

BSCS602

Pratik Patil

Roll No:58

KERALEEYA SAMAJAM(REGD.) DOMBIVLI'S
MODEL COLLEGE
EMPOWERED AUTONOMOUS

Pratik Patil
Date:-

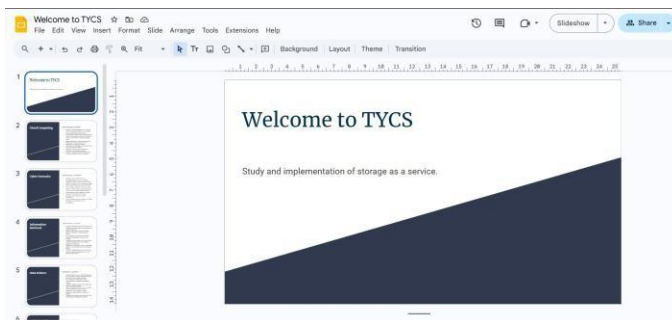
Roll No:58

Practical 8

Aim : Study and implementation of Storage as a Service.

On the google drive - create docs. - presentation 10 slides(style and animation) - google form 10 questions (different format) - spreadsheet (calculations) - share.

Presentation :



Cloud Computing

Cloud Computing - Key Points

1. **Definition:** Cloud computing provides on-demand access to computing resources over the Internet without requiring physical infrastructure.
2. **Service Models:** It includes IaaS (Infrastructure as a Service), PaaS (Platform as a Service), and SaaS (Software as a Service) for different computing needs.
3. **Deployment Models:** It can be Public (shared by multiple users), Private (exclusive to one organization), or Hybrid (mix of both).
4. **Advantages:** Offers scalability, cost savings, remote access, and automatic updates.
5. **Challenges:** Includes security risks, internet dependency, and regulatory compliance.
6. **Examples:** Popular cloud platforms include AWS, Google Cloud, Microsoft Azure, and Dropbox.

Data Science

Data Science – Key Points

1. **Definition:** Data Science is an interdisciplinary field that uses statistics, machine learning, and domain knowledge to extract insights from data.
2. **Key Components:** Includes data collection, cleaning, analysis, visualization, and predictive modeling.
3. **Techniques:** Machine learning, deep learning, data mining, and statistical analysis.
4. **Tools & Technologies:** Python, R, SQL, TensorFlow, Pandas, and Hadoop are commonly used.
5. **Applications:** Used in healthcare, finance, marketing, artificial intelligence, and business analytics.
6. **Challenges:** Data quality, privacy concerns, model interpretability, and handling large datasets.

Information Retrieval

Information Retrieval – Key Points

1. **Definition:** Information retrieval (IR) is the process of obtaining relevant information from large datasets or document collections.
2. **Objective:** Helps users find useful information quickly from structured or unstructured data sources.
3. **Key Components:** Includes query processing, indexing, ranking algorithms, and relevance feedback.
4. **Techniques:** Boolean search, vector space model, machine learning-based retrieval, and natural language processing (NLP).
5. **Applications:** Search engines (Google, Bing), library systems, recommendation systems, and big data analysis.
6. **Challenges:** Handling large-scale data, improving accuracy, dealing with ambiguous queries, and optimizing response time.

Cyber Forensics

Cyber Forensics – Key Points

1. **Definition:** Cyber forensics involves investigating digital crimes by collecting, analyzing, and preserving electronic evidence.
2. **Objectives:** Identify, recover, and analyze digital data to support legal cases and cybersecurity.
3. **Types:** Includes computer forensics, network forensics, mobile forensics, and cloud forensics.
4. **Process:** Involves data acquisition, analysis, documentation, and presentation of findings.
5. **Challenges:** Encryption, anti-forensic techniques, data volatility, and legal complexities.
6. **Tools & Examples:** EnCase, Autopsy, FTK, and Wireshark are commonly used for investigations.


Ethical Hacking

Ethical Hacking – Key Points

1. **Definition:** Ethical hacking involves legally testing and securing computer systems to identify and fix vulnerabilities.
2. **Objective:** Helps organizations strengthen cybersecurity by simulating real cyberattacks.
3. **Types:** Includes penetration testing, web application hacking, network security testing, and social engineering.
4. **Techniques & Tools:** Uses methods like password cracking, SQL injection, and tools like Metasploit, Nmap, and Wireshark.
5. **Applications:** Used in cybersecurity, risk assessment, compliance testing, and securing sensitive data.
6. **Challenges:** Legal and ethical boundaries, evolving threats, and staying updated with security trends.

Pratik Patil

Roll No:58

<h3>Assignment</h3>	<ul style="list-style-type: none"> • Cloud Computing • Cyber Forensics • Information Retrieval • Data Science • Ethical Hacking 	<h3>Project</h3>	<p>Sem V : Project Dissertation</p> <p>To develop understanding of software processes and helps the students to get deeper idea on how to develop a software application and their implementations.</p>
<h3>Project</h3>	<p>Sem VI : Project Implementation</p> <p>Learners will be able to describe the time needed to successfully complete a project, considering factors such as task dependencies and task lengths.</p>	<h3>Thank You</h3>	

Google Form :

← Preview mode Published [Copy responder link](#)

CC_Pr8 Form

The name, email address and photo associated with your Google Account will be recorded when you upload files and submit this form

What is your name?

Your answer

What is your DOB?

Date

dd-mm-yyyy

Select your gender

☐ Male

☐ Female

← Preview mode Published [Copy responder link](#)

what are your hobbies?

☐ Singing

☐ Dancing

☐ Drawing

☐ Reading

Tell me about yourself.

Your answer

Upload your identity proof.

Upload 1 supported file: PDF or image. Max 10 MB.

[Add File](#)

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Which social media platforms do you use for the following activities?

	Facebook	Instagram	Twitter	LinkedIn	WhatsApp
News	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Networking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Entertainment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Buisness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What is your preferred mode of transportation?

Choose

← Preview mode Published [Copy responder link](#)

How satisfied are you with your current work-life balance?

1 2 3 4 5

Not satisfied ☐ ☐ ☐ ☐ ☐ Very satisfied

How often do you engage in following activities?

	Daily	Weekly	Rarely	Never
Exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Read Books	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Watch TV	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Never submit passwords through Google Forms.

This content is neither created nor endorsed by Google. [Terms of Service](#) [Privacy Policy](#)

Spreadsheet :

CC Pr8 File Edit View Insert Format Data Tools Extensions Help

100% 123 Default... 10 B I A

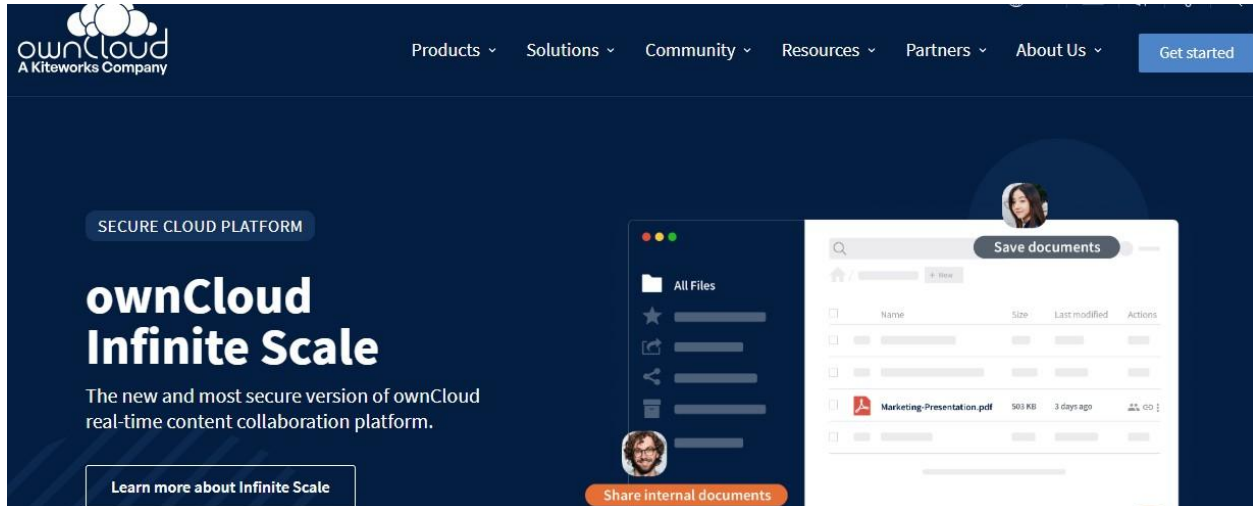
	A	B	C	D	E	F	G	H
1	Roll No	Name	Marks_1	Marks_2	Marks_3	Total	Average	
2	1	athulya	85	90	88	263	87.66666667	
3	2	siddhi	90	84	80	254	84.66666667	
4	3	sidhaarth	88	82	75	245	81.66666667	
5	4	abel	90	94	69	253	84.33333333	
6	5	ashwin	89	65	48	202	67.33333333	
7	6	abc	84	71	52	207	69	
8	7	pqr	78	61	49	188	62.66666667	
9	8	xyz	65	86	78	229	76.33333333	
10	9	mno	69	72	62	203	67.66666667	
11	10	def	72	80	82	234	78	
12								

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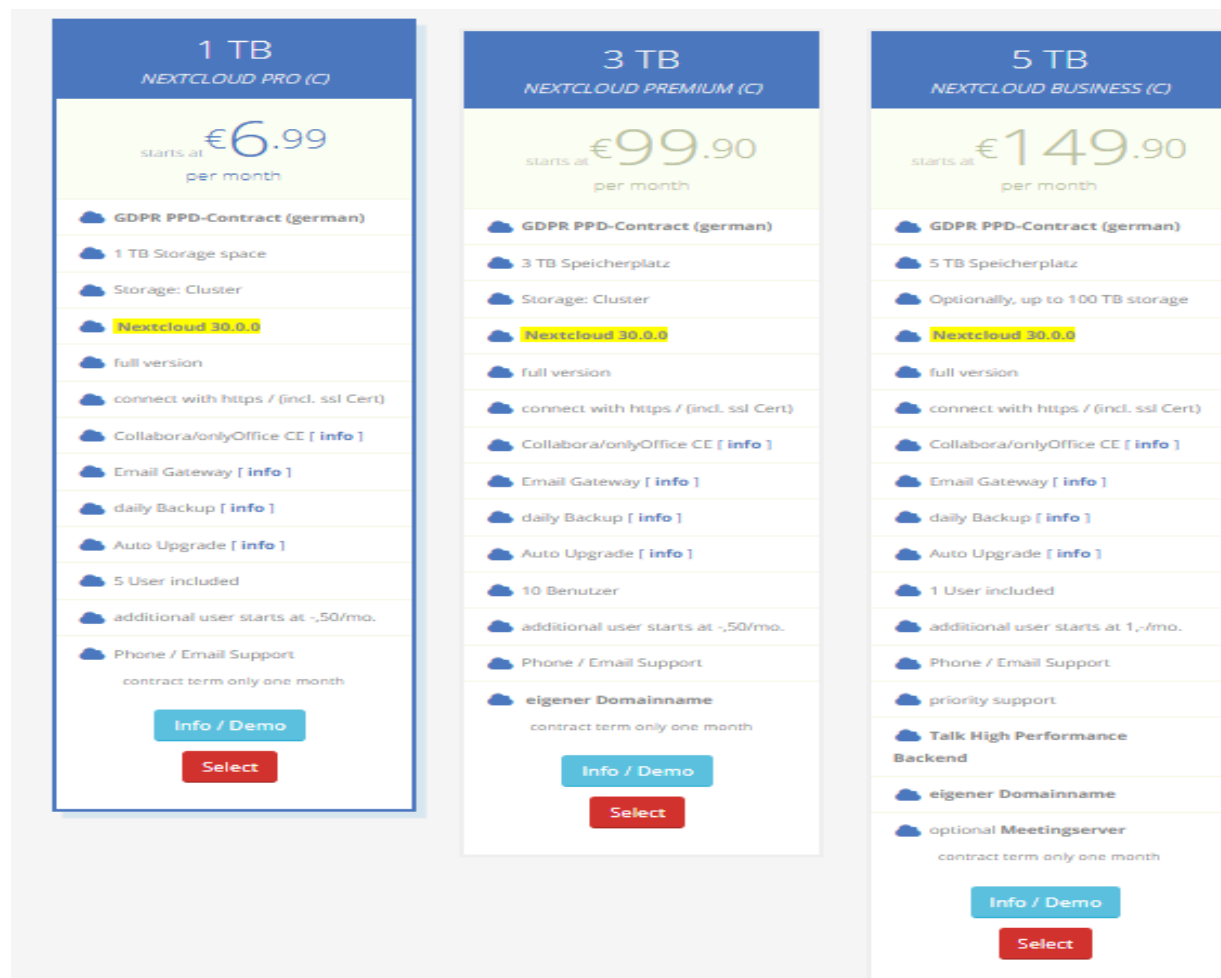
Practical 9

Study and implementation of Identity management

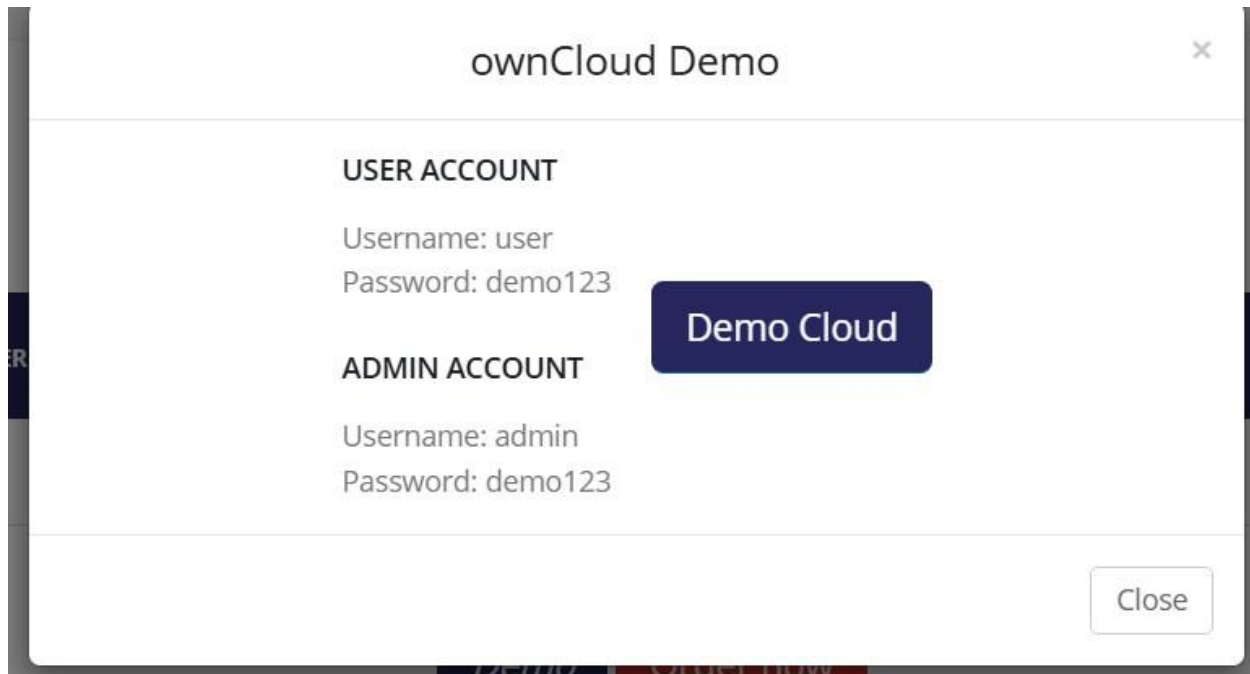
Step 1: Open owncloud



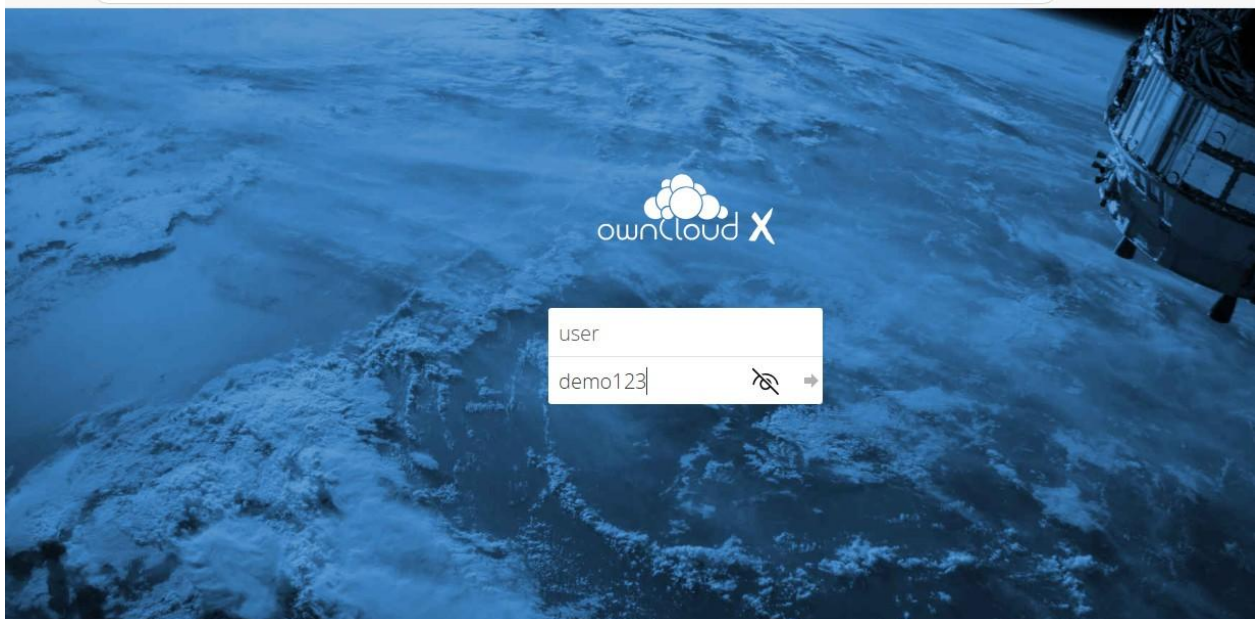
Step 2: Select the plan ,here we select the 1TB Free plan



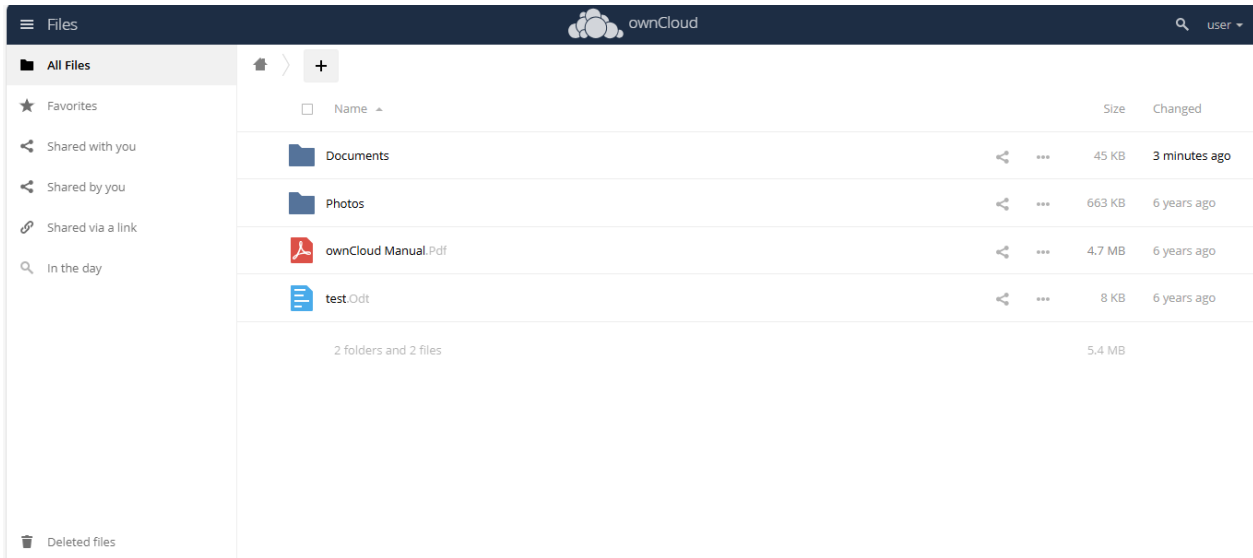
Step 3: Select The Info/Demo Option



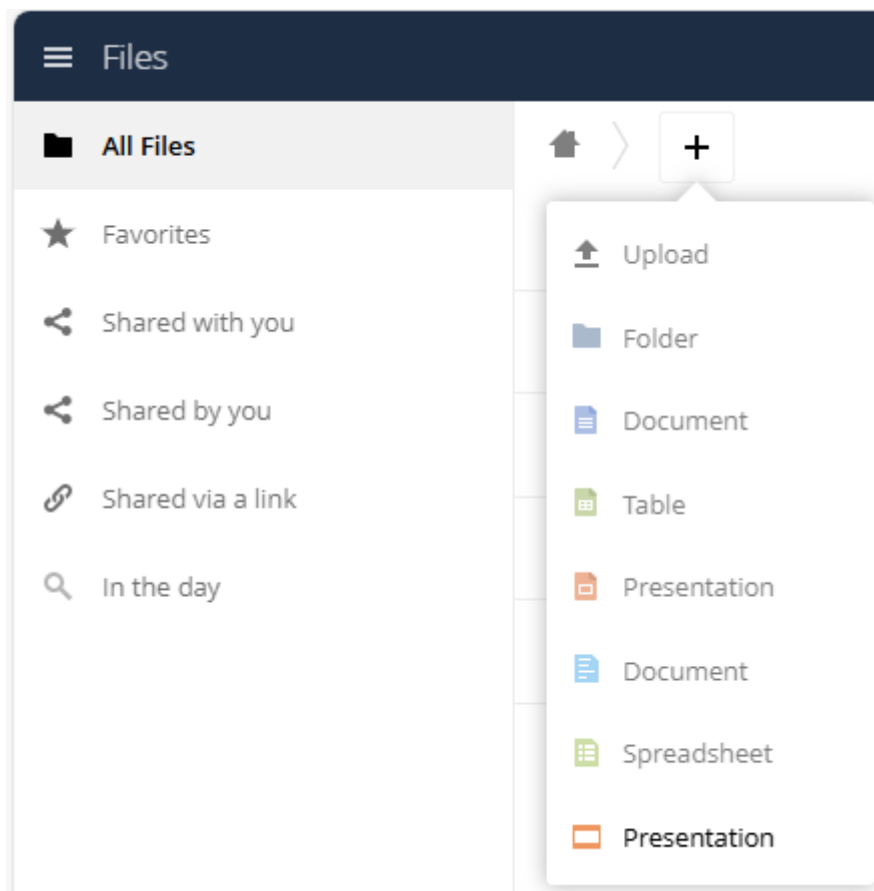
Step 4: Using The The Username and Password Provided login to the Owncloud user and Admin account



Step 5: Hence You are Logged into the user account



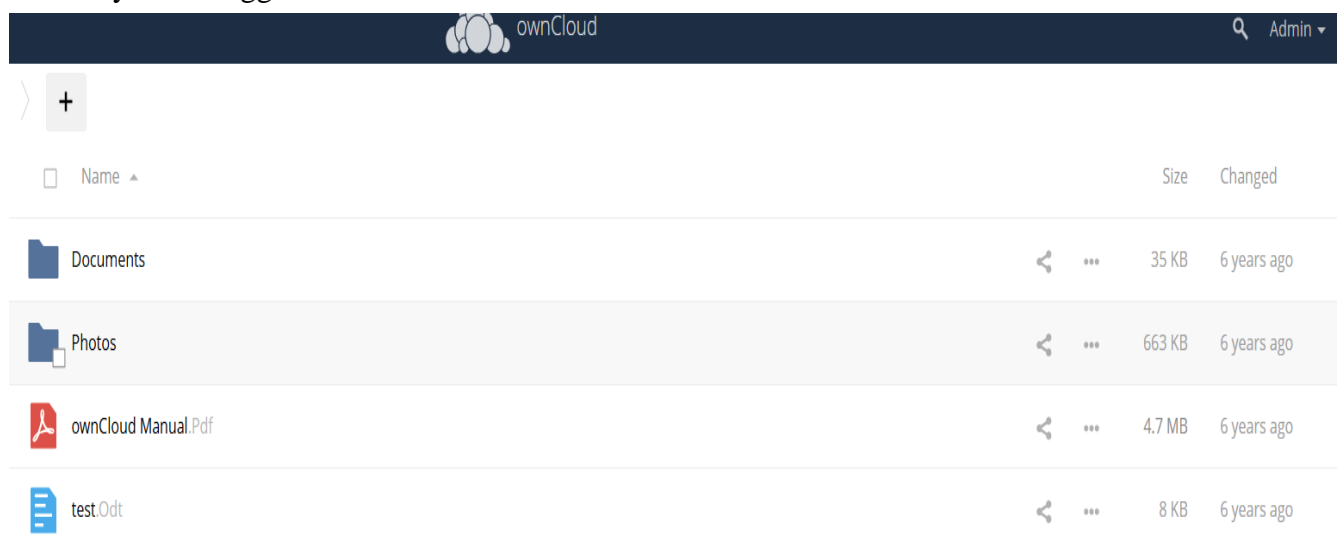
Step 6: Now try to upload any file



Step 7: Now log out of the user account and log into the admin account



Step 8: Here you are logged into the admin account whi



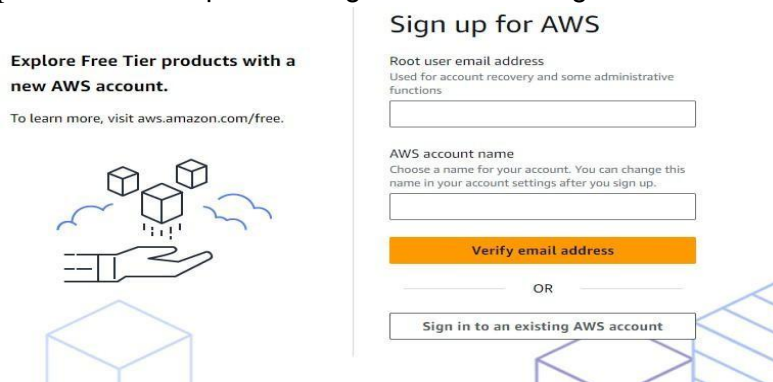
Date:-

Practical 10**Aim : Study Cloud Security management.**

Step 1: Search AWS in Google and open the following page. Proceed to click on “Create AWS Account”.



Step 2: Select the option of “Sign in to an existing AWS account”.



Step 3: Select the option of “Sign in using root user email”.



Step 4: Provide the email id in the given field and click on Next.

Sign in

☒ **Root user**
Account owner that performs tasks requiring unrestricted access. [Learn more](#)

☐ **IAM user**
User within an account that performs daily tasks. [Learn more](#)

Root user email address

Next

By continuing, you agree to the [AWS Customer Agreement](#) or other agreement for AWS services, and the [Privacy Notice](#). This site uses essential cookies. See our [Cookie Notice](#) for more information.

[New to AWS?](#)

Create a new AWS account

Step 5: Enter the password of the root user and sign in to the account.

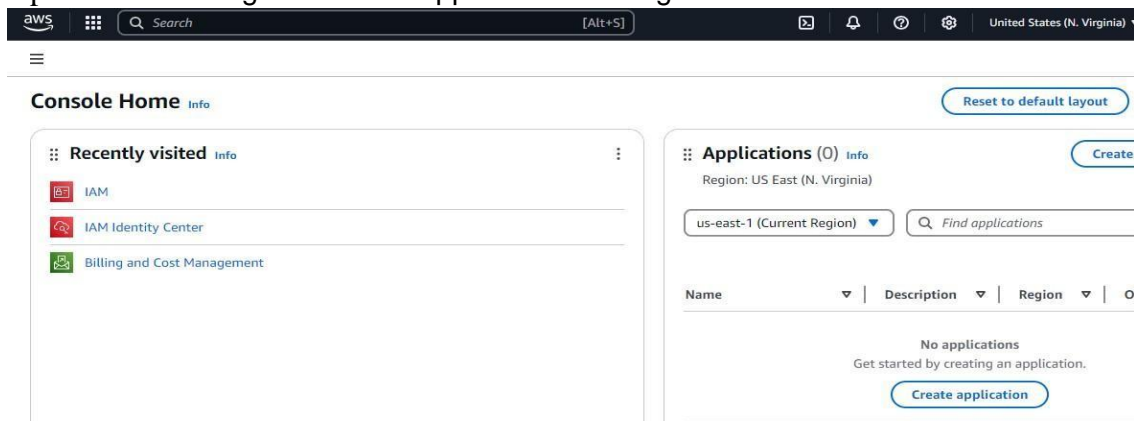
Root user sign in

Email: sidb.modelcollege@gmail.com

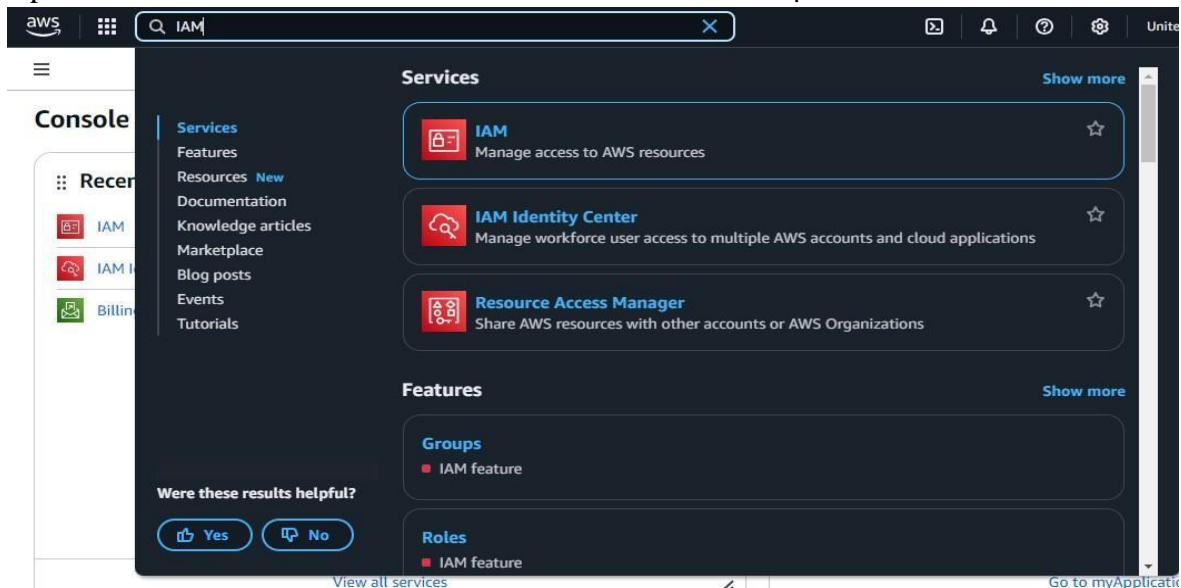
Password [Forgot password?](#)

Sign in[Sign in to a different account](#)[Create a new AWS account](#)

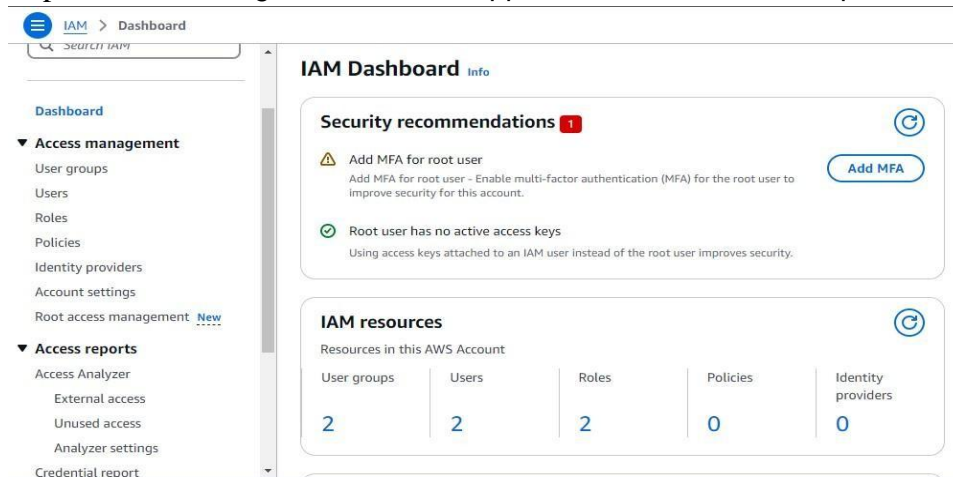
Step 6: The following window will appear after the login to the account is successful.



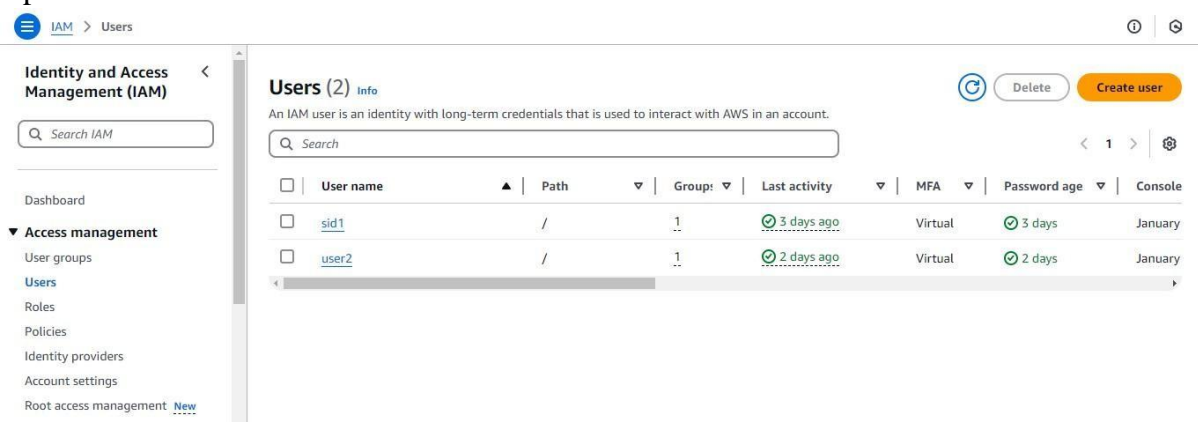
Step 7: Search for “IAM” in the search bar and select the first option.



Step 8: The following dashboard will appear from this select the option of “Users”.



Step 9: Click on “Create User” to create a new user into the account.



Step 10: Provide the name of the user and then tick the checkbox. Following dropdown will appear from that select “I want to create an IAM user.”

Specify user details

User details

User name

Batch1

The user name can have up to 64 characters. Valid characters: A-Z, a-z, 0-9, and +, =, @, _ - (hyphen)

☒ Provide user access to the AWS Management Console - *optional*

If you're providing console access to a person, it's a [best practice](#) to manage their access in IAM Identity Center.

Are you providing console access to a person?

User type

☐ Specify a user in Identity Center - Recommended

We recommend that you use Identity Center to provide console access to a person. With Identity Center, you can centrally manage user access to their AWS accounts and cloud applications.

☒ I want to create an IAM user

We recommend that you create IAM users only if you need to enable programmatic access through access keys, service-specific credentials for AWS CodeCommit or Amazon Keyspaces, or a backup credential for emergency account access.

Step 11: Click on “Custom password” and enter the password you want to provide then tick the checkbox seen below and proceed to click on next.

Console password

☐ Autogenerated password

You can view the password after you create the user.

☒ Custom password

Enter a custom password for the user.

Batch@1

- Must be at least 8 characters long
- Must include at least three of the following mix of character types: uppercase letters (A-Z), lowercase letters (a-z), numbers (0-9), and symbols ! @ # \$ % ^ & * () _ + - (hyphen) = [] { }

☒ Show password

☒ Users must create a new password at next sign-in - Recommended

Users automatically get the [IAMUserChangePassword](#) policy to allow them to change their own password.

If you are creating programmatic access through access keys or service-specific credentials for AWS CodeCommit or Amazon Keyspaces, you can generate them after you create this IAM user. [Learn more](#)

Cancel Next

Console password

☐ Autogenerated password

You can view the password after you create the user.

☒ Custom password

Enter a custom password for the user.

☐ Show password

☒ Users must create a new password at next sign-in - Recommended

Users automatically get the [IAMUserChangePassword](#) policy to allow them to change their own password.

If you are creating programmatic access through access keys or service-specific credentials for AWS CodeCommit or Amazon Keyspaces, you can generate them after you create this IAM user. [Learn more](#)

Cancel Next

Step 12: The following window will appear. Check every detail and click on “Create User”.

Permissions options

- ☒ **Add user to group**
Add user to an existing group, or create a new group. We recommend using groups to manage user permissions by job function.
- ☐ **Copy permissions**
Copy all group memberships, attached managed policies, and inline policies from an existing user.
- ☐ **Attach policies directly**
Attach a managed policy directly to a user. As a best practice, we recommend attaching policies to a group instead. Then, add the user to the appropriate group.

User groups (2)

Group name	Users	Attached policies	Created
<input type="checkbox"/> group1	1	AdministratorAccess	2025-01-31 (3 days ago)
<input type="checkbox"/> group2	1	AdministratorAccess	2025-01-31 (3 days ago)

► **Set permissions boundary - optional**

Permissions summary

Name	Type	Used as
IAMUserChangePassword	AWS managed	Permissions policy

Tags - optional
Tags are key-value pairs you can add to AWS resources to help identify, organize, or search for resources. Choose any tags you want to associate with this user.
No tags associated with the resource.
[Add new tag](#)
You can add up to 50 more tags.

[Cancel](#) [Previous](#) [Create user](#)

Step 13: Here we can see that the user has been successfully created. Download the csv file of the credentials which is required for the further use.

User created successfully
You can view and download the user's password and email instructions for signing in to the AWS Management Console. [View user](#)

Console sign-in details [Email sign-in instructions](#)

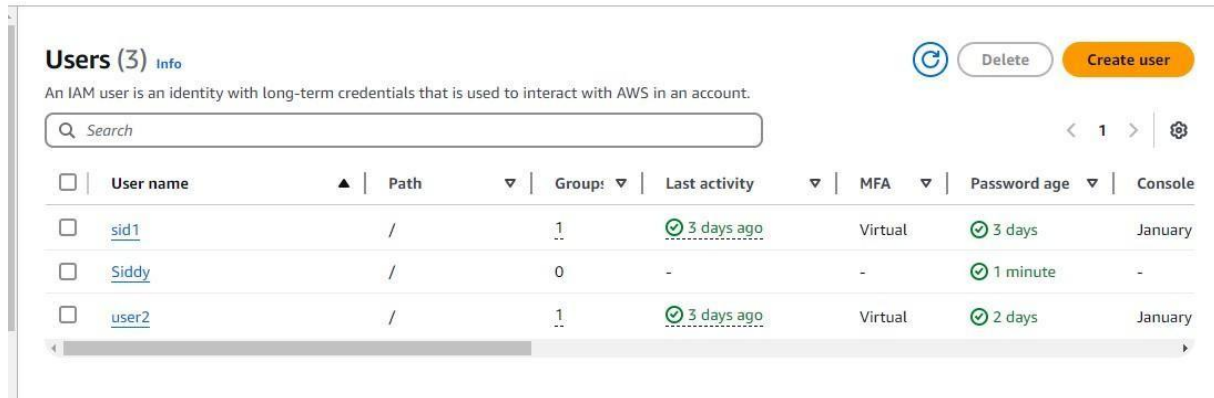
Console sign-in URL
<https://588738572450.signin.aws.amazon.com/console>

User name
[Batch1](#)

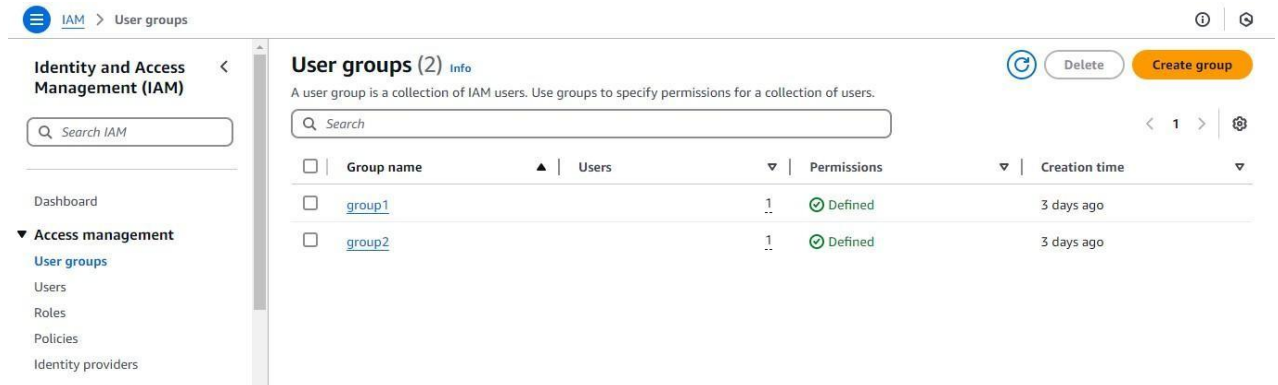
Console password
[Show](#)

[Cancel](#) [Download .csv file](#) [Return to users list](#)

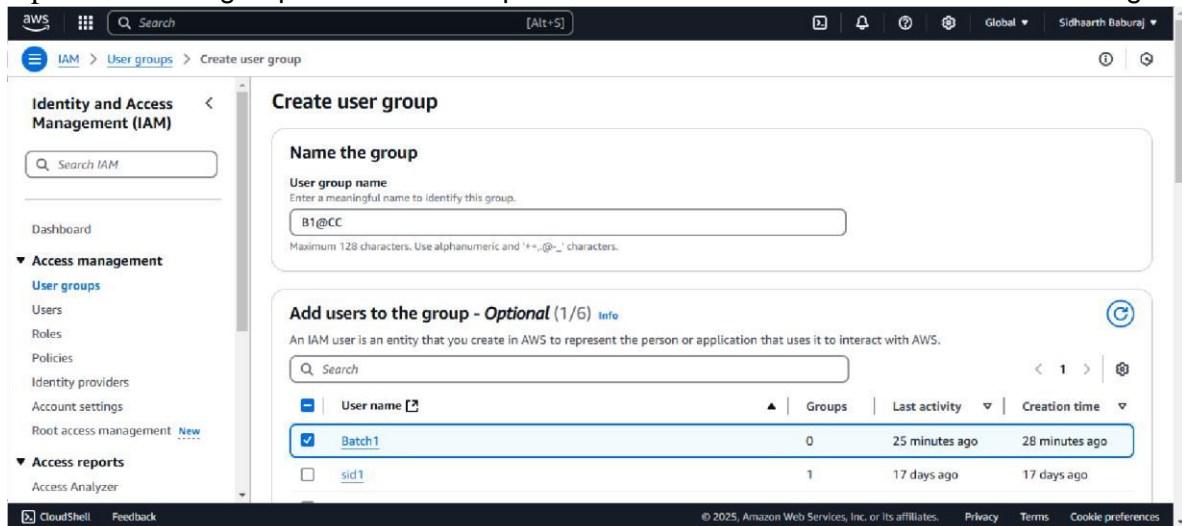
Step 14: Here we can see the user we created just now.



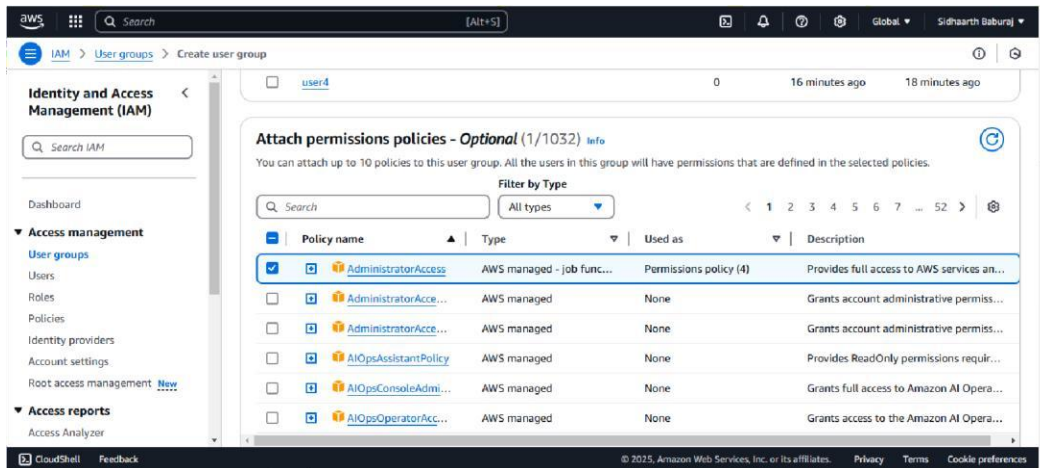
Step 15: Click on “User groups” and select the option on “Create group”.



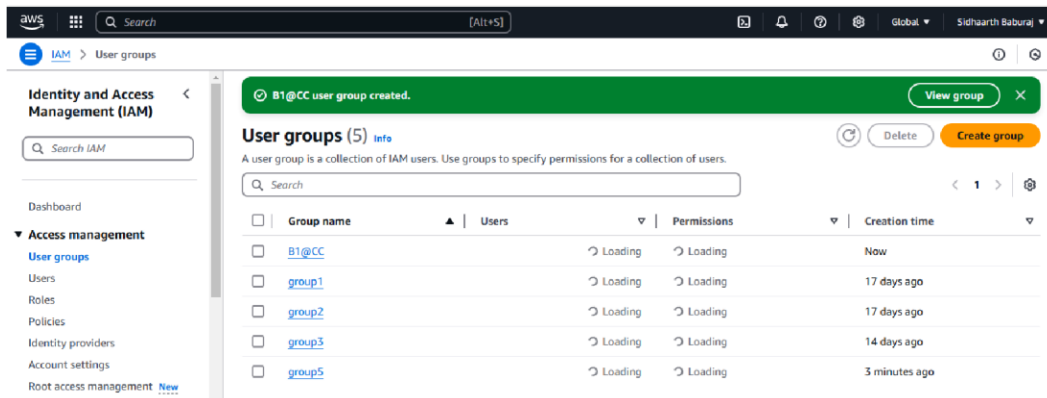
Step 16: Give the group name in the respective field and select the users to add into the group.



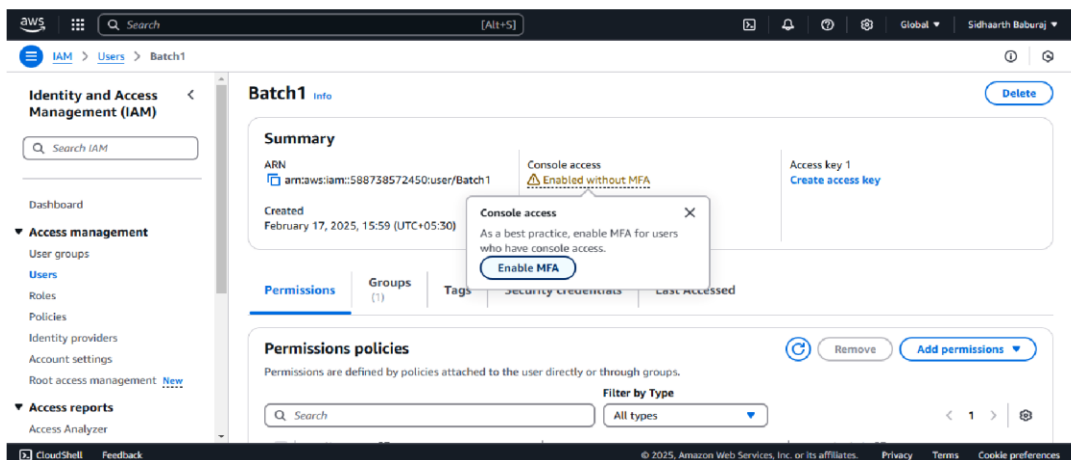
Step 17: Here Attach the permission policies, select the first option as shown below. Click on create group.



Step 18: Here the group is successfully created as shown below.



Step 19: Go to the Users and click on the link of the user just created, The following window will appear in that click on the option of "Enable without MFA" and select the option of "Enable MFA".



Step 20: Give a name to the MFA device.

MFA device name

Device name
This name will be used within the identifying ARN for this device.

B1Device

Maximum 64 characters. Valid characters: A-Z, a-z, 0-9, and + = , . @ _ - (hyphen)

Step 21: Select the option of “Authenticator app”.

MFA device

Device options
In addition to username and password, you will use this device to authenticate into your account.

☐ **Passkey or security key**
Authenticate using your fingerprint, face, or screen lock. Create a passkey on this device or use another device, like a FIDO2 security key.

☒ **Authenticator app**
Authenticate using a code generated by an app installed on your mobile device or computer.

☐ **Hardware TOTP token**
Authenticate using a code generated by Hardware TOTP token or other hardware devices.

Step 22: Click on Show QR Code to get the code to scan. Scan the QR Code and wait till the MFA code is generated and provide the code in the following fields. Click on Add MFA.

Open your authenticator app, choose **Show QR code** on this page, then use the app to scan the code. Alternatively, you can type a secret key. [Show secret key](#)

3 Type two consecutive MFA codes below

Enter a code from your virtual app below

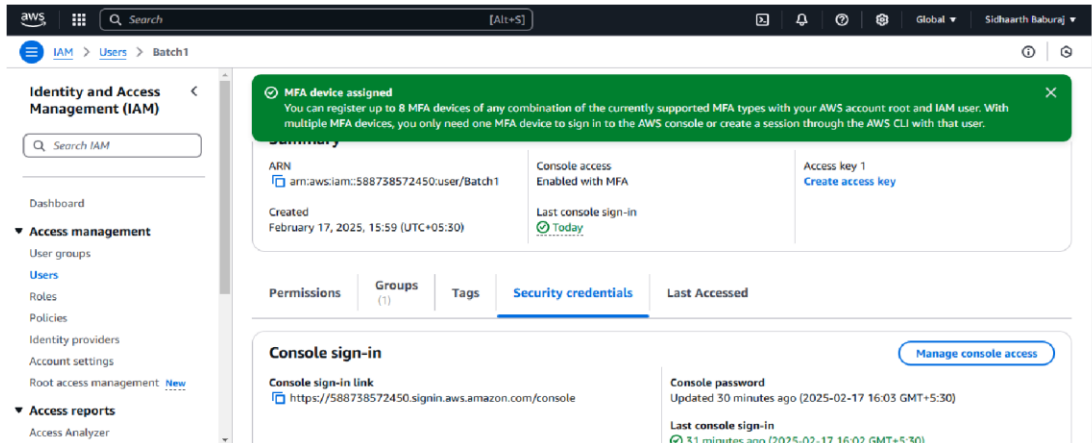
642051

Wait 30 seconds, and enter a second code entry.

754832

[Cancel](#) [Previous](#) [Add MFA](#)

Step 23: Here the MFA device is successfully assigned.



Step 24: Go back to the login page and enter the details required. The details can be obtained from the credential.csv file . Click on Sign-in.

IAM user sign in ⓘ

Account ID (12 digits) or account alias

IAM username

Password

☐ Show Password [Having trouble?](#)

Sign in

Sign in using root user email

[Create a new AWS account](#)

Step 25: Enter the MFA code and click on Sign-in.

Keeping you secure

Your account is protected with **multi-factor authentication (MFA)**.

To finish signing in, enter the code from your MFA device below.

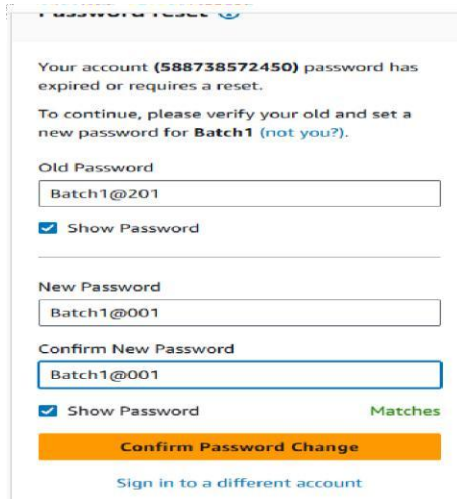
MFA code

Sign in

Sign in to a different account

[Trouble signing in?](#)

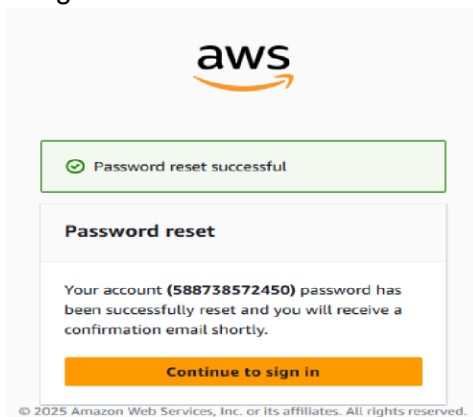
Step 26: Here we have to create a new password for that enter the old password first and then the new one. Click on Confirm Password Change.



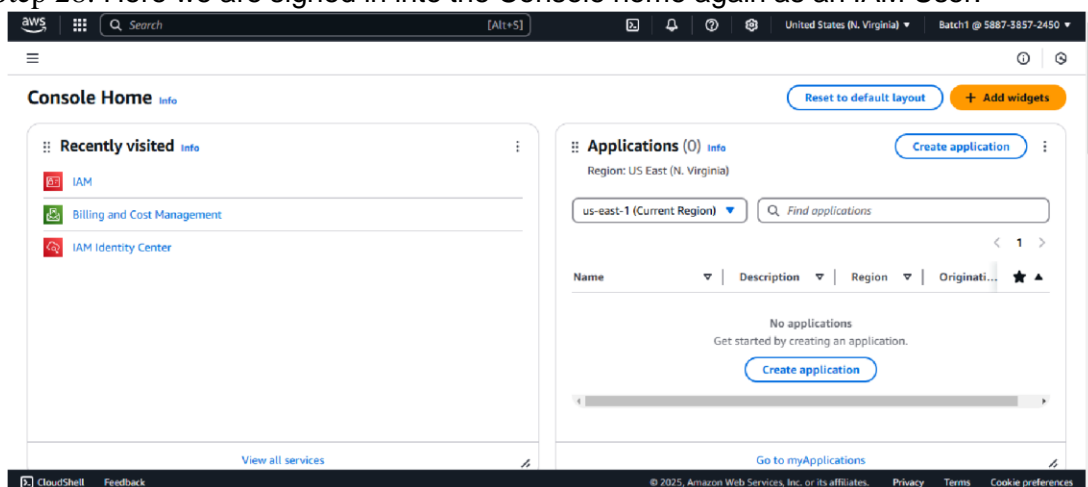
The screenshot shows the 'Password reset' form in the AWS console. It contains the following elements:

- A message: "Your account (588738572450) password has expired or requires a reset. To continue, please verify your old and set a new password for Batch1 (not you?)."
- A section for 'Old Password' with a text input field containing 'Batch1@201' and a checked checkbox for 'Show Password'.
- A section for 'New Password' with a text input field containing 'Batch1@001'.
- A section for 'Confirm New Password' with a text input field containing 'Batch1@001' and a checked checkbox for 'Show Password'. A green 'Matches' label is visible next to the confirm field.
- An orange button labeled 'Confirm Password Change'.
- A link: 'Sign in to a different account'.

Step 27: Here we can see that the password has been reset successfully. Click on continue to sign-in.



Step 28: Here we are signed in into the Console home again as an IAM User.

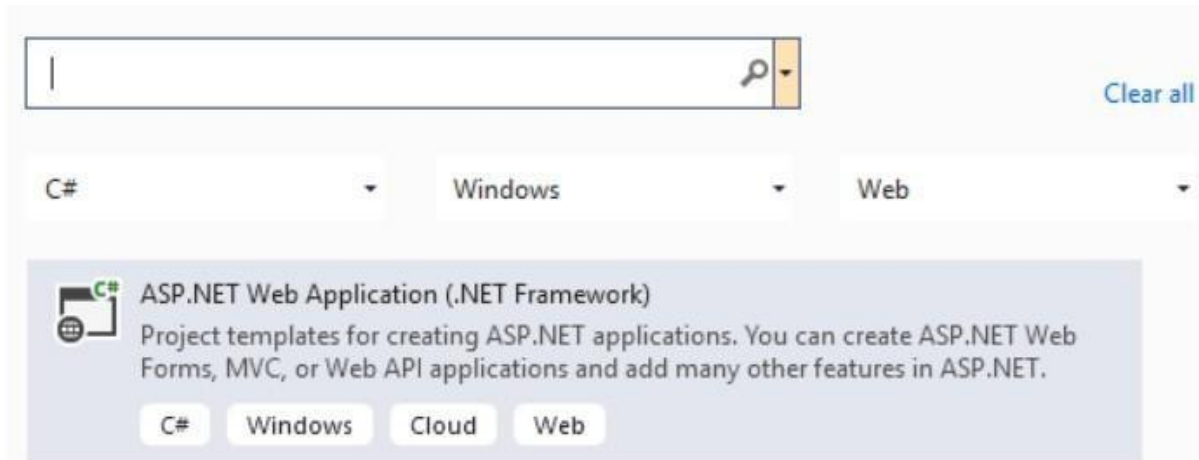


Date:-

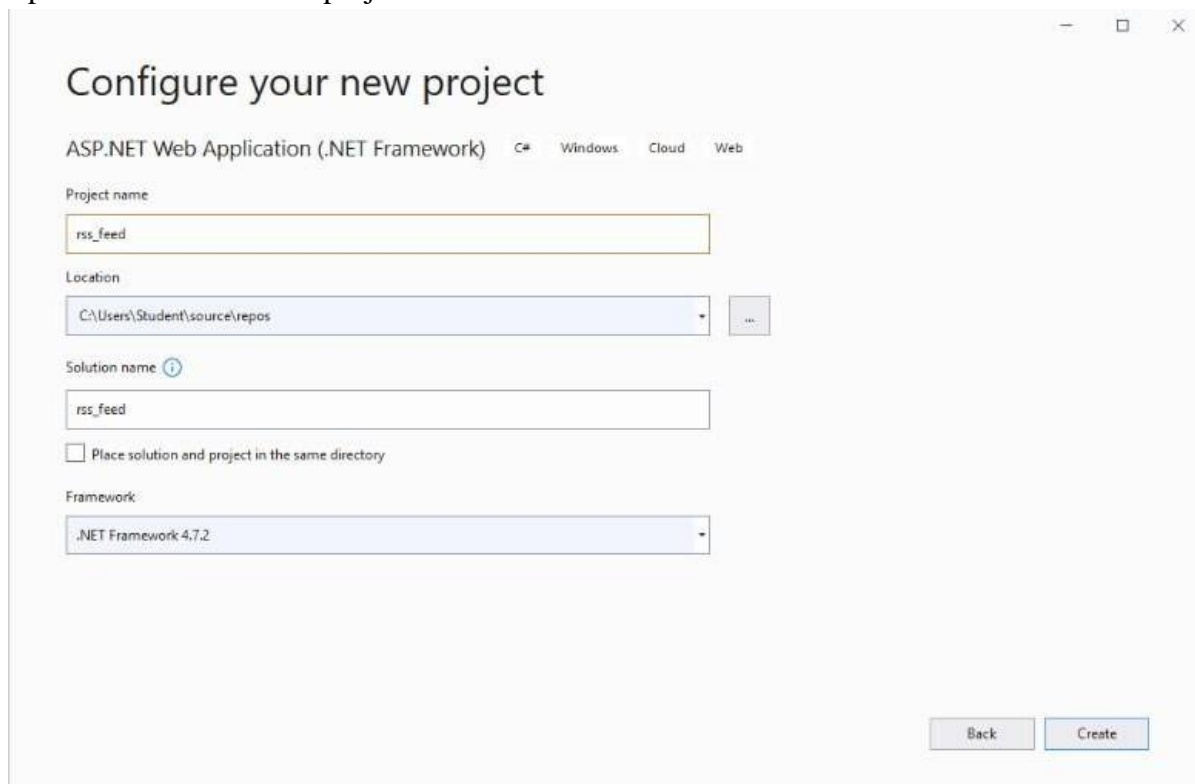
Practical 11

Aim : Write a program for the web feed.

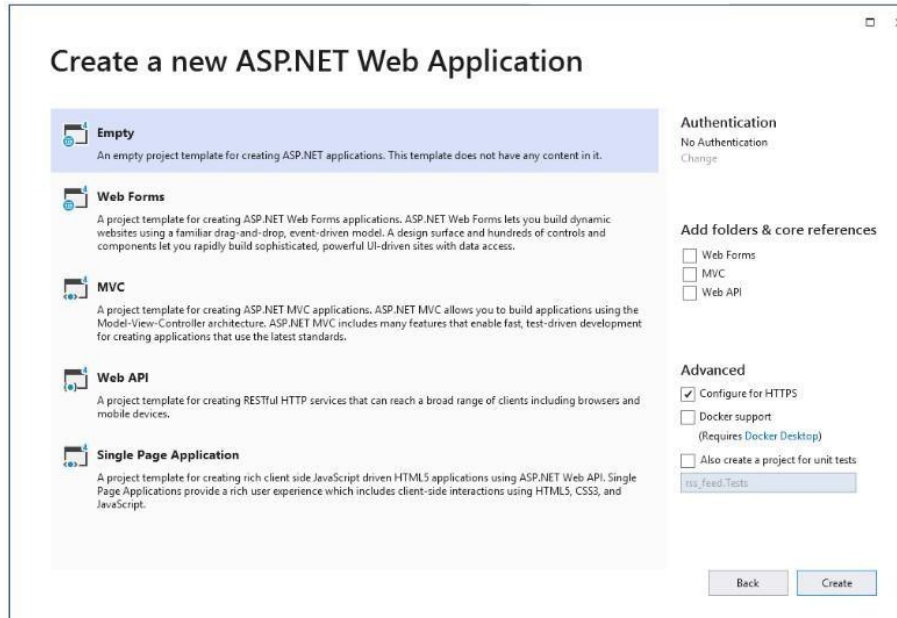
Step 1: Start Visual Studio → Create a new project → All Languages → C# → All Platform → Windows → All project types → Web → Select ASP.NET Web App.



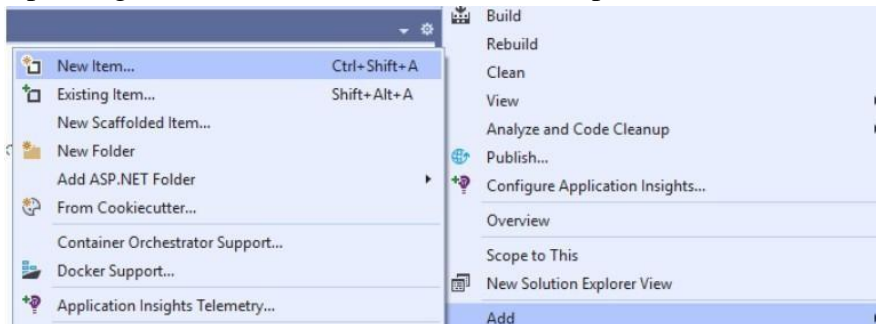
Step 2: Give name for the project as 'RSSFeed' → Click on Create.



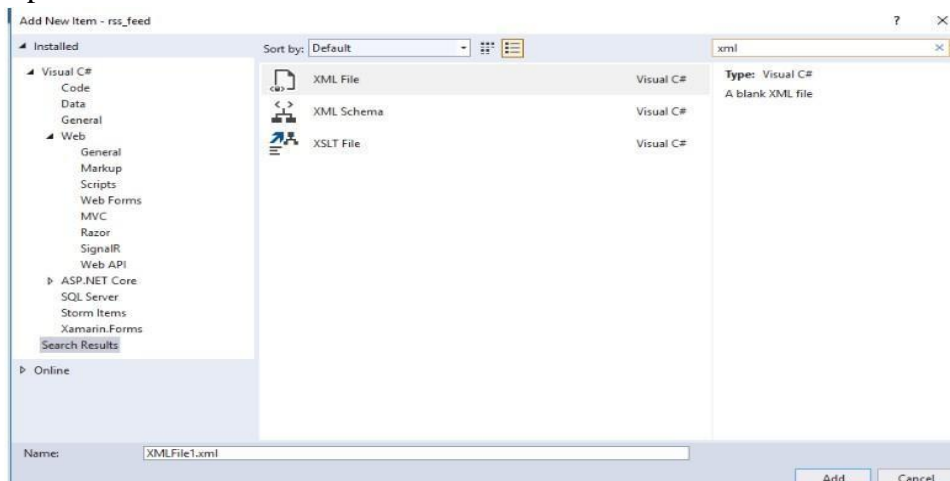
Step 3: Select 'Empty' → click on create.



Step 4: Right click on 'RSSFeed' in solution explorer → New Item → Add.

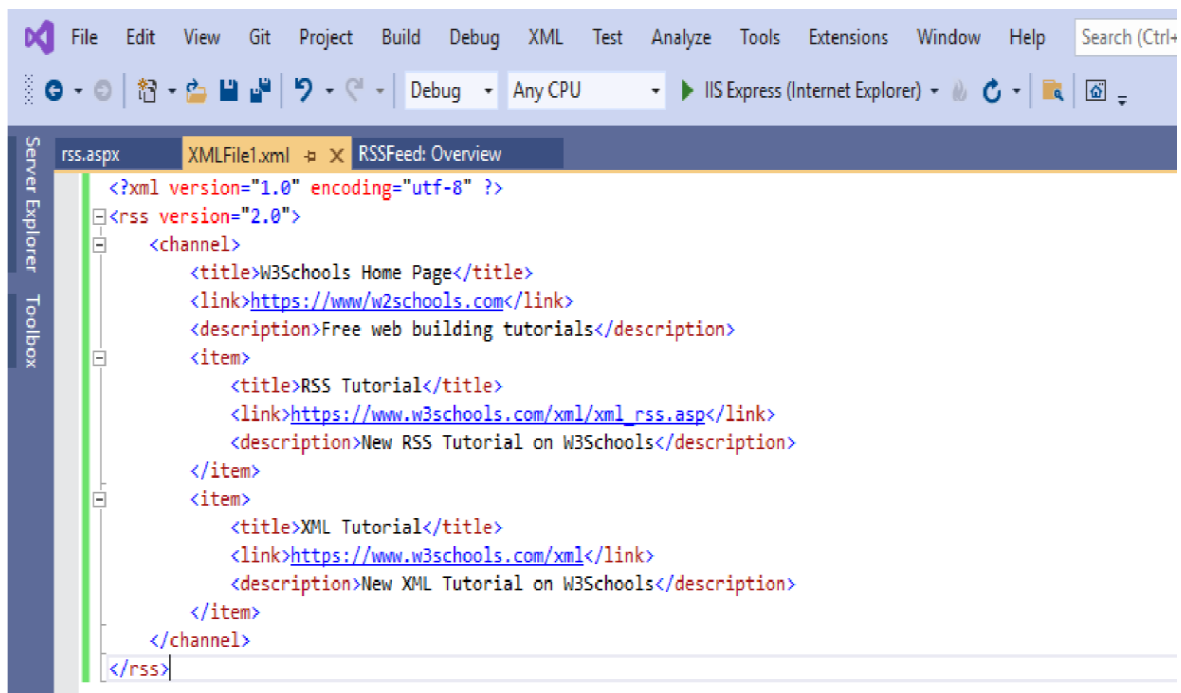


Step 5: Now search for 'XML' → select 'XML File'.

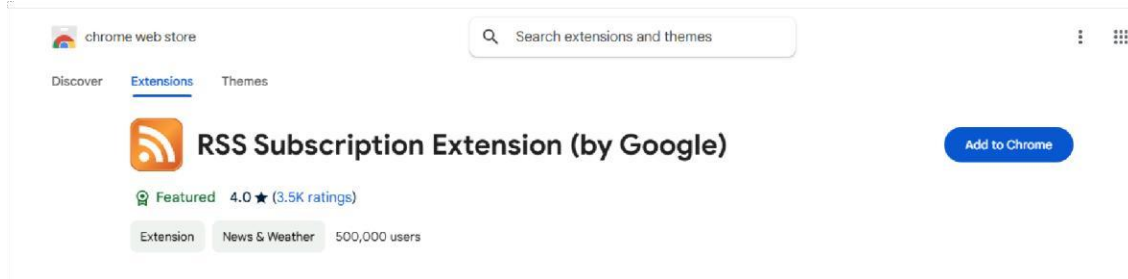


//XMLFile.xml

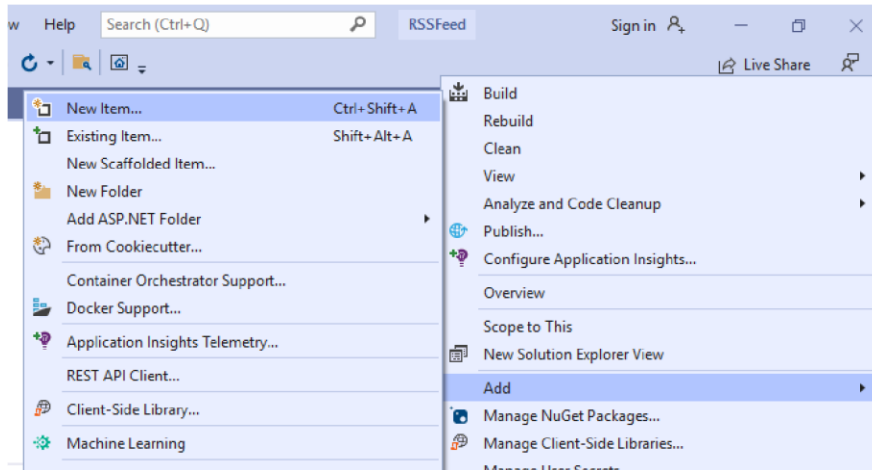
```
<?xml version="1.0" encoding="utf-8" ?>
<rss version="2.0">
  <channel>
    <title>W3Schools Home Page</title>
    <link>https://www.w2schools.com</link>
    <description>Free web building tutorials</description>
    <item>
      <title>RSS Tutorial</title>
      <link>https://www.w3schools.com/xml/xml_rss.asp</link>
      <description>New RSS Tutorial on W3Schools</description>
    </item>
    <item>
      <title>XML Tutorial</title>
      <link>https://www.w3schools.com/xml</link>
      <description>New XML Tutorial on W3Schools</description>
    </item>
  </channel>
</rss>
```



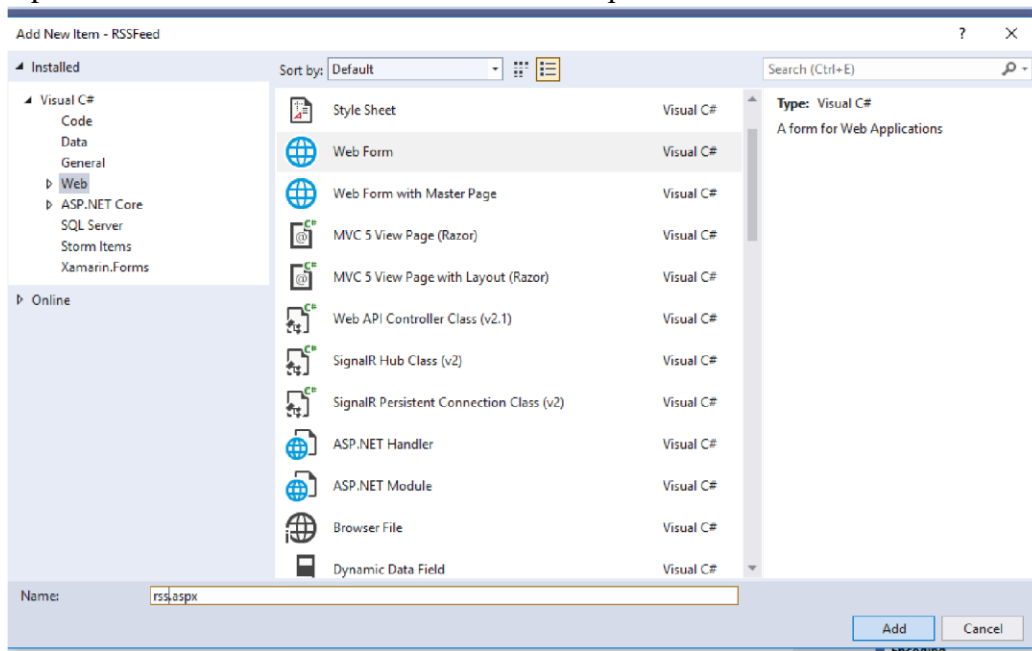
Step 6: Search for RSS Subscription Extension in google



Step 7: Right click on RSSFeed → New Item → Add.



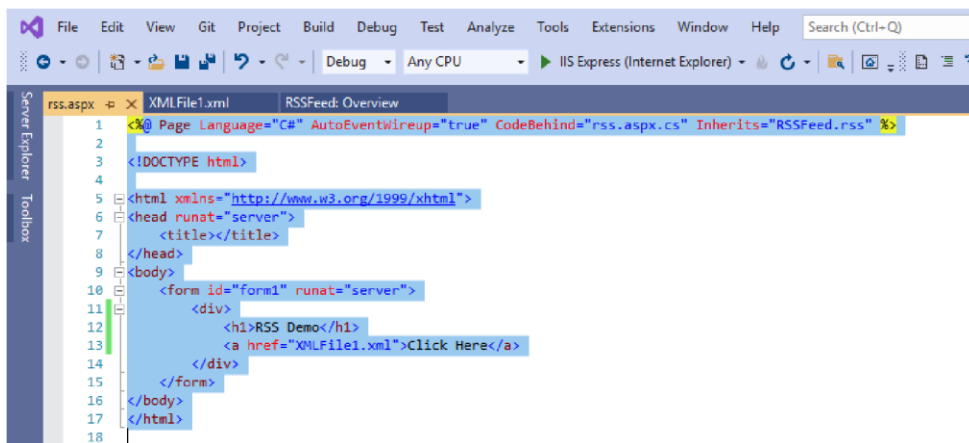
Step 8: Select 'Web Form' and name it as 'rss.aspx' and click on 'Add'.



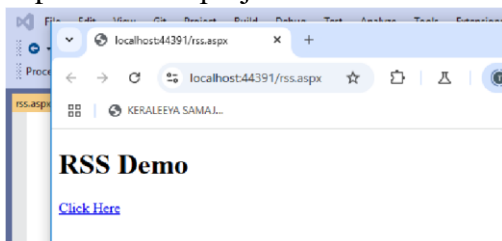
```
//rss.aspx
<% @ Page Language="C#" AutoEventWireup="true" CodeBehind="rss.aspx.cs"
Inherits="RSSFeed.rss" %>

<!DOCTYPE html>

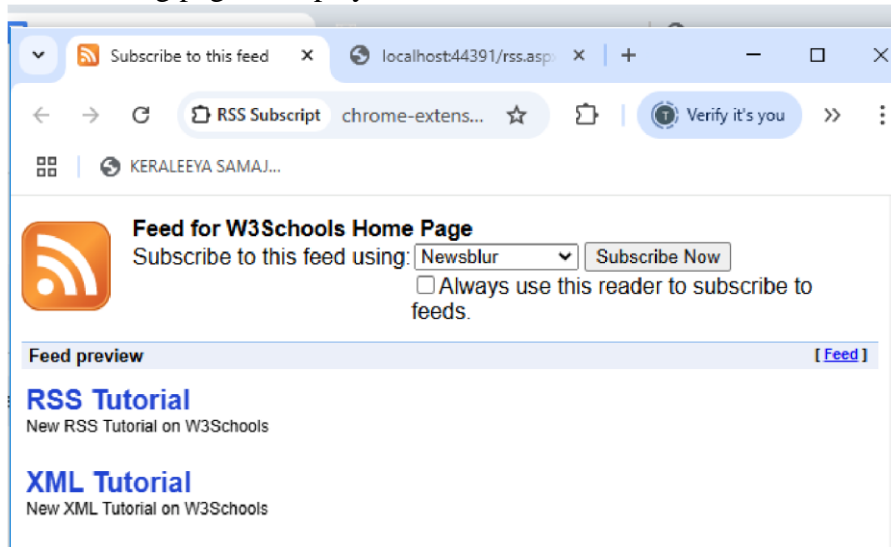
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
            <h1>RSS Demo</h1>
            <a href="XMLFile1.xml">Click Here</a>
        </div>
    </form>
</body>
</html>
```



Step 9: Run the project → Click on 'Click Here'



The following page is displayed.

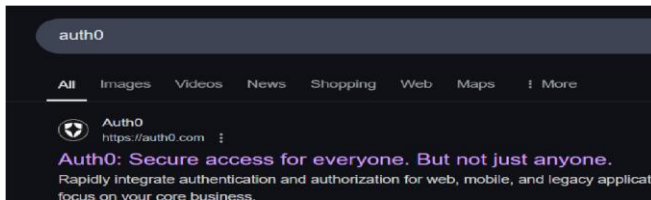


Date:-

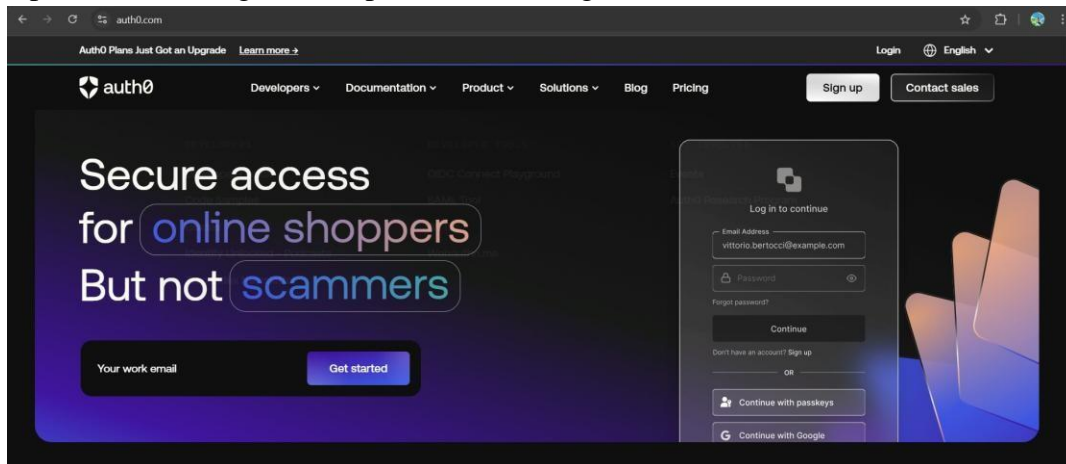
Practical 12

Aim: Study and implementation of Single-Sign-On.

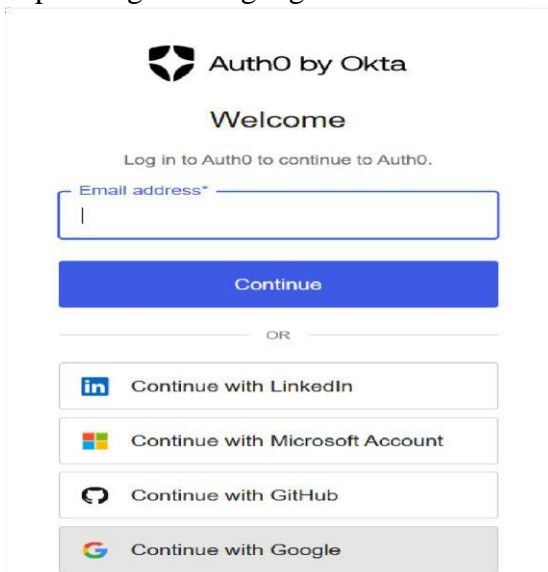
Step 1: Search auth0 in chrome.



Step 2: The AuthPage0 will open. Click on Login.




Step 3: Login with google account.



Step 4: Select account type as 'Other'. Click next.

Account Type
Are you creating this account for yourself or on behalf of a company?

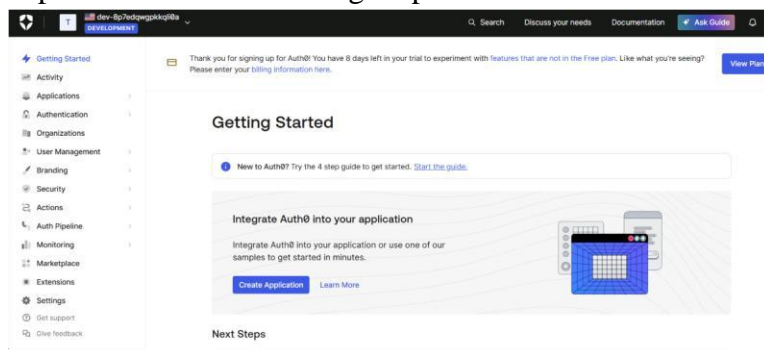
☒ Company ☐ Personal

☐ I need advanced settings 

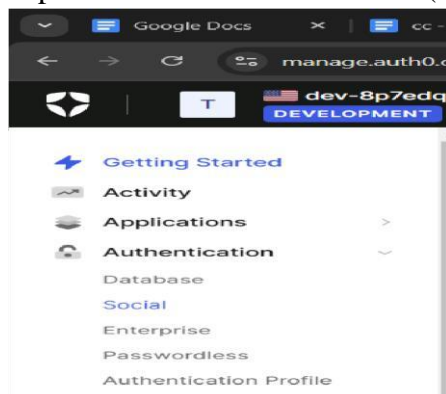
We've assigned your data region to the United States and given you a tenant name. Check this box if you need to process your data in a different region to comply with privacy laws.

NEXT

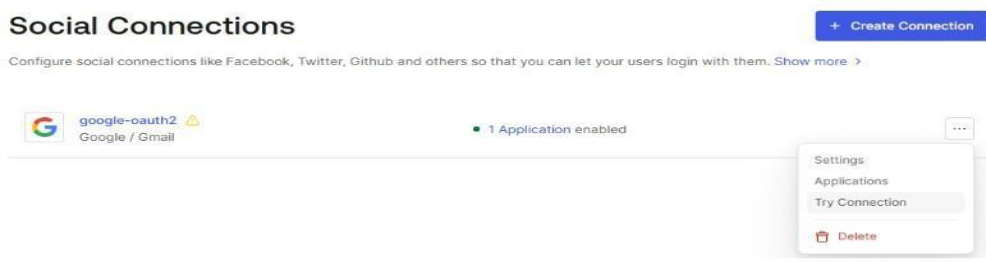
Step 5: The dashboard will get open.



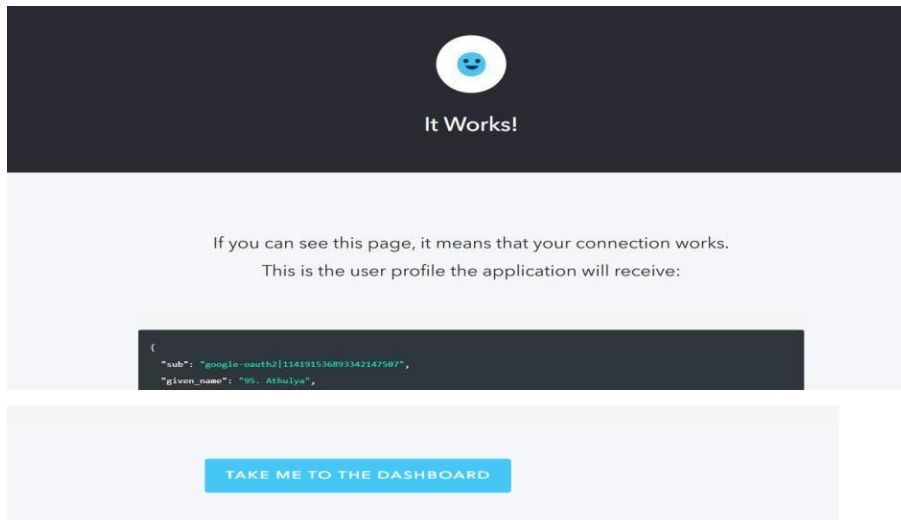
Step 6: Go to social connections. (Authentication → Social)



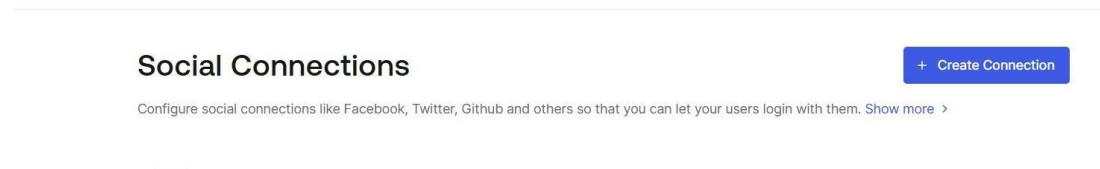
Step 7: Click on three dots on google- auth0.



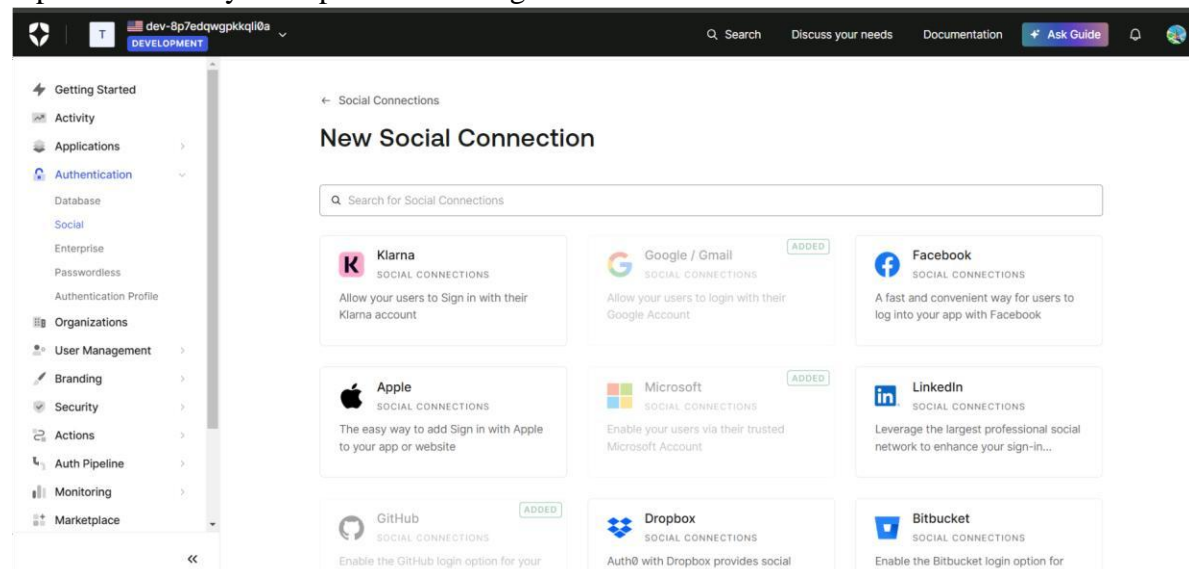
Step 8: The following page will be displayed showing “It works”. Now click on “Take me to the dashboard”.



Step 9: Click on create connection.




Step 10: Select any one option from the given social connections.



Step 11: Click on continue.

← Choose Social Connection

 **New GitHub Social Connection**

GitHub Social Connection by Auth0

GitHub will need access to:

Redirect users to login at GitHub

Receive and store user identities from GitHub

Update user root profiles with data from GitHub

Continue

Cancel

Step 12: Click on create.

☐ write:public_key ⓘ

☐ admin:public_key ⓘ

Advanced

Sync user profile attributes at each login

☒

Create

Step 13: Enable the default app option and click on 'Try Connection'. Give the required credentials and login to your account.

← Social Connections

 **github**
GitHub Identifier con_yQSuJpp1IgIudA0j

Try Connection

Setup Guide

Settings Applications

Applications using this connection.

Default App

Single Page Application

☒

The below screen will be displayed. Click on 'Authorize iam-login'.

