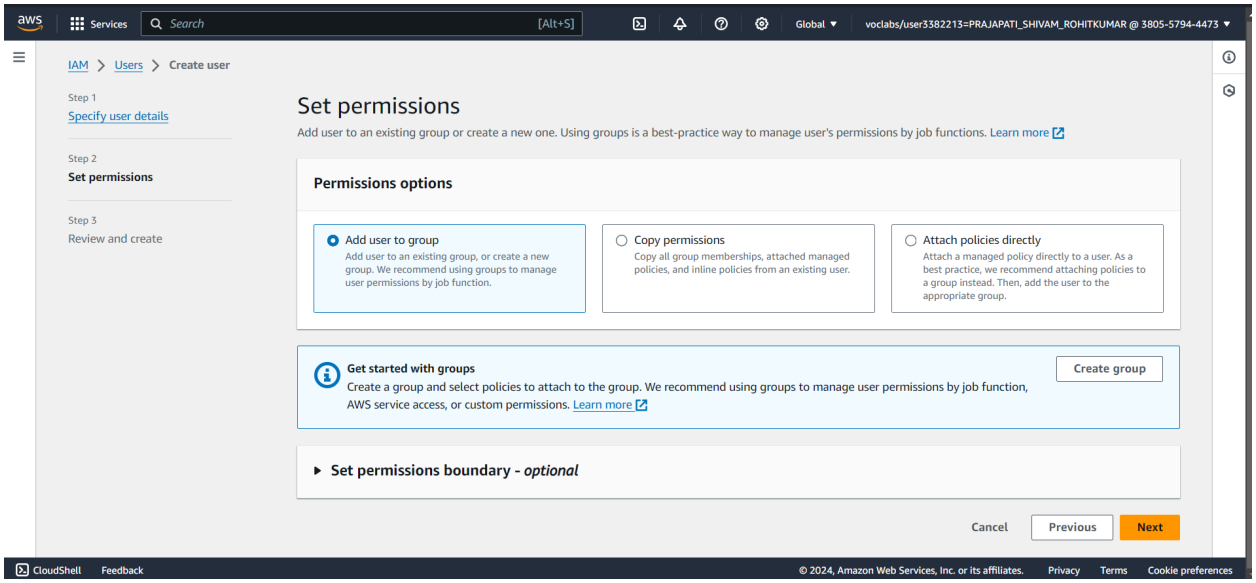
3) Write the name of the user you want to add and click on next



4) Select add User to Group. If there are no user groups on your accounts, you will have to create one. Click on Create Group. Click on the drop down menu of the set permissions boundary



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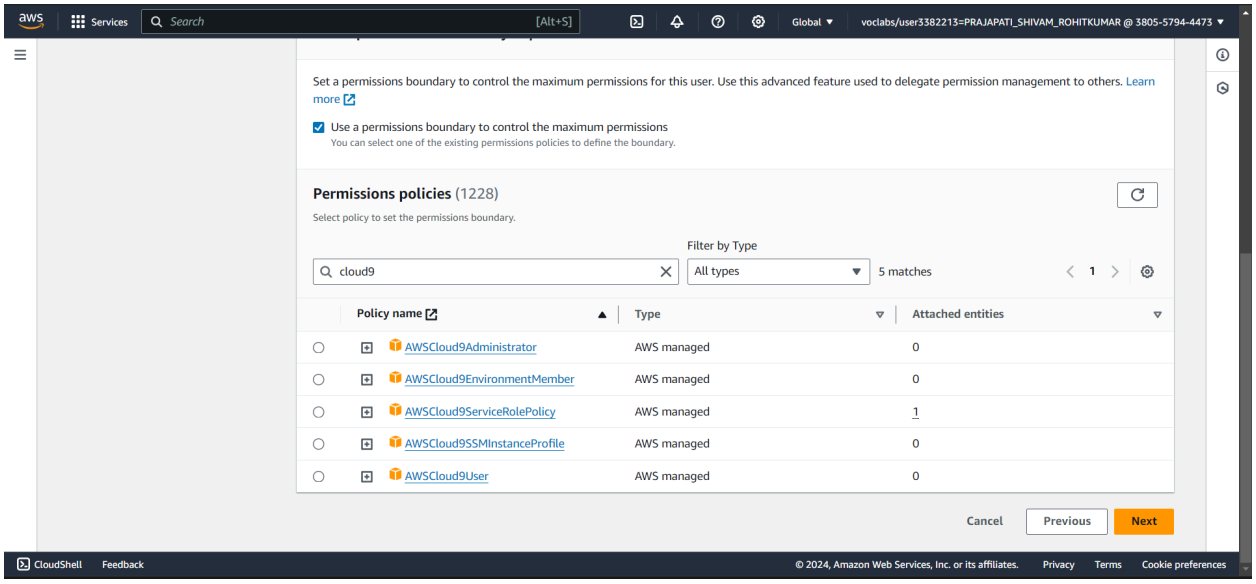
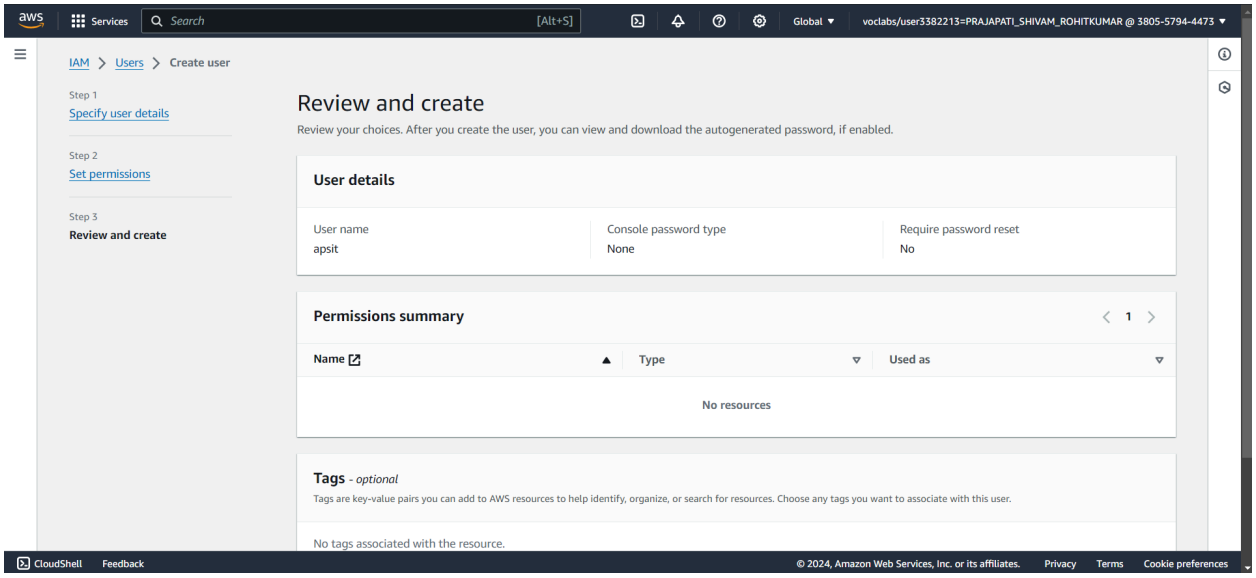
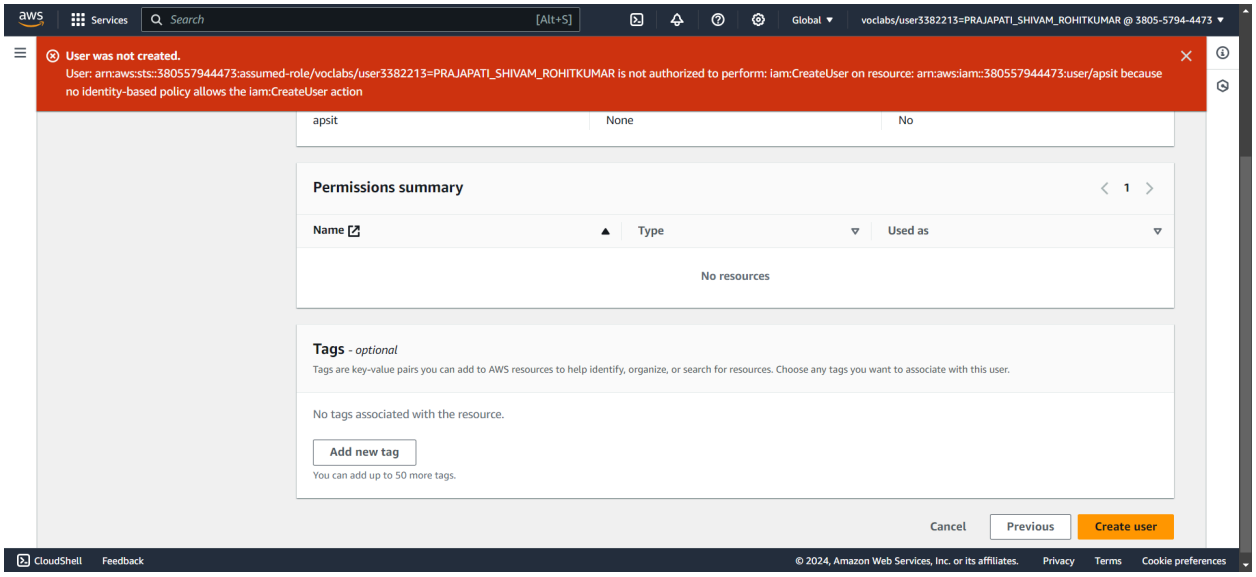
5)Click on the checkbox and search for cloud9 under permissions policies ,click on next



6) Scroll down and click on create user



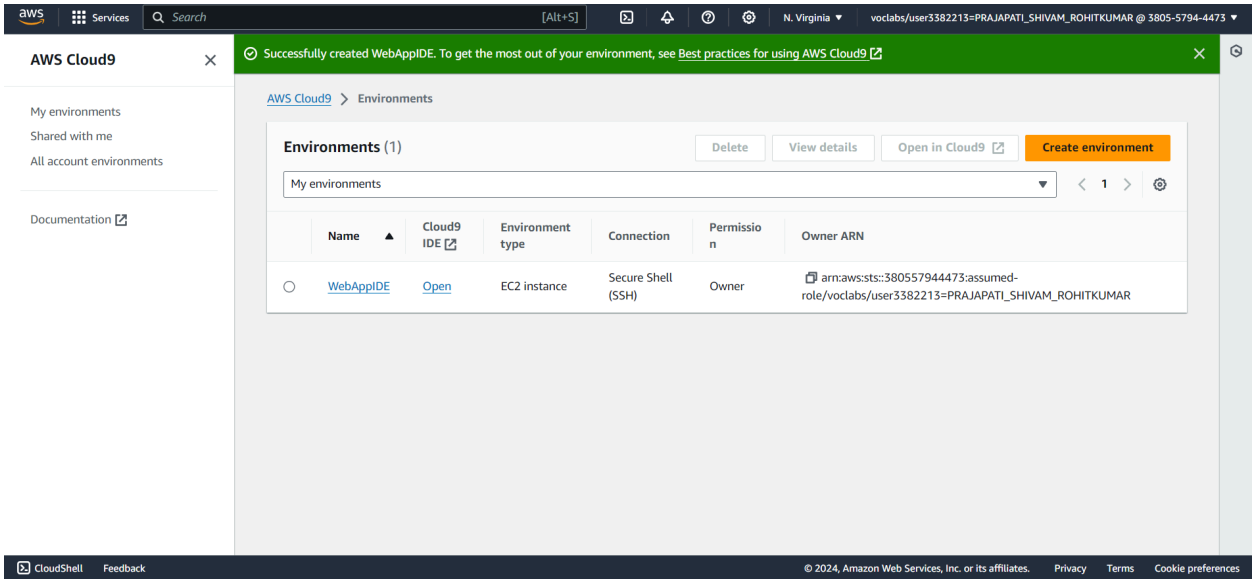
Name: Alok Yadav Div: D15C Roll No.: 59



When we go to add user to a group, the AWS Academy account throws an error as we do not have the permissions to create a group. So we have to use our personal AWS account for this part.

Step 3: Working on Cloud9 IDE

1) Go to Cloud9 services. Click on Open under Cloud9 IDE



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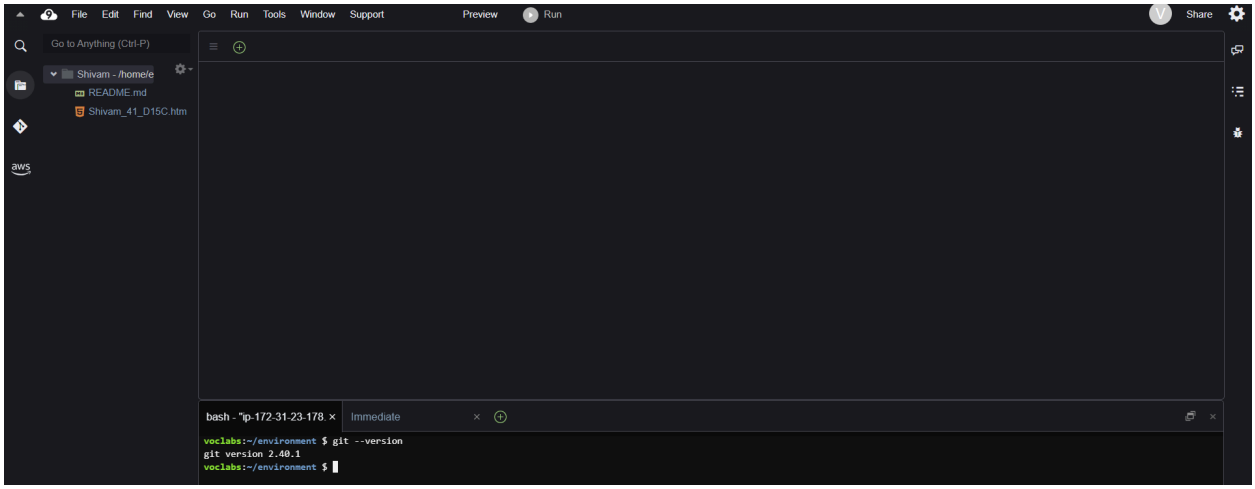
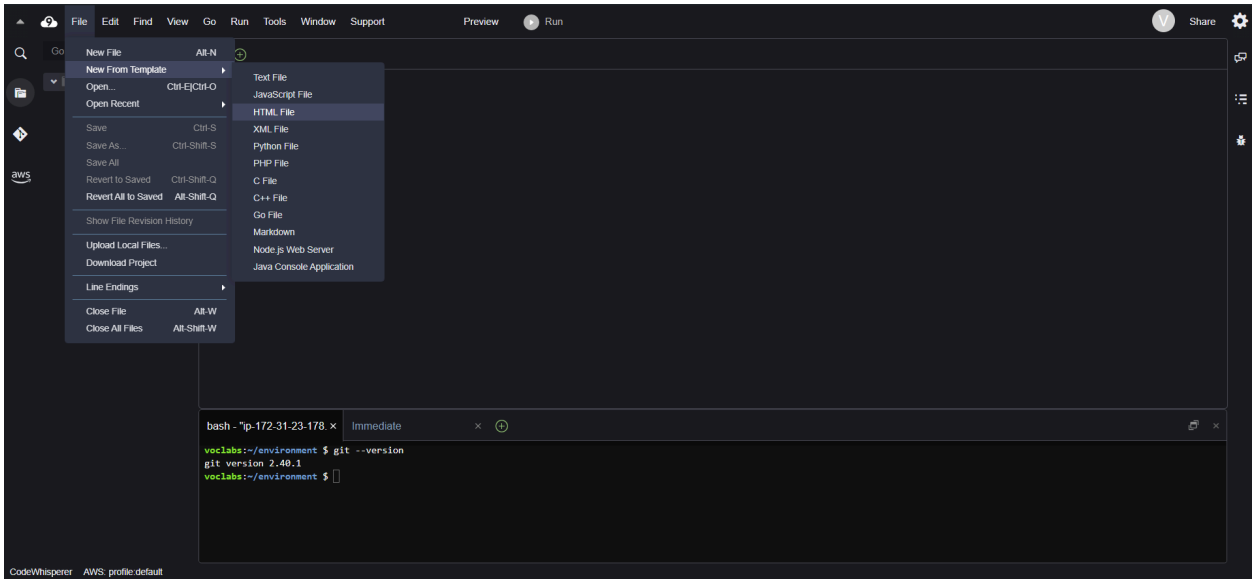
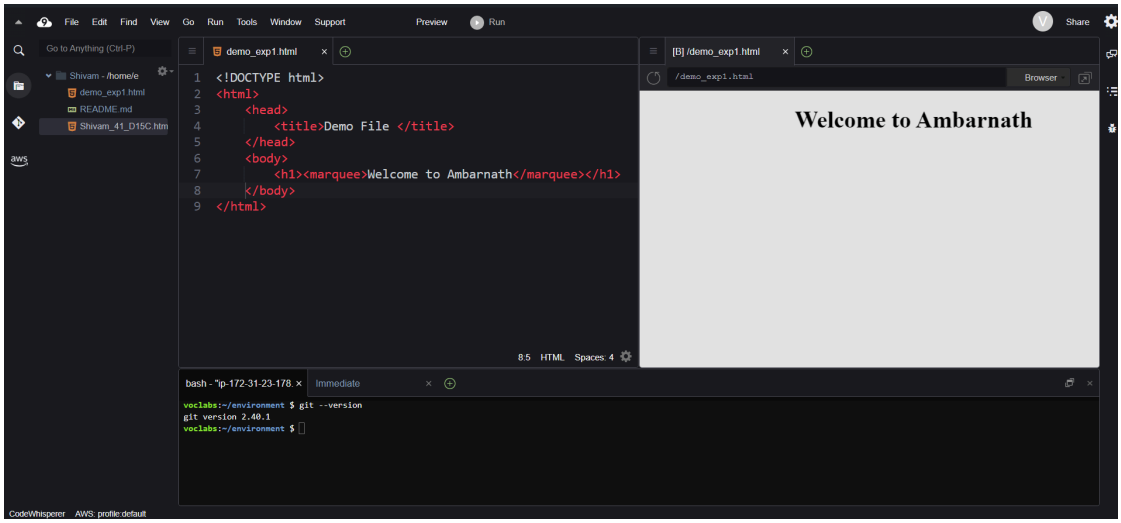
2) This is the Cloud9 IDE interface. The major part of the screen is the coding IDE. There is a command console just below it. For example, the command git --version is run.



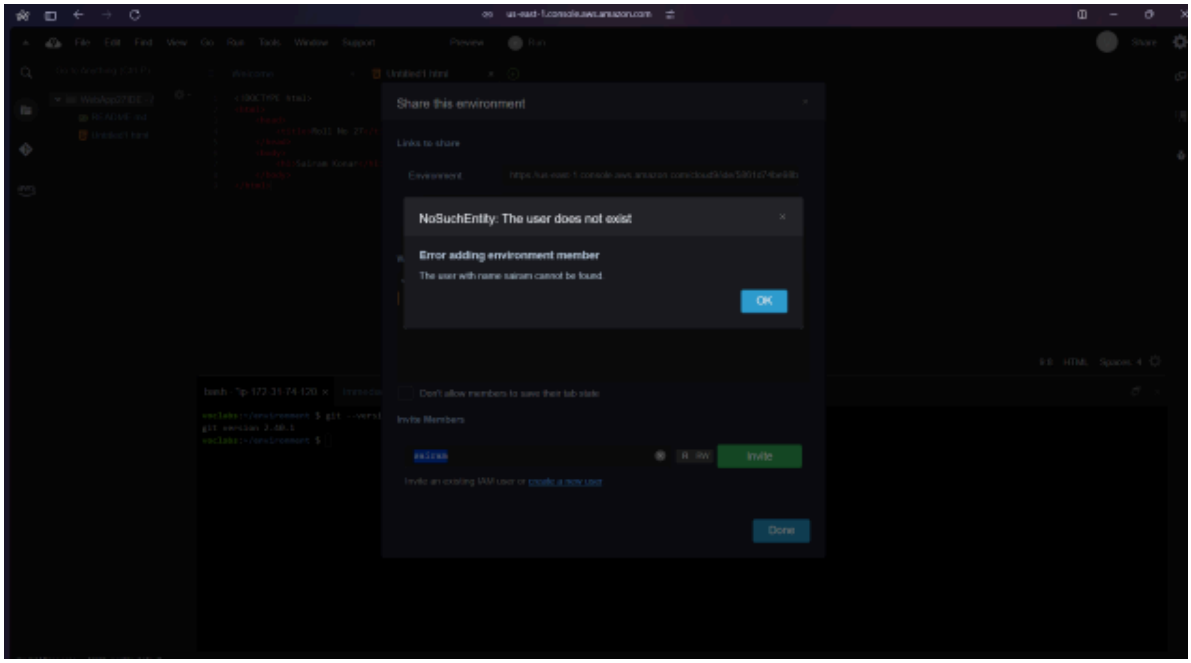
3) To add a file, click on file. For this experiment, we are to add an HTML file. So go to File → New From Template → HTML file. This gives a basic HTML template on the coding IDE



4) Make a basic website on the HTML template and save it.



After saving, on the toolbar towards the far right, click on Share. Then put the username that you had put during creating IAM user.



Here, it gives an error as Cloud9 was created on the academy account where creating an IAM group is not available, meanwhile on the personal account, the services of Cloud9 have been deprecated. So currently, it is not possible to integrate the cloud9 and IAM parts of the experiment.