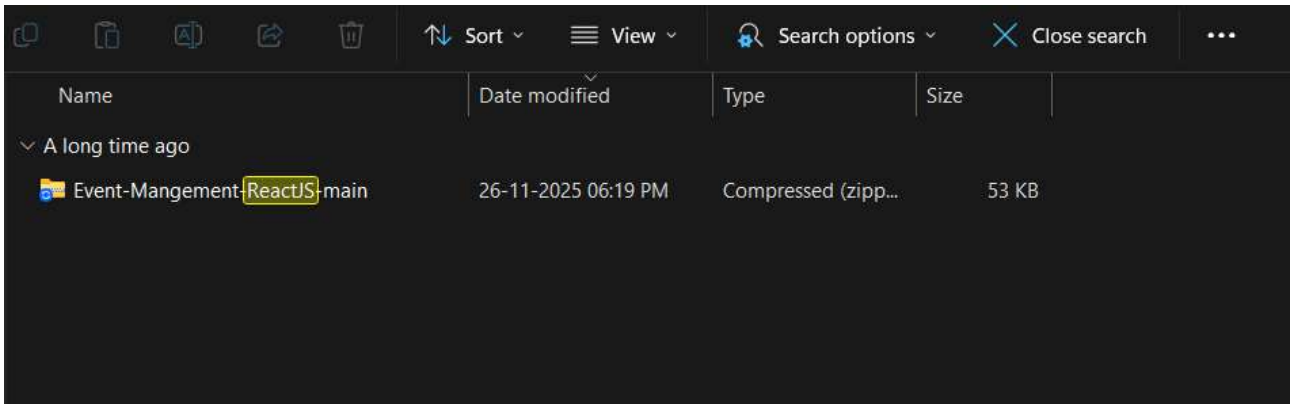
Deployment of ReactJS Application using AWS EC2, S3 and NGINX

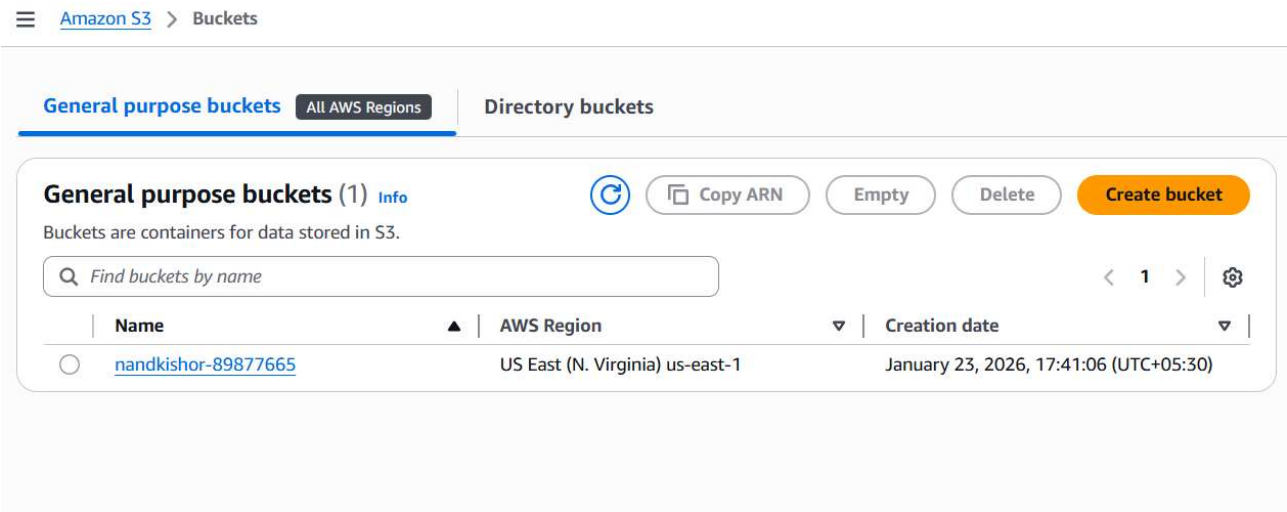
The deployment process involved object storage using Amazon Simple Storage Service (S3), compute resources using Amazon Elastic Compute Cloud (EC2), secure access control via IAM Role, and application hosting using the NGINX web server.

Use Of Amazon S3

- The React application ZIP file was uploaded to S3.
- The EC2 instance downloaded the file securely using an IAM Role.

In this deployment s3 acts as a storage repository. Firstly i created a s3 bucket uploaded my application file in bucket from local storage :





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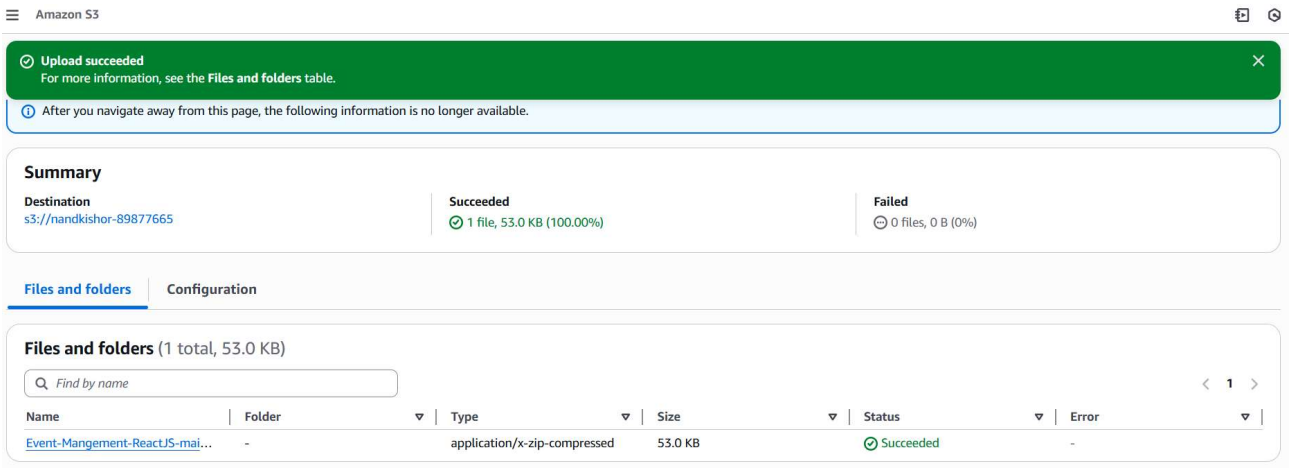
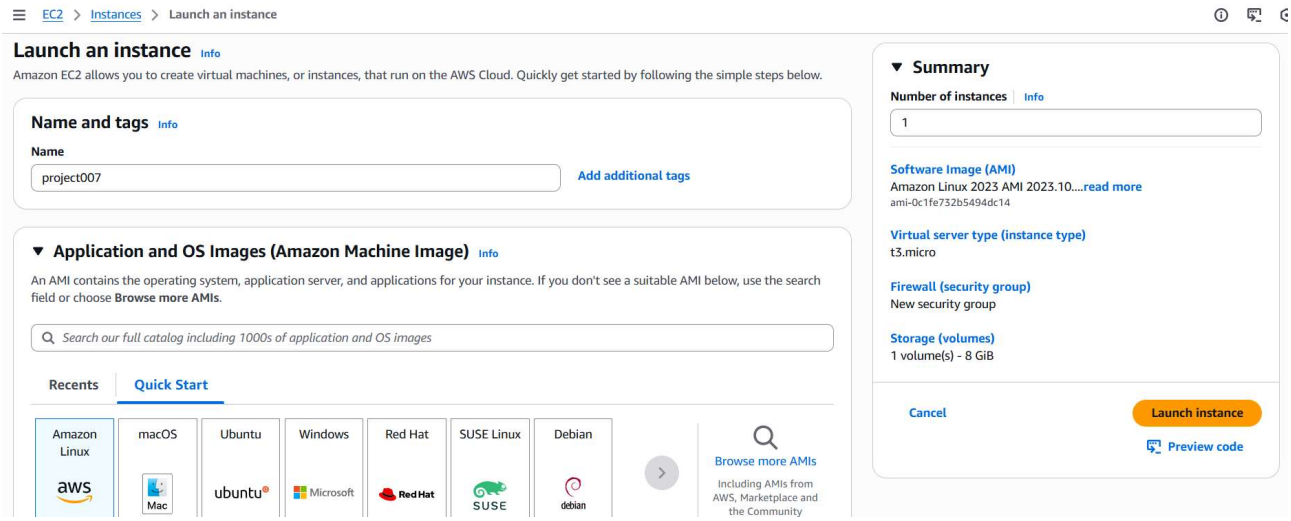
added my application file in bucket which was a zip file :



launching EC2 instance :



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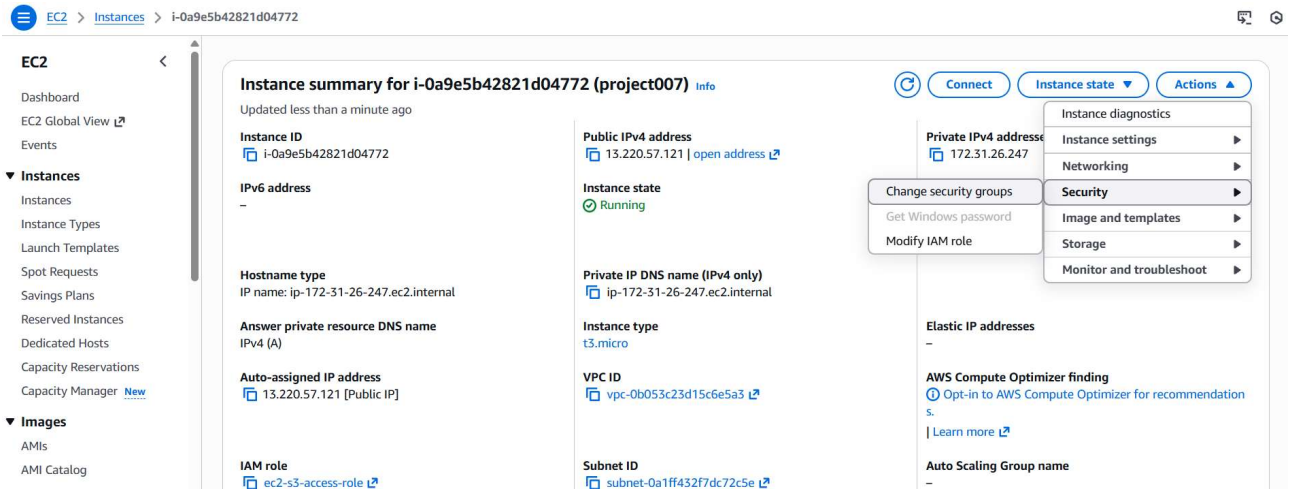
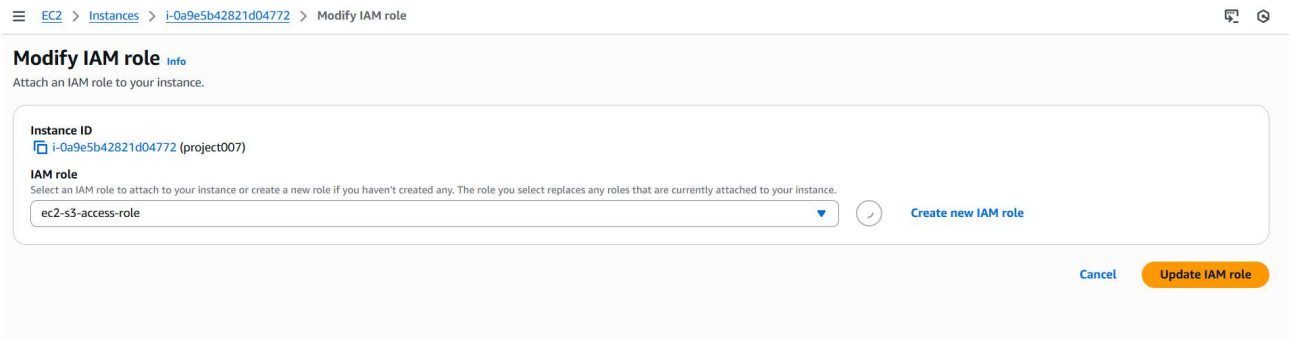
create a IAM role so that we will get accesss to s3 and attach it directly to EC2 instance :



modify IAM role : attach the we cretaed to give full access of S3 to copy application file to EC2



Connecting to EC2 Instance : The instance was accessed using SSH

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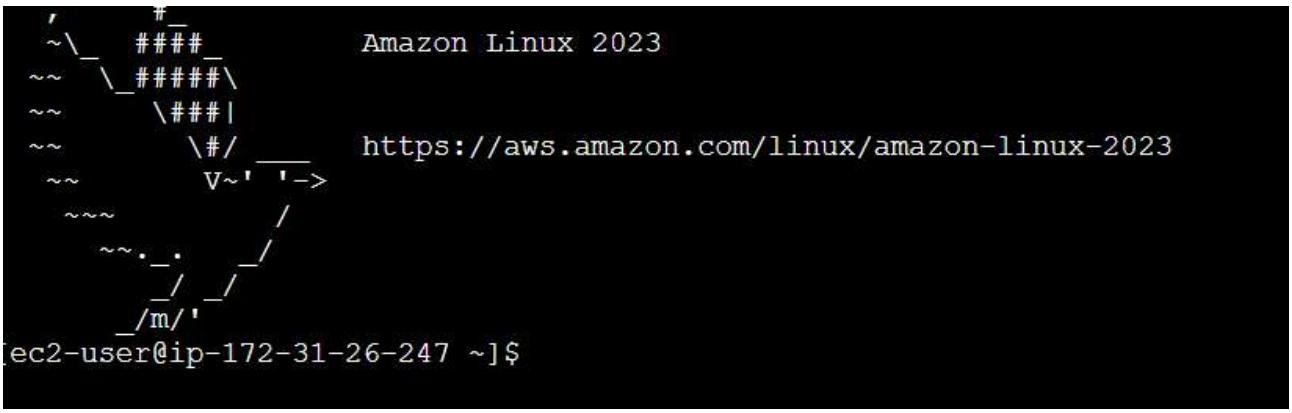

Installation of Required Software

The following packages were installed:

- NodeJS
- npm
- unzip
- awscli
- nginx

Prepare environment for building and serving the application.

```
4  yum update -y
5  sudo yum update -y
6  sudo yum install -y unzip awscli docker
7  sudo systemctl start docker
8  sudo systemctl enable docker
```

Copying File from S3 to EC2

command for it is : aws s3 cp s3://bucket-name/file.zip /home/ec2-user/

Extracting Application

```
12  sudo systemctl status docker
13  clear
14  aws s3 cp s3://nandkishor-89877665/Event-Mangement-ReactJS-main.zip /home/ec2-user/
15  unzip Event-Mangement-ReactJS-main
16  cd Event-Mangement-ReactJS-main/
```

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install dependencies using a command : npm install

it creates node_modules folder

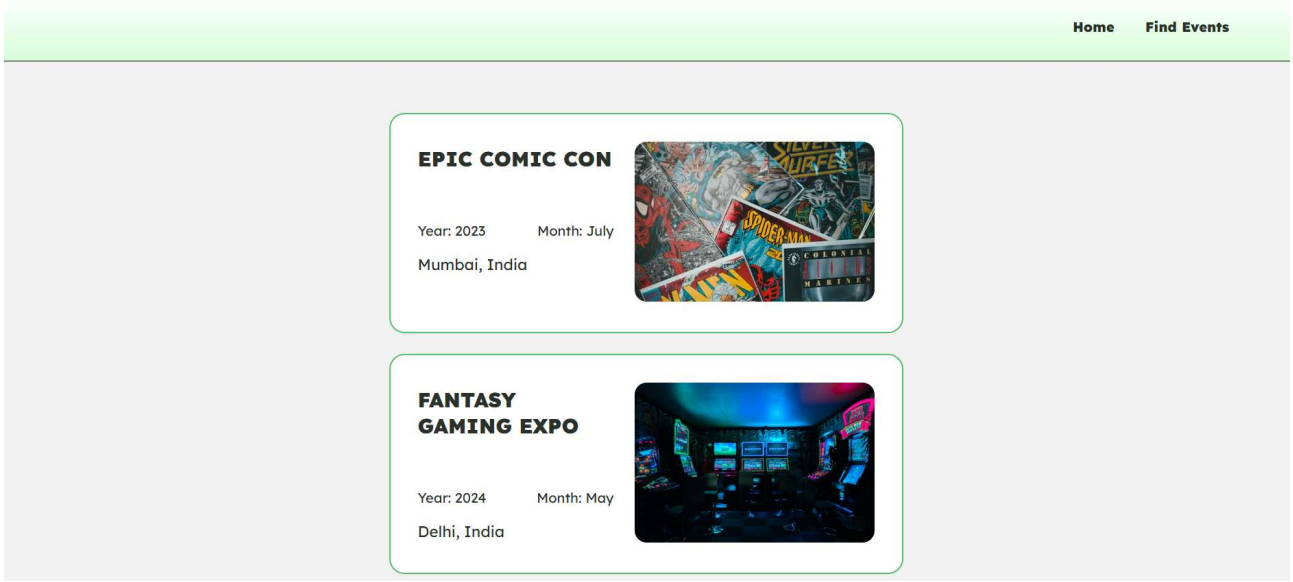
after installing dependencies start nginx service by command : sudo systemctl start nginx
and enable it

after enabling, deploy build files to NGINX directory

```
40  sudo rm -rf /usr/share/nginx/html/*
41  sudo cp -r dist/* /usr/nginx/html/
42  sudo cp -r dist/* /usr/share/nginx/html/
```

Now we can access our application with public ip that we will get from instance interface
in this process browser sends http request to EC2 processed by NGINX then EC2 serves static react files so that application should run on browser

Result :



Application Interface