**Aim:** To develop a website and host it on your local machine on a VM

**Theory:** To develop and host a website on your local machine using XAMPP and a virtual machine (VM), here are the theoretical steps and implementation details:

**1. Understanding the Basics**

**Website Development:** This involves writing code (HTML, CSS, JavaScript, PHP, etc.) for the front-end and back-end (if applicable). For example, HTML for structure, CSS for styling, JavaScript for functionality, and PHP for server-side scripting.

Local Hosting: XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of Apache HTTP Server, MySQL database, and interpreters for scripts written in PHP and Perl.

**VM Setup:** You can use software like VirtualBox or VMware to create a virtual machine with anoperating system to host your development environment.

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**VM Setup:** You can use software like VirtualBox or VMware

**2. Installing XAMPP on the Virtual Machine**

XAMPP includes Apache, MySQL (MariaDB), and PHP/Perl, which are essential for running a local server.

**Steps:**

**1. Download XAMPP:**

Visit Apache Friends and download XAMPP for the OS installed on your VM.

**2. Install XAMPP:**

Open the downloaded file and follow the installation instructions.

Install Apache, MySQL, and PHP components.

**3. Start XAMPP Services:**

Open the XAMPP Control Panel.

Start Apache (Web Server) and MySQL

**3. Website Development**

Steps:

**1. Website Files:**

Place your website files (HTML, CSS, JS, PHP) in the htdocs folder located in the XAMPP installation directory (e.g., /opt/lampp/htdocs/ on Linux or C:\xampp\htdocs\ on Windows).

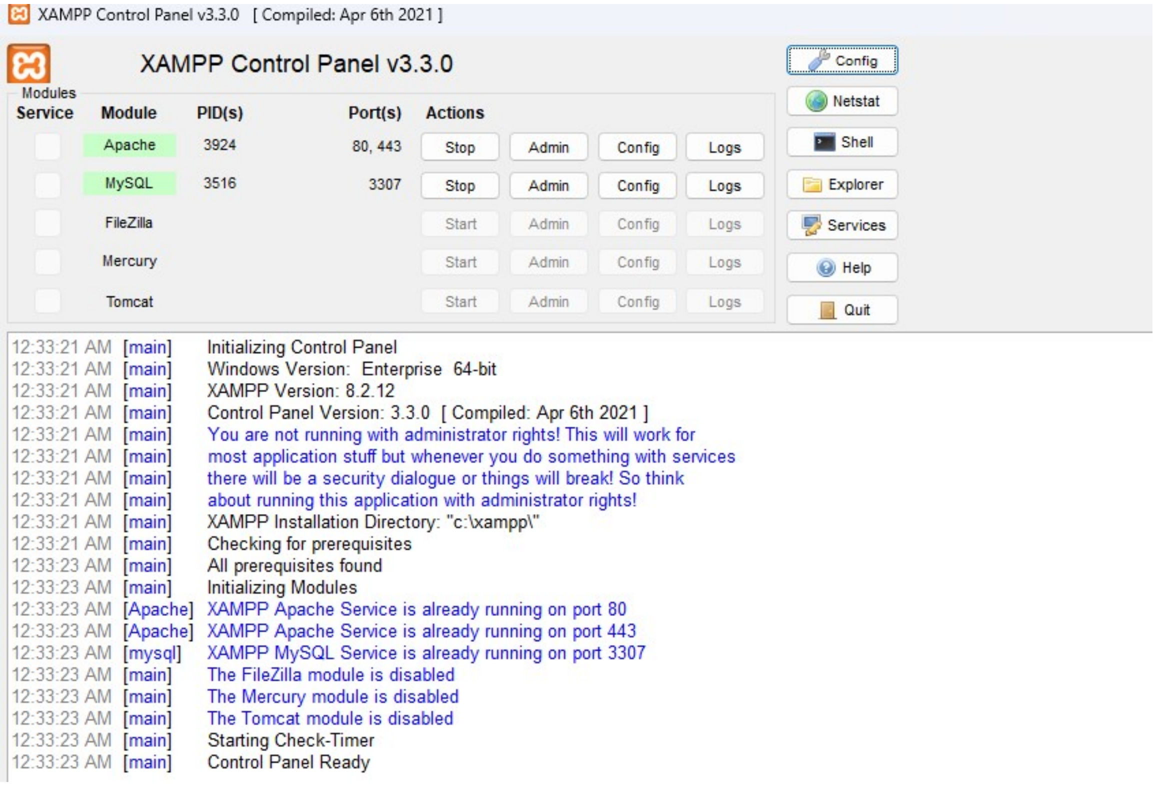
**2. Database Setup (Optional):**

If your website requires a database, you can set it up using phpMyAdmin, which is bundled with XAMPP.

Open your browser and visit http://localhost/phpmyadmin to access the MySQL database management interface.

Create a new database and import/export tables if necessary.

Steps:

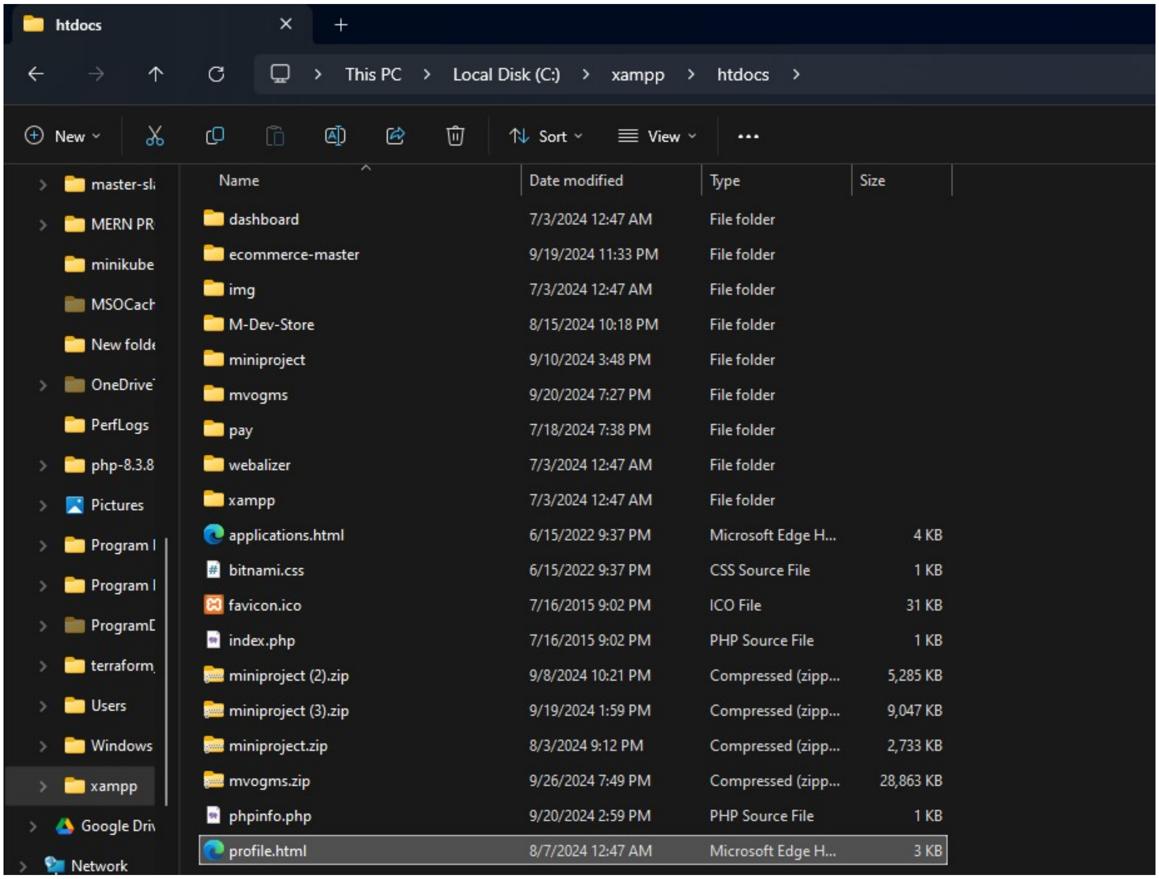


XAMPP Control Panel v3.3.0 [ Compiled: Apr 6th 2021 ]

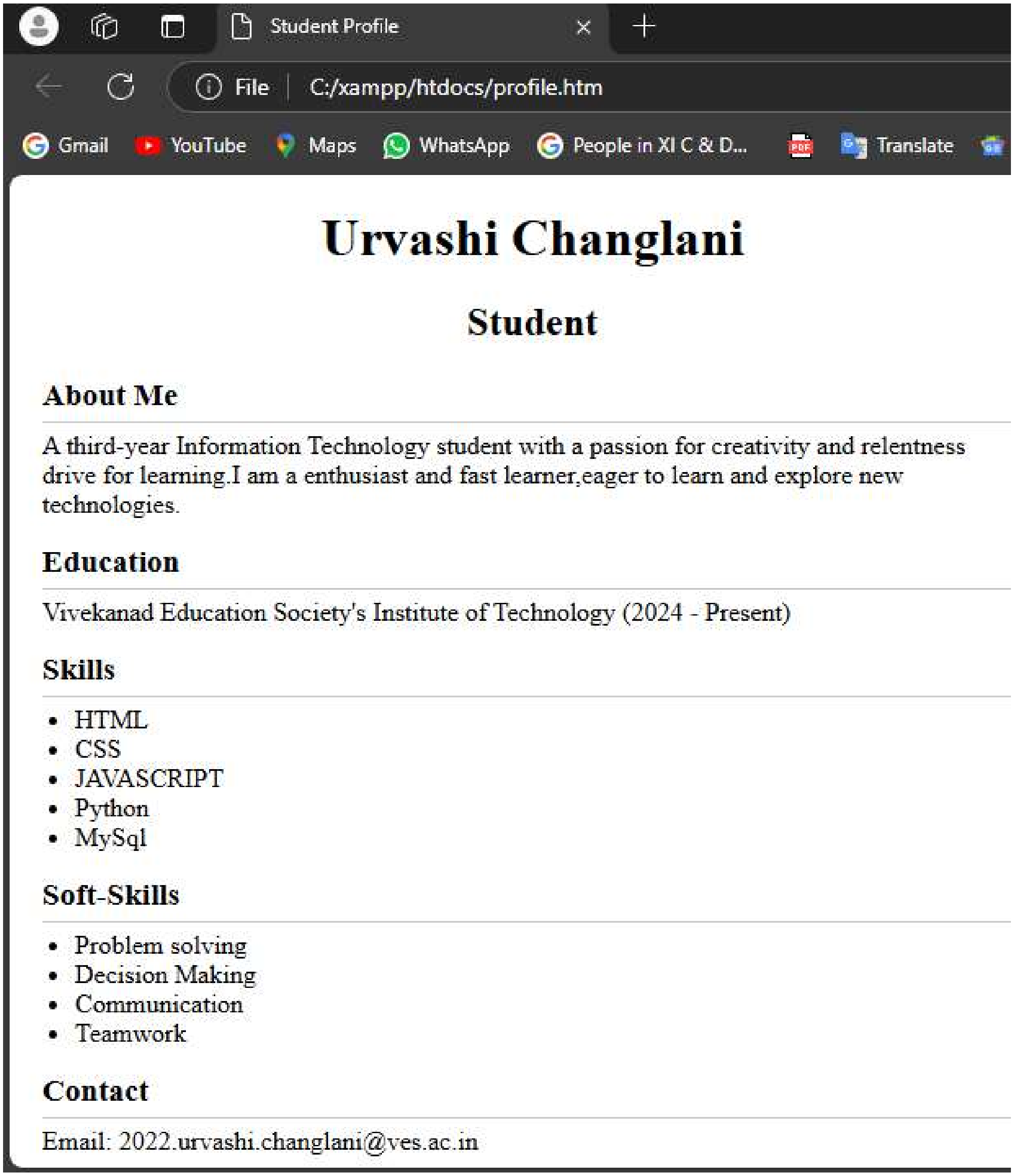
XAMPP Control Panel v3.3.0

| Service | Module | PID(s) | Port(s) | Actions |
|---|---|---|---|---|
|  | Apache | 3924 | 80, 443 | Stop Admin Config Logs |
|  | MySQL | 3516 | 3307 | Stop Admin Config Logs |
|  | FileZilla |  |  | Start Admin Config Logs |
|  | Mercury |  |  | Start Admin Config Logs |
|  | Tomcat |  |  | Start Admin Config Logs |

```
12:33:21 AM  [main]     Initializing Control Panel
12:33:21 AM  [main]     Windows Version:  Enterprise  64-bit
12:33:21 AM  [main]     XAMPP Version: 8.2.12
12:33:21 AM  [main]     Control Panel Version: 3.3.0  [ Compiled: Apr 6th 2021 ]
12:33:21 AM  [main]     You are not running with administrator rights! This will work for
12:33:21 AM  [main]     most application stuff but whenever you do something with services
12:33:21 AM  [main]     there will be a security dialogue or things will break! So think
12:33:21 AM  [main]     about running this application with administrator rights!
12:33:21 AM  [main]     XAMPP Installation Directory: "c:\xampp\"
12:33:21 AM  [main]     Checking for prerequisites
12:33:23 AM  [main]     All prerequisites found
12:33:23 AM  [main]     Initializing Modules
12:33:23 AM  [Apache]   XAMPP Apache Service is already running on port 80
12:33:23 AM  [Apache]   XAMPP Apache Service is already running on port 443
12:33:23 AM  [mysql]    XAMPP MySQL Service is already running on port 3307
12:33:23 AM  [main]     The FileZilla module is disabled
12:33:23 AM  [main]     The Mercury module is disabled
12:33:23 AM  [main]     The Tomcat module is disabled
12:33:23 AM  [main]     Starting Check-Timer
12:33:23 AM  [main]     Control Panel Ready
```



| Name | Date modified | Type | Size |
|---|---|---|---|
| dashboard | 7/3/2024 12:47 AM | File folder | |
| ecommerce-master | 9/19/2024 11:33 PM | File folder | |
| img | 7/3/2024 12:47 AM | File folder | |
| M-Dev-Store | 8/15/2024 10:18 PM | File folder | |
| miniproject | 9/10/2024 3:48 PM | File folder | |
| mvogms | 9/20/2024 7:27 PM | File folder | |
| pay | 7/18/2024 7:38 PM | File folder | |
| webalizer | 7/3/2024 12:47 AM | File folder | |
| xampp | 7/3/2024 12:47 AM | File folder | |
| applications.html | 6/15/2022 9:37 PM | Microsoft Edge H... | 4 KB |
| bitnami.css | 6/15/2022 9:37 PM | CSS Source File | 1 KB |
| favicon.ico | 7/16/2015 9:02 PM | ICO File | 31 KB |
| index.php | 7/16/2015 9:02 PM | PHP Source File | 1 KB |
| miniproject (2).zip | 9/8/2024 10:21 PM | Compressed (zipp... | 5,285 KB |
| miniproject (3).zip | 9/19/2024 1:59 PM | Compressed (zipp... | 9,047 KB |
| miniproject.zip | 8/3/2024 9:12 PM | Compressed (zipp... | 2,733 KB |
| mvogms.zip | 9/26/2024 7:49 PM | Compressed (zipp... | 28,863 KB |
| phpinfo.php | 9/20/2024 2:59 PM | PHP Source File | 1 KB |
| profile.html | 8/7/2024 12:47 AM | Microsoft Edge H... | 3 KB |



# Urvashi Changlani

## Student

### About Me

A third-year Information Technology student with a passion for creativity and relentness drive for learning.I am a enthusiast and fast learner,eager to learn and explore new technologies.

### Education

Vivekanad Education Society's Institute of Technology (2024 - Present)

### Skills

- HTML
- CSS
- JAVASCRIPT
- Python
- MySql

### Soft-Skills

- Problem solving
- Decision Making
- Communication
- Teamwork

### Contact

Email: 2022.urvashi.changlani@ves.ac.in

**Uploading a Website on AWS S3 Bucket: Theory and Steps**

Amazon S3 (Simple Storage Service) is a cloud storage service that can host static websites. Unlike local hosting (e.g., with XAMPP), AWS S3 is used for deploying websites on the cloud, making them globally accessible. Here's the theory and the steps involved in uploading and hosting a website using an S3 bucket.

**1. Understanding the Basics**

- **Static Website Hosting:** Amazon S3 can only host static websites, meaning the website contains files like HTML, CSS, JavaScript, and images. It doesn’t support server-side scripting (PHP, Python, etc.).
- **Cloud Hosting:** Using AWS S3, your website files are stored in a cloud bucket, and they can be accessed via a unique URL assigned to the bucket.
- **Global Accessibility:** Once hosted on S3, your website is accessible globally, making it suitable for users who need fast and reliable hosting.

**2. Setting Up AWS S3**

To host a website on S3, you'll need to create an S3 bucket and configure it for static website hosting.

Steps:

**1. Create an AWS Account**

**Steps:**

**1. Create an AWS Account:**

Sign up at aws.amazon.com.

**2. Access S3 Service:**

Log in to the AWS Management Console.

Search for "S3" in the services search bar and open the Amazon S3 dashboard.

**3. Create an S3 Bucket**

Steps:

1. Create a New Bucket:

Click on Create Bucket

Enter a unique bucket name (this name will form part of the website URL).

○ Select a region (preferably close to your target audience).

○ Uncheck the "Block all public access" option, as this is required to make the website publicly accessible.

○ Confirm by clicking Create Bucket.

**4. Upload Your Website Files**

Steps:

**1. Upload Static Files:**

○ Click on the newly created bucket name.

○ Click Upload and add all your static website files (HTML, CSS, JavaScript, images).

○ Once the files are added, click Upload to finish the process.

**2. Set Permissions:**

○ To make your files publicly accessible, you need to configure the permissions:

■ Select the files you uploaded.

■ Click on Actions > Make public

5. Configure Static Website Hosting

Steps:

1. Enable Static Website Hosting:

○ In the S3 bucket, go to the Properties tab.

○ Scroll down to Static Website Hosting.

○ Select Enable.

○ Enter the name of your index document (usually index.html), and optionally an error document (like 404.html).

**2. Save the Changes:**

○ Save the configuration. Once saved, AWS S3 will generate a website endpoint URL (e.g.,

http://your-bucket-name.s3-website-region.amazonaw

6. Testing the Website

● Open the website endpoint URL that was generated when you enabled static website hosting.

● Your website should be live, and you can access it from any browser using the URL.

**7. Configure Bucket Policy for Public Access**

If you get an error when accessing your site, you may need to adjust the bucket policy to allow public access to your files.

**Steps:**

**1. Go to Permissions:**

○ In the bucket, navigate to the Permissions tab.

**2. Add a Bucket Policy:**

○ Click Bucket Policy and add the following JSON policy to allow public access:

json

Copy code

```
{
"Version": "2012-10-17",
"Statement": [
{
"Sid": "PublicReadGetObject",
"Effect": "Allow",
"Principal": "*",

"Action": "s3:GetObject",

"Resource": "arn:aws:s3:::your-bucket-name/*"

}

]

}
```

3.Replace your-bucket-name with the actual bucket name.

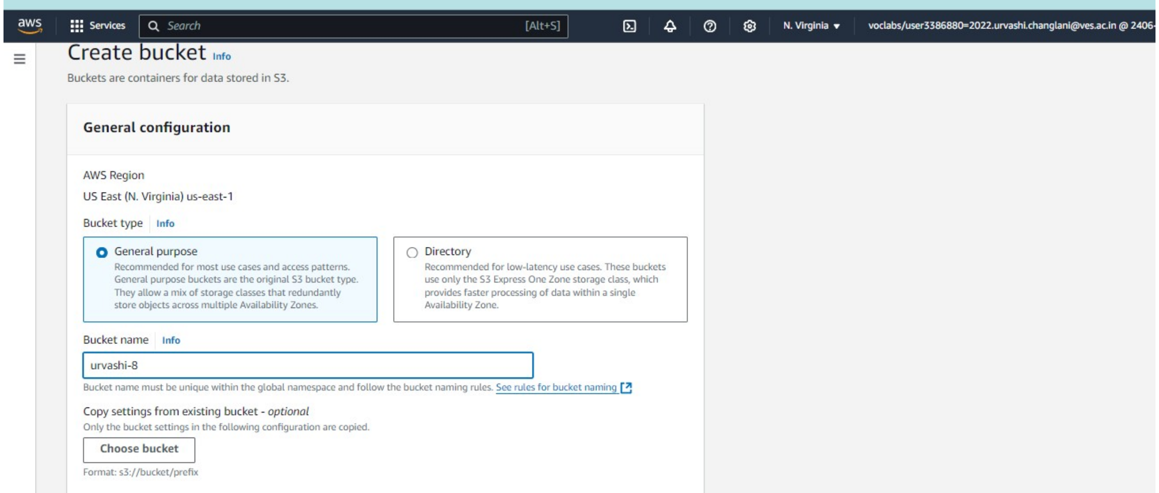
Save the policy.

8. Optional: Custom Domain and SSL

If you want to use a custom domain for your website, you can do the following:

- Custom Domain: Use Amazon Route 53 or your own DNS provider to map your domain to the S3 website.
- SSL/TLS Encryption: You can use Amazon CloudFront (AWS's CDN service) to add SSL/TLS support and improve performance by serving content from global edge locations.

**Steps**



Create bucket

Buckets are containers for data stored in S3.

General configuration

AWS Region

US East (N. Virginia) us-east-1

Bucket type

● General purpose
Recommended for most use cases and access patterns. General purpose buckets are the original S3 bucket type. They allow a mix of storage classes that redundantly store objects across multiple Availability Zones.

○ Directory
Recommended for low-latency use cases. These buckets use only the S3 Express One Zone storage class, which provides faster processing of data within a single Availability Zone.

Bucket name

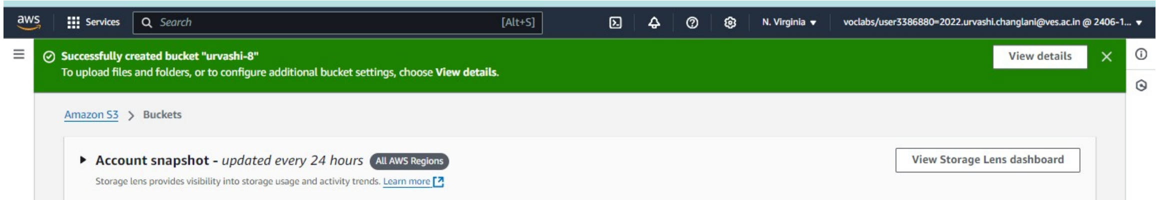
urvashi-8

Bucket name must be unique within the global namespace and follow the bucket naming rules. See rules for bucket naming

Copy settings from existing bucket - *optional*

Only the bucket settings in the following configuration are copied.

Format: s3://bucket/prefix


aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user3386880=2022.urvashi.changlani@ves.ac.in @ 2406-1...
View details

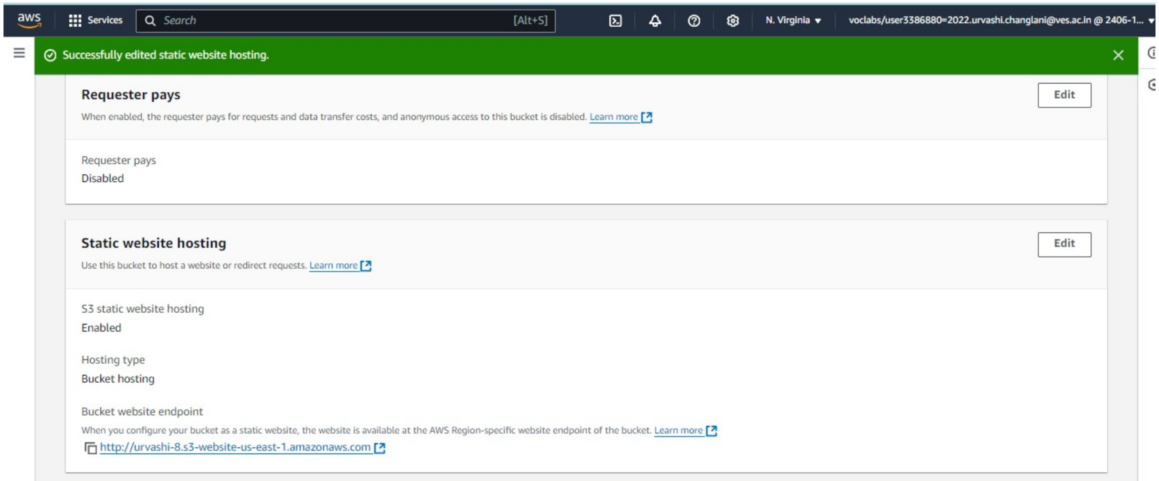
Successfully created bucket "urvashi-8"
To upload files and folders, or to configure additional bucket settings, choose **View details**.

Amazon S3 > Buckets

**Account snapshot -** *updated every 24 hours* All AWS Regions

Storage lens provides visibility into storage usage and activity trends. Learn more

View Storage Lens dashboard


aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user3386880=2022.urvashi.changlani@ves.ac.in @ 2406-1...
Edit
Edit

Successfully edited static website hosting.

**Requester pays**

When enabled, the requester pays for requests and data transfer costs, and anonymous access to this bucket is disabled. Learn more

Requester pays
Disabled

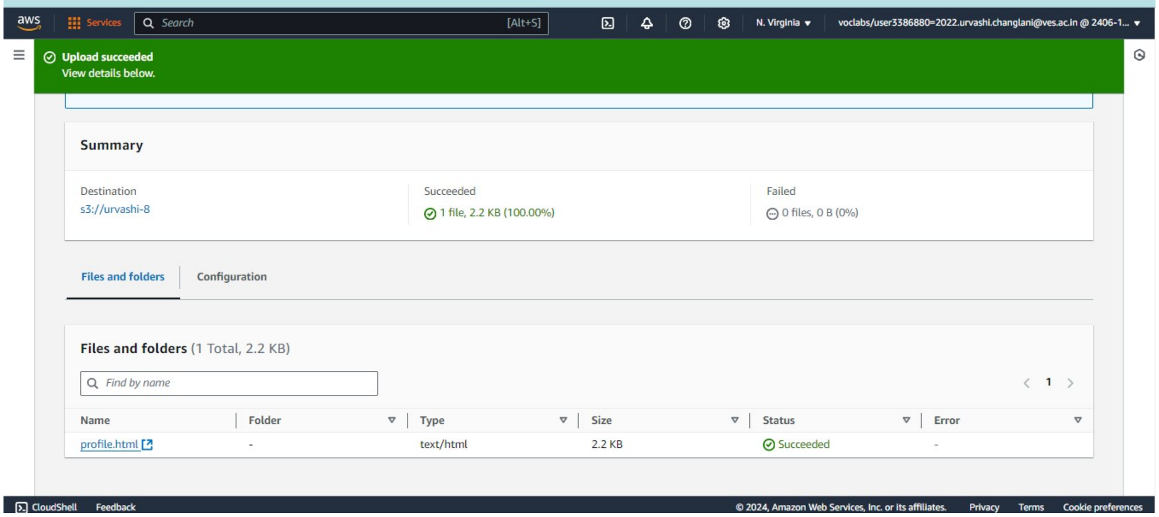
**Static website hosting**

Use this bucket to host a website or redirect requests. Learn more

S3 static website hosting
Enabled

Hosting type
Bucket hosting

Bucket website endpoint
When you configure your bucket as a static website, the website is available at the AWS Region-specific website endpoint of the bucket. Learn more
http://urvashi-8.s3-website-us-east-1.amazonaws.com


aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user3386880=2022.urvashi.changlani@ves.ac.in @ 2406-1...
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

**Upload succeeded**
View details below.

**Summary**

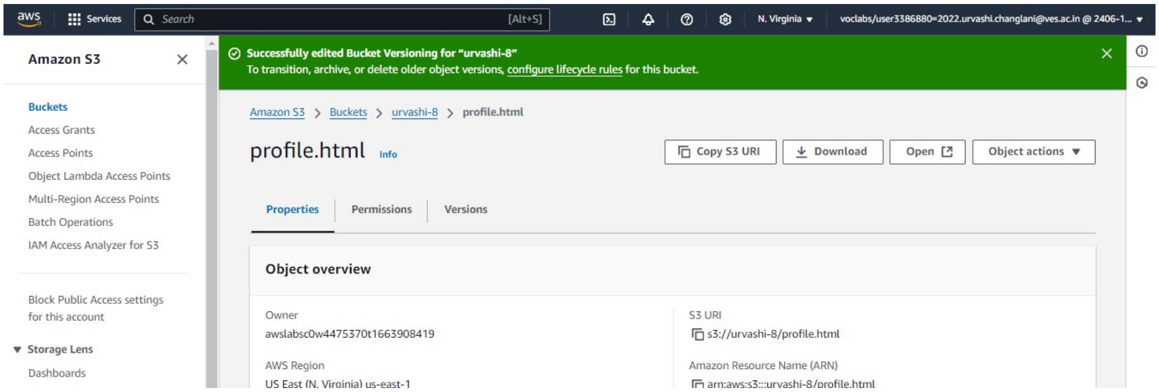
| Destination | Succeeded | Failed |
|---|---|---|
| s3://urvashi-8 | 1 file, 2.2 KB (100.00%) | 0 files, 0 B (0%) |

Files and folders | Configuration

**Files and folders** (1 Total, 2.2 KB)

Find by name

| Name | Folder | Type | Size | Status | Error |
|---|---|---|---|---|---|
| profile.html | - | text/html | 2.2 KB | Succeeded | - |


aws
Services
Search
[Alt+S]
N. Virginia
voclabs/user3386880=2022.urvashi.changlani@ves.ac.in @ 2406-1...
Amazon S3
Buckets
Access Grants
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
IAM Access Analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
Amazon S3 > Buckets > urvashi-8 > profile.html
Info
Copy S3 URI
Download
Open
Object actions
Properties
Permissions
Versions

Successfully edited Bucket Versioning for "urvashi-8"
To transition, archive, or delete older object versions, configure lifecycle rules for this bucket.

profile.html

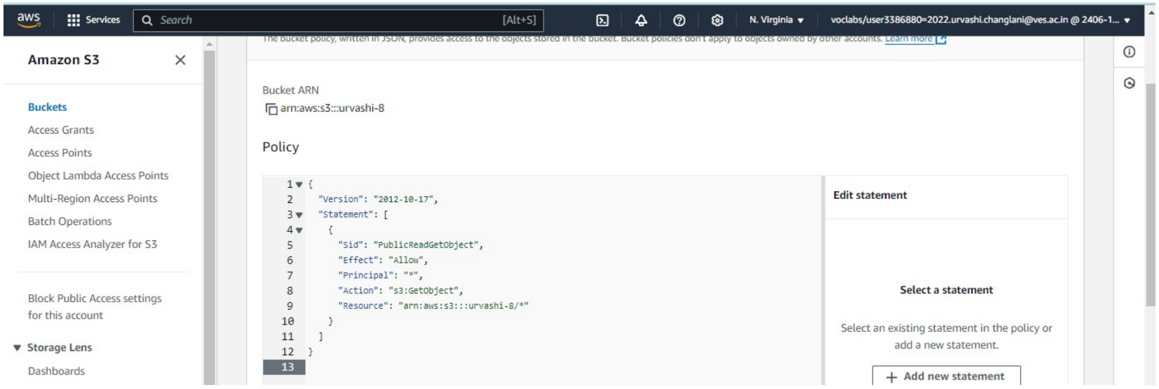
Object overview

Owner
awslabsc0w4475370t1663908419

AWS Region
US East (N. Virginia) us-east-1

S3 URI
s3://urvashi-8/profile.html

Amazon Resource Name (ARN)
arn:aws:s3:::urvashi-8/profile.html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Amazon S3
Buckets
Access Grants
Access Points
Object Lambda Access Points
Multi-Region Access Points
Batch Operations
IAM Access Analyzer for S3
Block Public Access settings for this account
Storage Lens
Dashboards
Edit statement
Select a statement
Add new statement

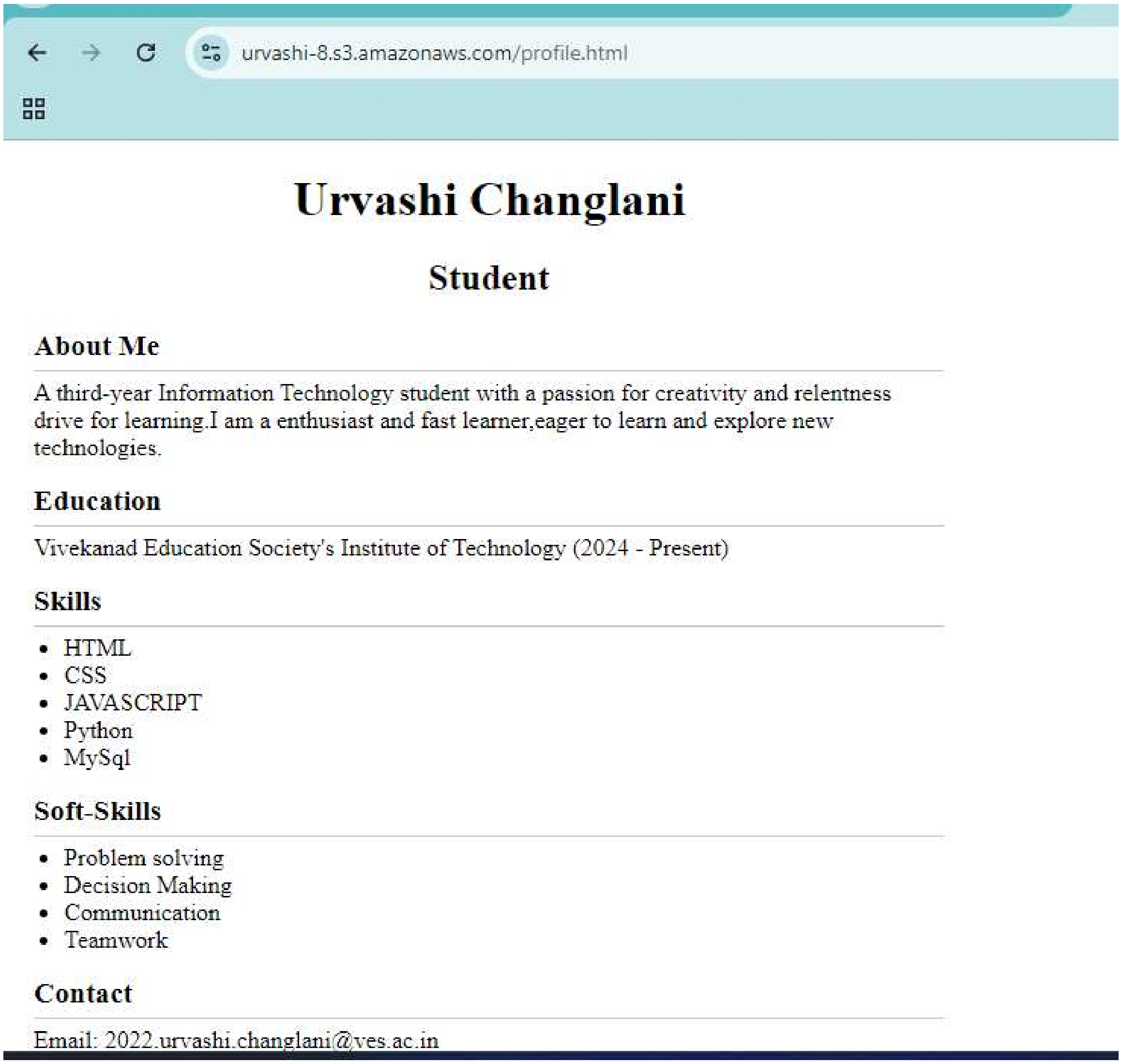
The bucket policy, written in JSON, provides access to the objects stored in the bucket. Bucket policies don't apply to objects owned by other accounts. Learn more

Bucket ARN
arn:aws:s3:::urvashi-8

Policy

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "PublicReadGetObject",
      "Effect": "Allow",
      "Principal": "*",
      "Action": "s3:GetObject",
      "Resource": "arn:aws:s3:::urvashi-8/*"
    }
  ]
}
```

Select an existing statement in the policy or add a new statement.



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**Conclusion**

XAMPP is great for local development of dynamic websites with server-side functionality, while AWS S3 is perfect for hosting static websites globally with high scalability and reliability. Use XAMPP for development and testing, and deploy to S3 for static content hosting in production.