INSTAGRAM POST FEATURE

Name

Image

Browse

Upload

Forms.html

Name

Image s3 url

Image cf url

MSG

Upload.php

Add data

Name

Image s3 url

Image cf url

RDS

Upload dir

Images

EBS

Save image temporary due to Internet issues

Upload in s3 bucket delete from EBS

Image s3 URL and CDN URL

Images

S3

ClodFront

IAM ROLE

MSG
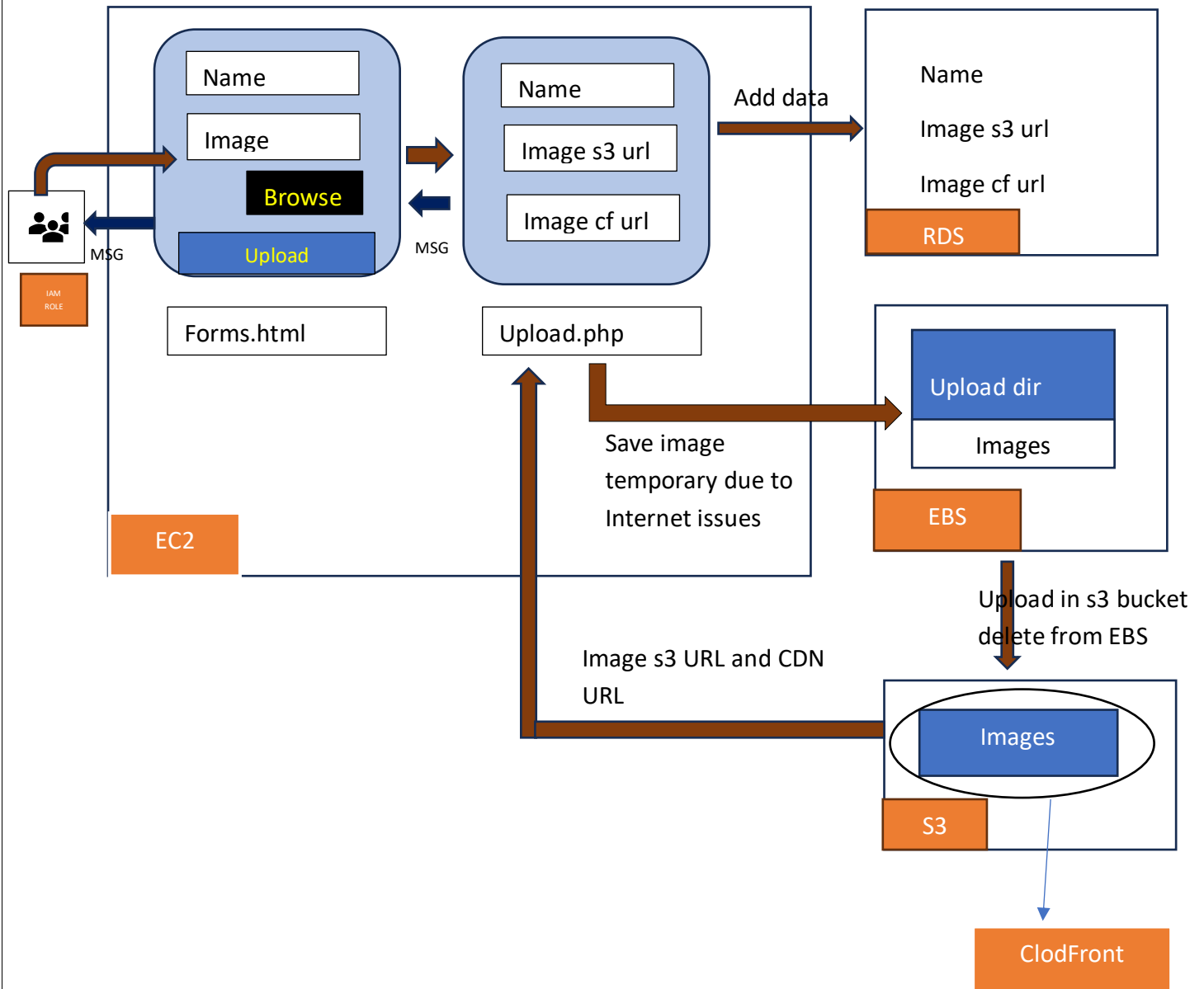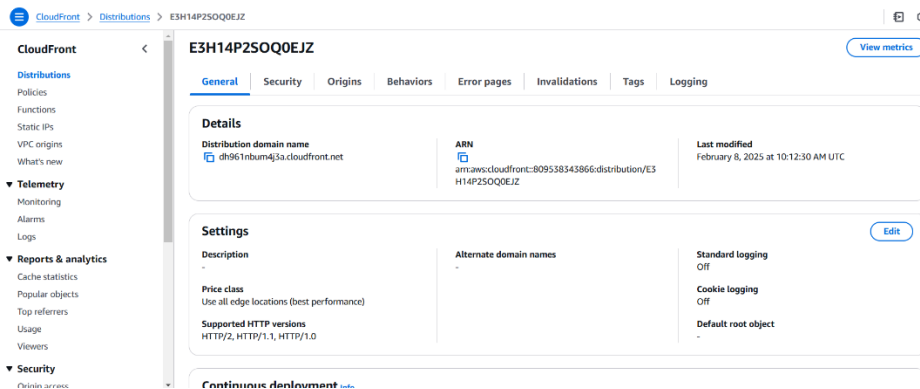
EC2

STEPS

Step 1] Create 'ACL enabled' bucket in s3

Step 2] Create CloudFront Distribution for S3 Bucket

Step 3] EC2 Setup

    a)   Launch Amazon linux and connect to instance

        ssh -i secret_key.pem ec2-user@public-ip

    b)   Install nginx , php , php-fpm , php8.3-mysqlnd , mariadb105-server and start nginx and php

        sudo yum install nginx php mariadb105-server -y

        sudo yum install php8.3-mysqlnd -y

        sudo service nginx start

        sudo service php-fpm start

        sudo systemctl enable nginx.service

        sudo systemctl enable php-fpm service

    c)   Create folder named "uploads" at /usr/share/nginx/html/

        sudo mkdir uploads/

    d)   Give 777 permission to uploads folder

        sudo chmod 777 uploads/

   e)   Add HTTP port 80 anywhere ipv4 in sg of ec2 instance

    f)   Install composer(php package manager) and Aws SDK at /usr/share/nginx/html/

        ▪ sudo curl -ss https://getcomposer.org/installer | sudo php

        ▪ sudo mv composer.phar /usr/local/bin/composer

        ▪ sudo ln -s /usr/local/bin/composer /usr/bin/composer

        ▪ sudo composer require aws/aws-sdk-php

g) Add Forms.html at /usr/share/nginx/html/

h) Add upload.php at /usr/share/nginx/html/

Step 4] RDS setup

a) Create RDS database instance
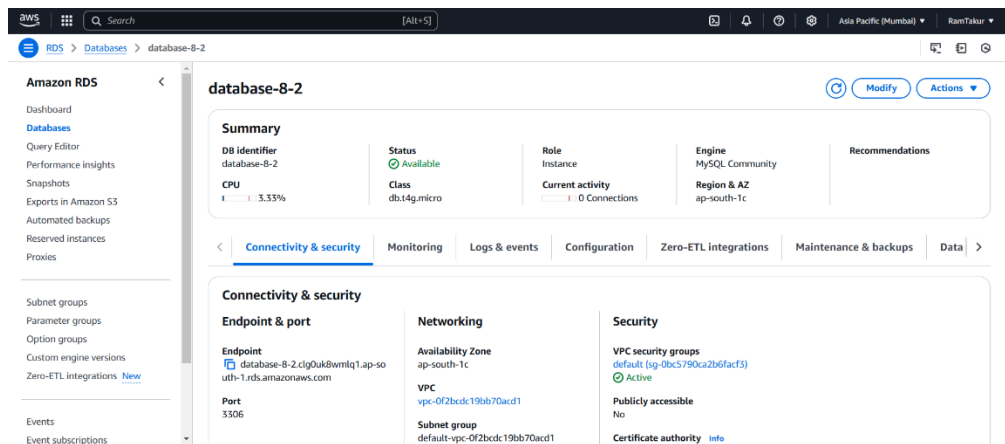
b) Connect to rds db

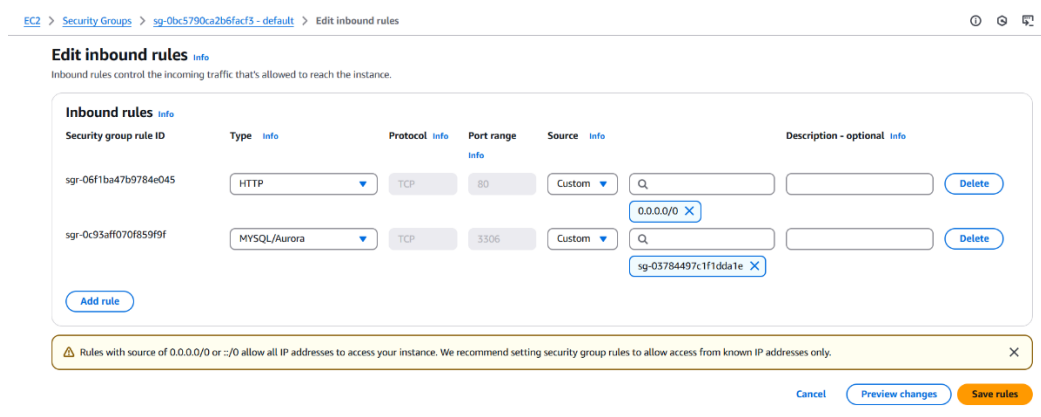sudo mysql -u 'user_name' -h 'rds-enpoint' -p

c) Create database named 'facebook'

create database facebook;

use facebook;

d) Create table named 'posts' having columns id , name , s3url , cfurl

create table posts(id int primary key auto_increment , name varchar(100) , s3url varchar(500), cfurl varchar(500));

e) Add Ec2 sg in Rds sg for 3306 port

Step 5] Update upload.php at EC2

    a) Update credentials access key and secret key (Note : create access key)

```php
// Instantiate an Amazon S3 client.
$s3Client = new S3Client([
'version' => 'latest',
'region'  => 'ap-south-1',
'credentials'
'key'    =>                                           ess key here
'secret' =>   anWByLxtH11UTGRdE+ddxOuWEPKI1OgyPTiSRx5Q   //Add your secret key here
]
]);
// Check if the form was submitted
```

    b) Bucket_name

```php
} else{
if(move_uploaded_file($_FILES["anyfile"]["tmp_name"], "uploads/" . $filename)){
$bucket = 'fortunecloudbucket';           //Add your bucket name here
```

    c) Bucket_url , cdn_domain_name

```php
$urls3= $result->get('ObjectURL') ;
$cfurl= str_replace("https://fortunecloudbucket.s3.ap-south-1.amazonaws.com","https://dh961nbum4j3a.cloudfront.net", $urls3);
echo $cfurl;
```
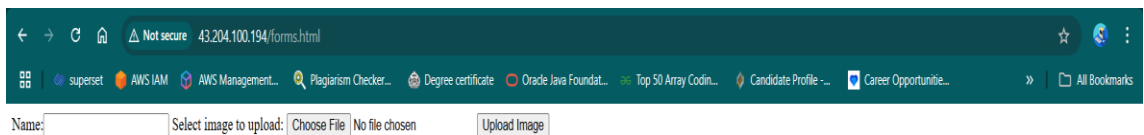
    d) Database details – RDS endpoint , username , password , column names

```php
$name=$_POST["name"];
$servername = "database-8-2.clg0uk8wmlq1.ap-south-1.rds.amazonaws.com";
$username = "admin";
$password =
$dbname = "facebook";
```

    e) Update region

Step 6] Testing

    a) Access page

    b) Enter data

c) Successfully added message

d) Image Stored In bucket

e) Data stored in RDS

Code for forms.html

```html
<!DOCTYPE html>
<html>
  <body>
    <form action="upload.php" method="post" enctype="multipart/form-data">
Name:<input type="text" id="name" name="name">
      Select image to upload:
      <input type="file" name="anyfile" id="anyfile">
        <input type="submit" value="Upload Image" name="submit">
    </form>
  </body>
</html>
```
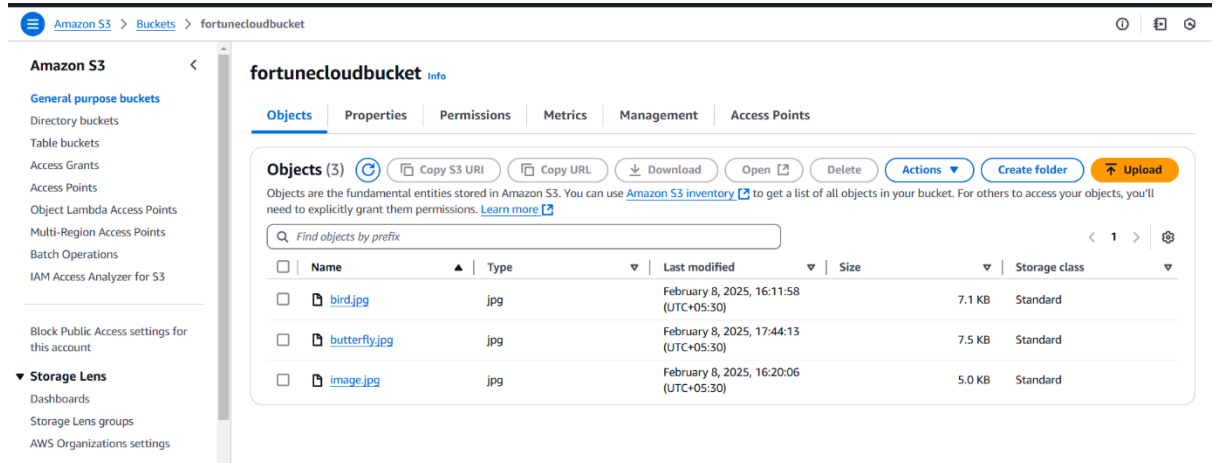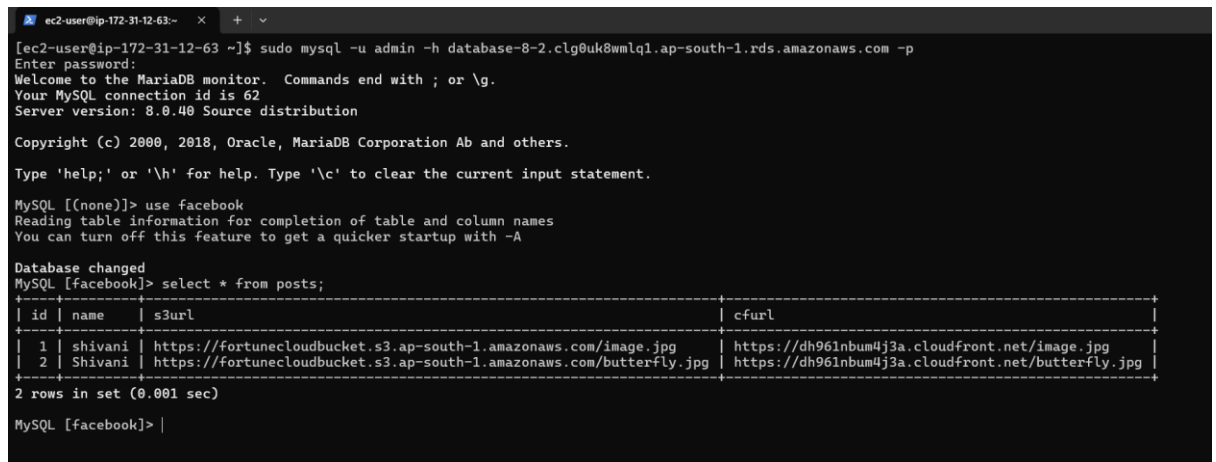
Code for upload.php

```php
<?php
require 'vendor/autoload.php';
use Aws\S3\S3Client;

// Instantiate an Amazon S3 client.
$s3Client = new S3Client([
  'version' => 'latest',
  'region'  => 'ap-south-1',
  'credentials' => [
    'key'   => '_____',    // Add your access key here
    'secret' => '_____'  // Add your secret key here
  ]
]);

// Check if the form was submitted
if ($_SERVER["REQUEST_METHOD"] == "POST") {
  // Check if file was uploaded without errors
  if (isset($_FILES["anyfile"]) && $_FILES["anyfile"]["error"] == 0) {
```

```php
$allowed = ["jpg" => "image/jpg", "jpeg" => "image/jpeg", "gif" => "image/gif", "png"
=> "image/png"];
    $filename = $_FILES["anyfile"]["name"];
    $filetype = $_FILES["anyfile"]["type"];
    $filesize = $_FILES["anyfile"]["size"];

    // Validate file extension
    $ext = pathinfo($filename, PATHINFO_EXTENSION);
    if (!array_key_exists($ext, $allowed)) {
        die("Error: Please select a valid file format.");
    }

    // Validate file size - 10MB maximum
    $maxsize = 10 * 1024 * 1024;
    if ($filesize > $maxsize) {
        die("Error: File size is larger than the allowed limit.");
    }

    // Validate type of the file
    if (in_array($filetype, $allowed)) {
        // Check whether file exists before uploading it
        if (file_exists("uploads/" . $filename)) {
            echo $filename . " already exists.";
        } else {
            if (move_uploaded_file($_FILES["anyfile"]["tmp_name"], "uploads/" . $filename))
{
                $bucket = 'fortunecloudbucket';  // Add your bucket name here
                $file_Path = __DIR__ . '/uploads/' . $filename;
                $key = basename($file_Path);

                try {
                    $result = $s3Client->putObject([
                        'Bucket' => $bucket,
                        'Key'    => $key,
```

```php
            'Body'   => fopen($file_Path, 'r'),
            'ACL'    => 'public-read' // Make file public
        ]);

        echo "Image uploaded successfully. Image path is: " . $result->get('ObjectURL');
        $urls3 = $result->get('ObjectURL');
        $cfurl = str_replace("https://fortunecloudbucket.s3.ap-south-1.amazonaws.com",
                    "https://d2n44t81ud3ywa.cloudfront.net", $urls3);
        echo $cfurl;


        $name = $_POST["name"];
        $servername = "database.clg0uk8wmlq1.ap-south-1.rds.amazonaws.com";
        $username = "admin";
        $password = "_____";
        $dbname = "facebook";


        // Create connection
        $conn = mysqli_connect($servername, $username, $password, $dbname);


        // Check connection
        if (!$conn) {
            die("Connection failed: " . mysqli_connect_error());
        }


        $sql = "INSERT INTO posts(name, s3url, cfurl) VALUES('$name', '$urls3', '$cfurl')";
        if (mysqli_query($conn, $sql)) {
            echo "New record created successfully";
        } else {
            echo "Error: " . $sql . "<br>" . mysqli_error($conn);
        }
        mysqli_close($conn);
```

```php
            } catch (Aws\S3\Exception\S3Exception $e) {
                echo "There was an error uploading the file.\n";
                echo $e->getMessage();
            }

            echo "Your file was uploaded successfully.";
        } else {
            echo "File is not uploaded";
        }
    }
    } else {
        echo "Error: There was a problem uploading your file. Please try again.";
    }
} else {
    echo "Error: " . $_FILES["anyfile"]["error"];
}
}
?>
```