20CYS402 – Distributed Systems and Cloud Computing

Lab Exercise – 6

Name: R Subramanian

Roll Number: CH.EN.U4CYS22043

Section: S3 and EC2

Objective

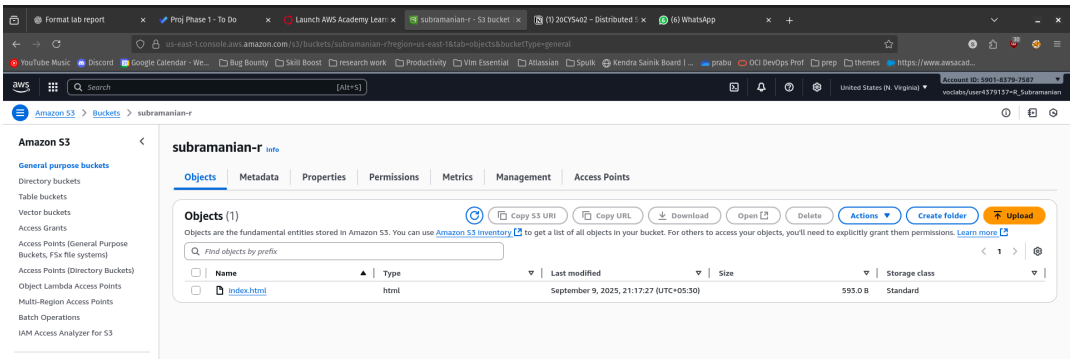
The objective of this lab is to **deploy a personal portfolio webpage** using **AWS S3 and EC2 services**, enabling access via a public IP address and understanding basic cloud deployment workflows.

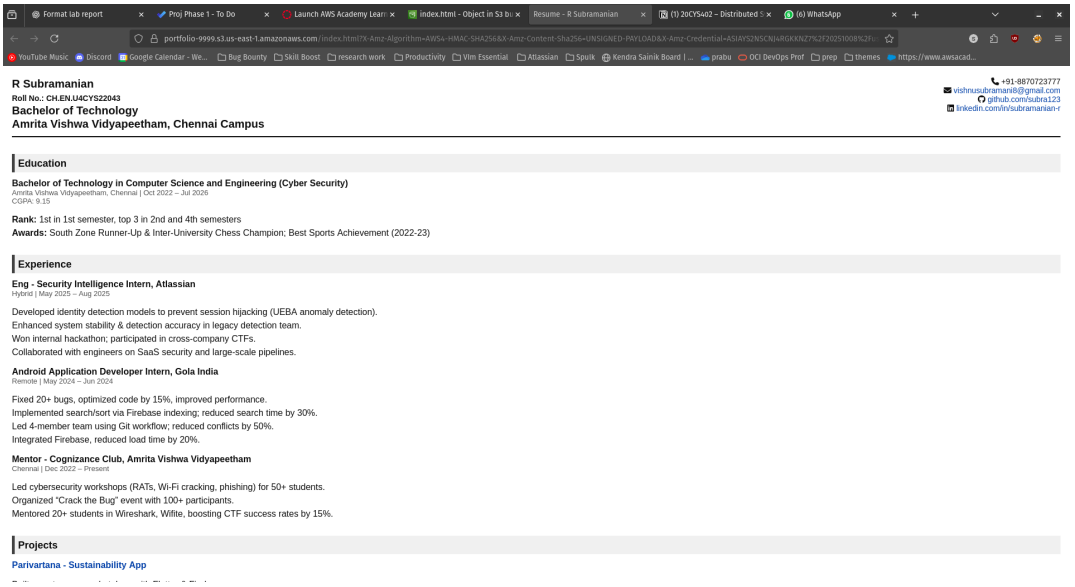
Assignment Tasks & Implementation

1. Create and Upload Portfolio Webpage (S3 Bucket)

1. Designed a basic `index.html` file for my personal portfolio.
2. Created an **S3 bucket** named **"Subra"**.
3. Uploaded `index.html` to the S3 bucket.

Screenshot:





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Education

Bachelor of Technology in Computer Science and Engineering (Cyber Security)
Amrita Vishwa Vidyapeetham, Chennai | Oct 2022 – Jul 2026
CGPA: 9.15

Rank: 1st in 1st semester, top 3 in 2nd and 4th semesters
Awards: South Zone Runner-Up & Inter-University Chess Champion; Best Sports Achievement (2022-23)

Experience

Eng - Security Intelligence Intern, Atlassian
Hybrid | May 2025 – Aug 2025

Developed identity detection models to prevent session hijacking (UEBA anomaly detection).
Enhanced system stability & detection accuracy in legacy detection team.
Won internal hackathon; participated in cross-company CTFs.
Collaborated with engineers on SaaS security and large-scale pipelines.

Android Application Developer Intern, Gola India
Remote | May 2024 – Jun 2024

Fixed 20+ bugs, optimized code by 15%, improved performance.
Implemented search/sort via Firebase indexing; reduced search time by 30%.
Led 4-member team using Git workflow; reduced conflicts by 50%.
Integrated Firebase, reduced load time by 20%.

Mentor - Cognizance Club, Amrita Vishwa Vidyapeetham
Chennai | Dec 2022 – Present

Led cybersecurity workshops (RATs, Wi-Fi cracking, phishing) for 50+ students.
Organized "Crack the Bug" event with 100+ participants.
Mentored 20+ students in Wireshark, Wifite, boosting CTF success rates by 15%.

Projects

Parivartana - Sustainability App

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2. Configure EC2 Instance

1. Launched a new **EC2 instance** (Amazon Linux/Ubuntu) with the instance name **"Subra"**.
2. Connected to the instance via SSH.
3. Installed the Apache HTTP server (`httpd`) using:

```
sudo yum install httpd -y   # For Amazon Linux
sudo apt-get install apache2 -y  # For Ubuntu
```

1. Retrieved the `index.html` file from the S3 bucket using:

```
curl <s3 uri>
```

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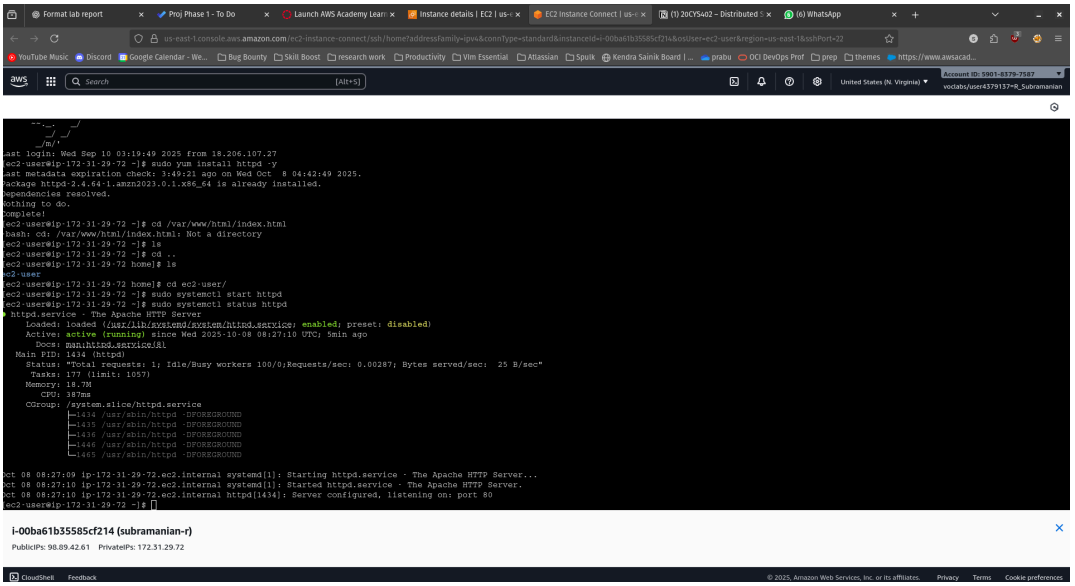
3. Start the Web Server

1. Started and enabled the HTTP server:

```
sudo systemctl start httpd
sudo systemctl enable httpd
sudo systemctl status httpd
```

1. Ensured **port 80 (HTTP)** is open in the EC2 security group.

Screenshot:



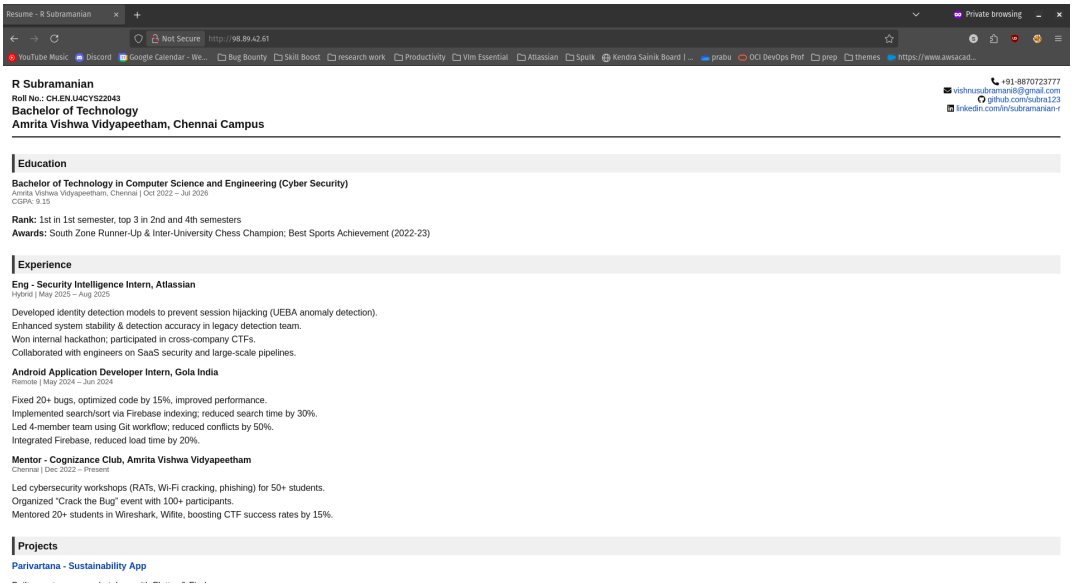
4. Verify Deployment

1. Accessed the portfolio webpage using the EC2 instance **public IP address**:

```
http://98.89.42.61/
```

1. Verified the webpage loads correctly on a mobile device.

Screenshot:



Conclusion

This lab successfully demonstrated how to:

- Create and upload files to an **S3 bucket**.
- Configure an **EC2 instance** and install a web server.
- Transfer files from S3 to EC2 and deploy a webpage.

- Access the deployed webpage via a **public IP**, understanding cloud hosting fundamentals.

The exercise reinforced the integration of **AWS S3 and EC2 services** for practical deployment scenarios.
