

Project-3 Report

Deployment of Web App Using AWS Cloud

Team Details:

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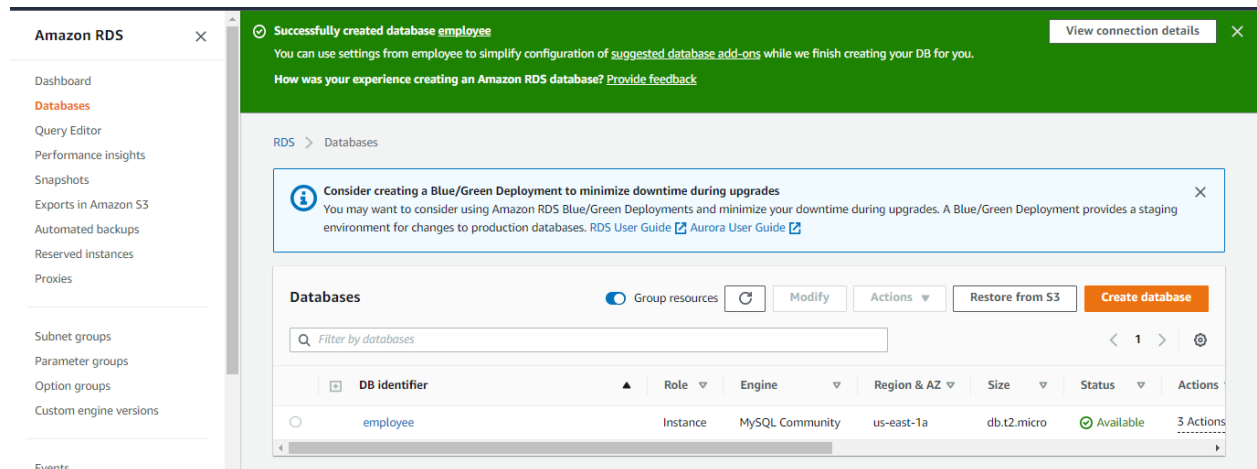
Steps and their results

GitHub repository link: <https://github.com/in-aj-16/aws3.git>

1. Database deployment on RDS:

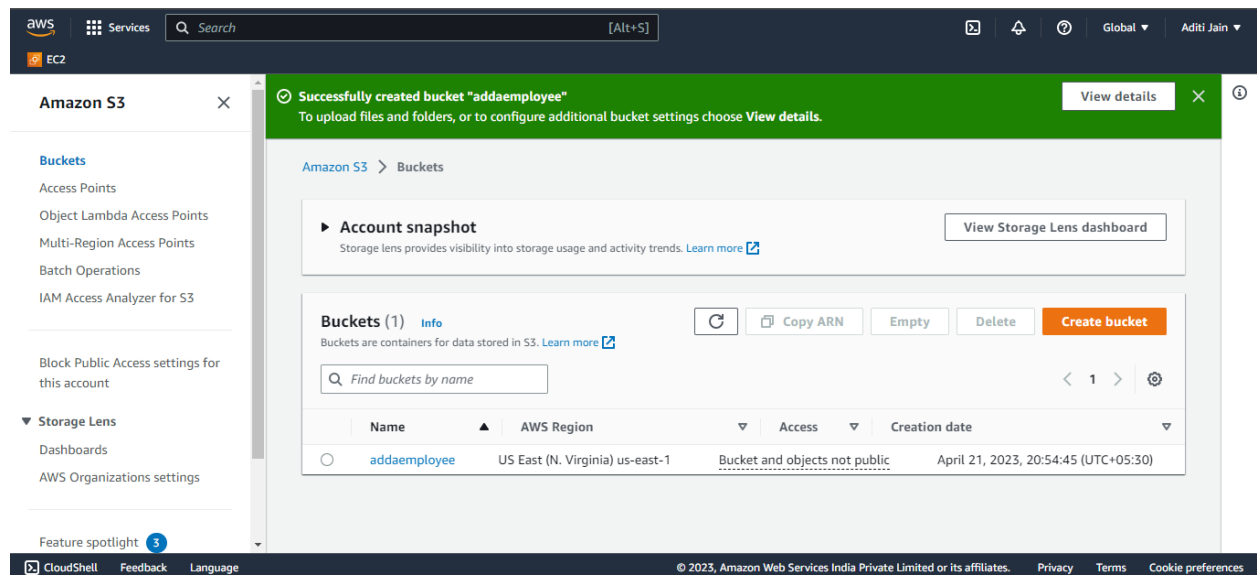
A database with the name **employee** was created.

Its a standard mysql database with password authentication created on free tier.



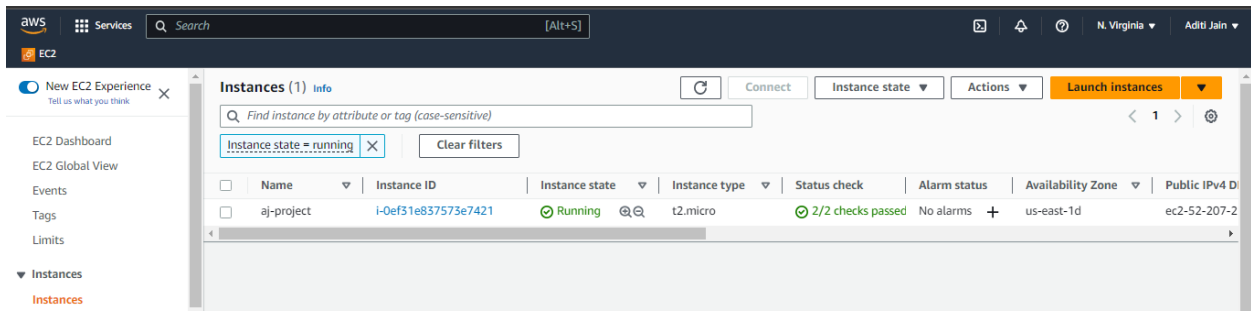
2. Creation of bucket on S3:

This bucket is created with the name **addaemployee**. No default settings have been changed.



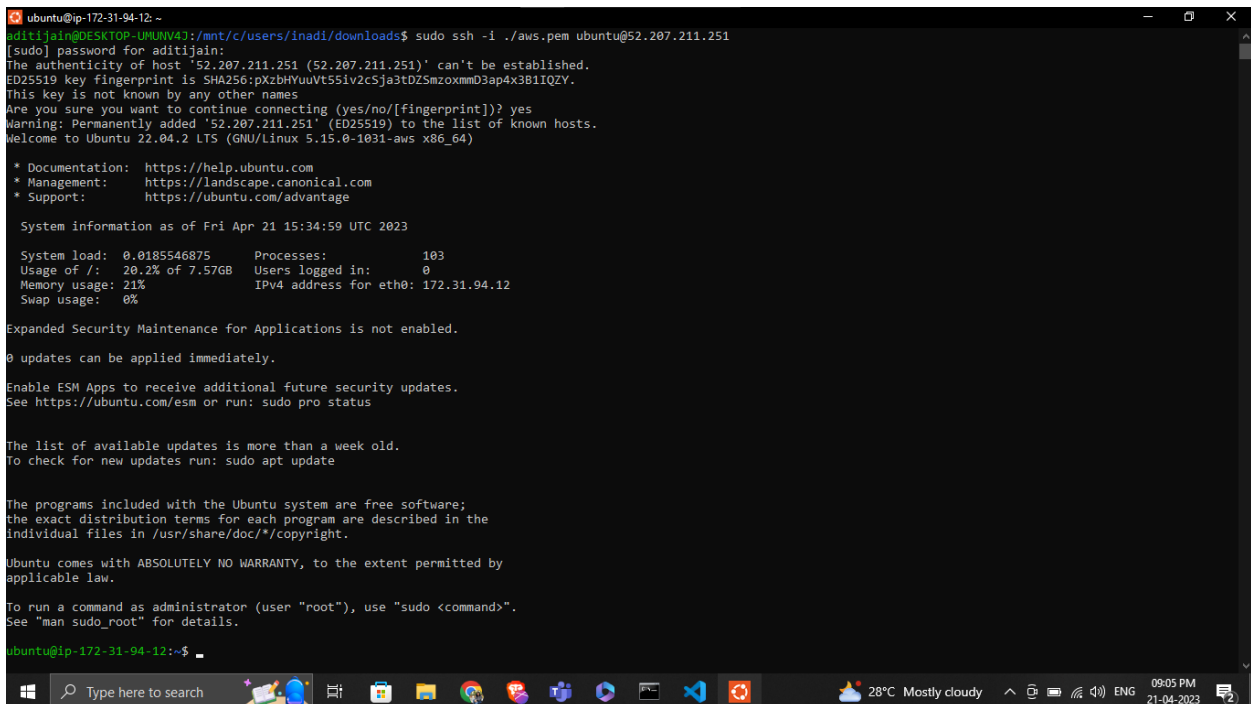
3. Deploying a server on EC2:

The server has been named **aj-project**. This is an ubuntu server with the default free tier **t2.micro** instance type. For authentication purposes we have created a **key-pair called aws**. Rest of the settings have been left default.



4. Connecting to a server on WSL:

WSL has been used because many commands related to this project, especially ssh are unavailable on Windows without Putty software.



5. Connecting to MySQL database created on RDS from terminal:

This was done using the endpoint from the RDS database created in AWS.

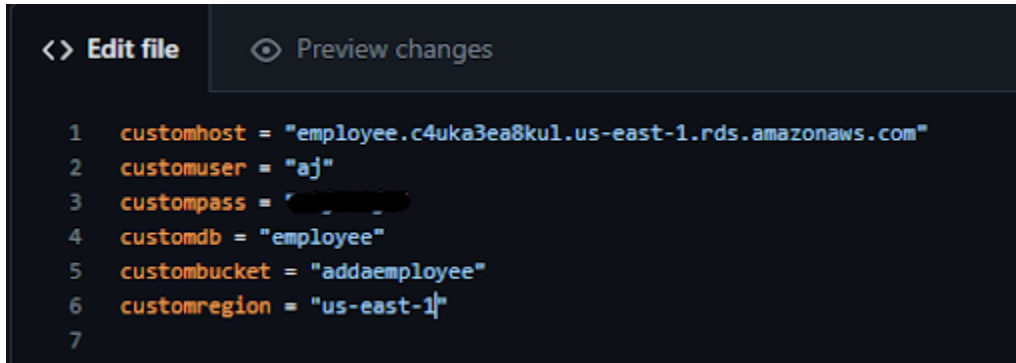
```
ubuntu@ip-172-31-94-12: ~  
  
Last login: Fri Apr 21 15:40:35 2023 from 49.37.160.225  
ubuntu@ip-172-31-94-12:~$ mysql -h employee.c4uka3ea8kul.us-east-1.rds.amazonaws.com -u aj -p  
Enter password:  
Welcome to the MySQL monitor.  Commands end with ; or \g.  
Your MySQL connection id is 23  
Server version: 8.0.32 Source distribution  
  
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owners.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
mysql> _
```

Then a table called employee was created:

```
Database changed  
mysql> create table employee(  
-> empid varchar(20).  
-> ^C  
mysql> create table employee(  
-> empid varchar(20),  
-> fname varchar(20),  
-> lname varchar(20),  
-> pri_skill varchar(20),  
-> location varchar (20));  
Query OK, 0 rows affected (0.10 sec)  
  
mysql> select * from employee;  
Empty set (0.00 sec)
```

6. Adding configuration details of deployed database and bucket in Python flask crud application:

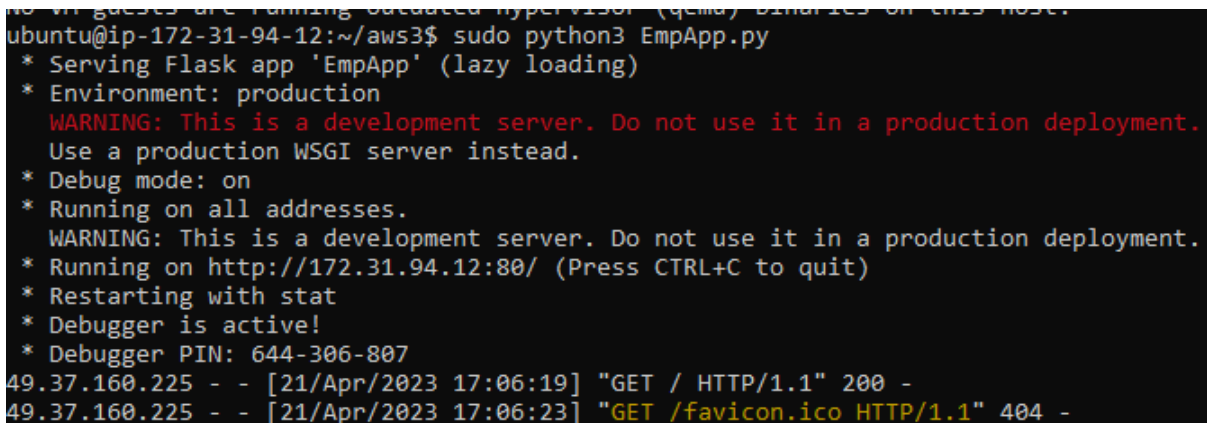
This was done so that the data entered in the website gets saved accordingly in the bucket created.



```
<> Edit file    Preview changes

1  customhost = "employee.c4uka3ea8kul.us-east-1.rds.amazonaws.com"
2  customuser = "aj"
3  custompass = "aj"
4  customdb = "employee"
5  custombucket = "addaemployee"
6  customregion = "us-east-1"
7
```

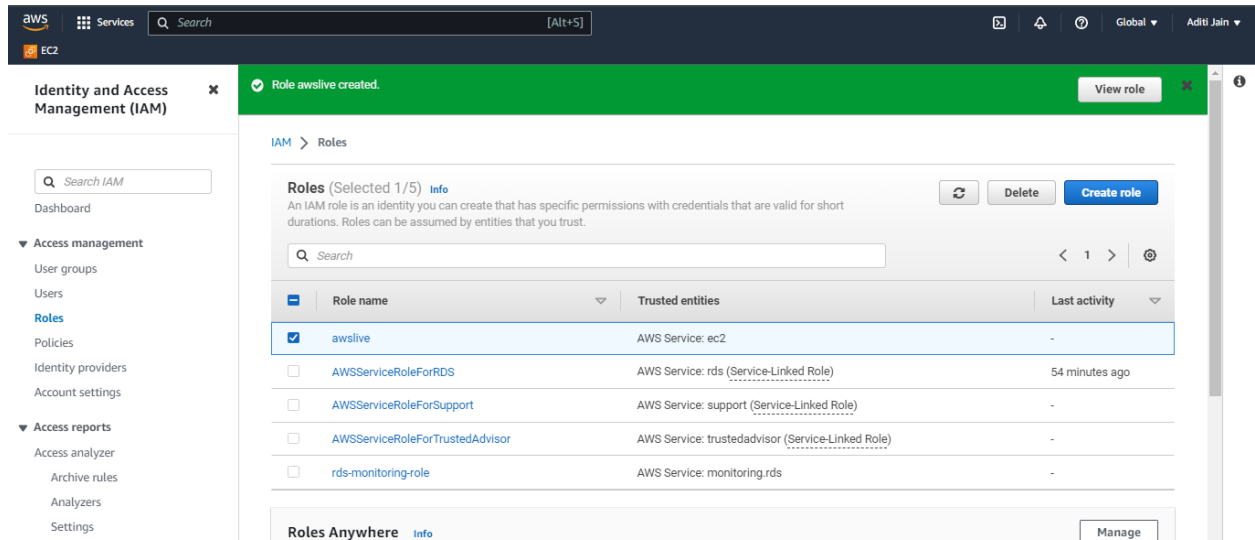
7. Running website from WSL:



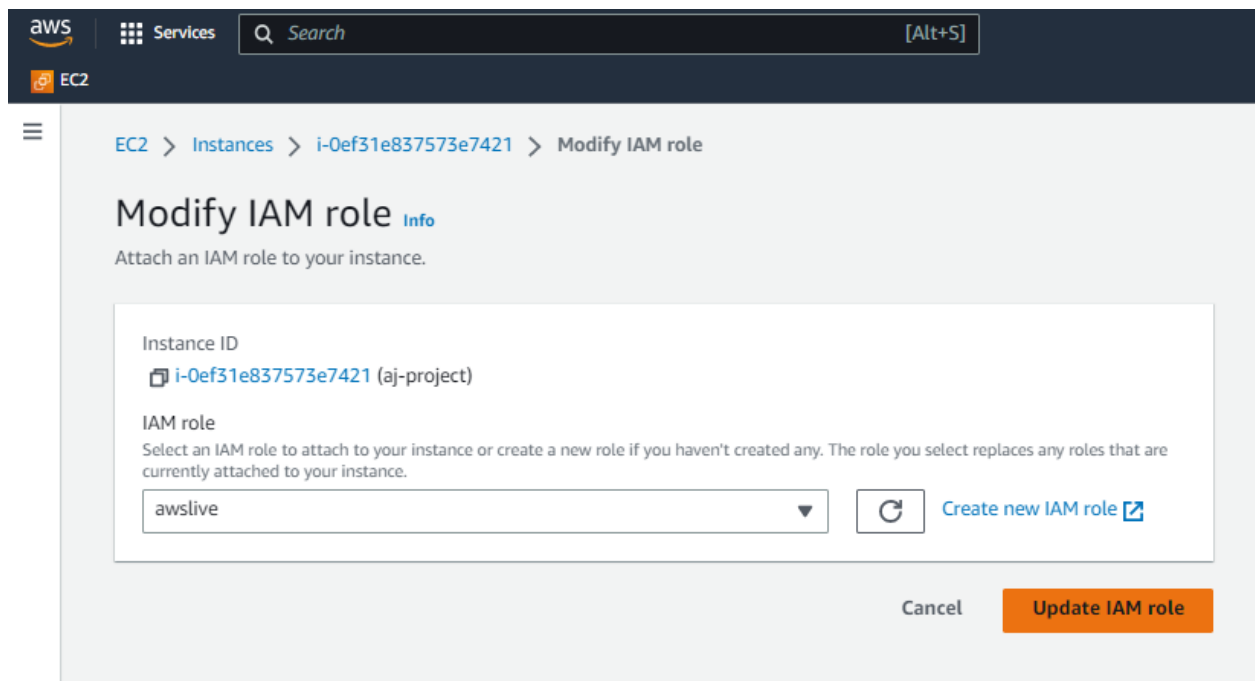
```
no VM guests are running nested hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-94-12:~/aws3$ sudo python3 EmpApp.py
* Serving Flask app 'EmpApp' (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: on
* Running on all addresses.
  WARNING: This is a development server. Do not use it in a production deployment.
* Running on http://172.31.94.12:80/ (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 644-306-807
49.37.160.225 - - [21/Apr/2023 17:06:19] "GET / HTTP/1.1" 200 -
49.37.160.225 - - [21/Apr/2023 17:06:23] "GET /favicon.ico HTTP/1.1" 404 -
```

8. IAM role created for administrator access called **awslive**:

To allow the data to be saved in the bucket.

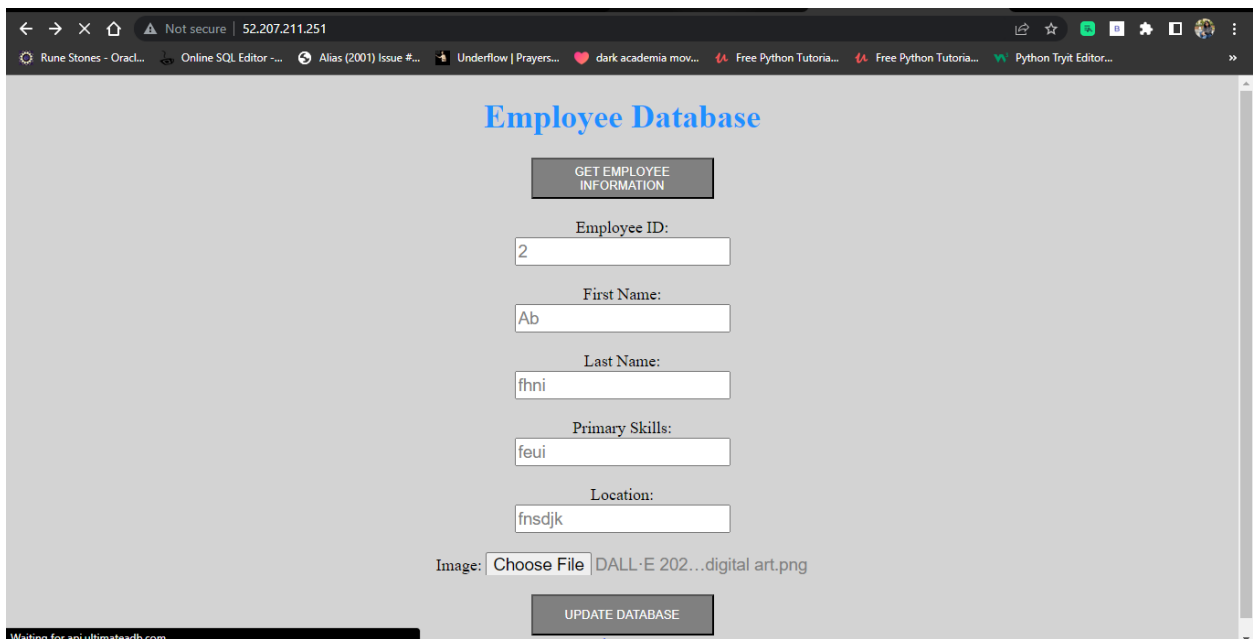


9. Attaching this role to EC2 instance:



Deployed Website

Adding some employee details and image files:

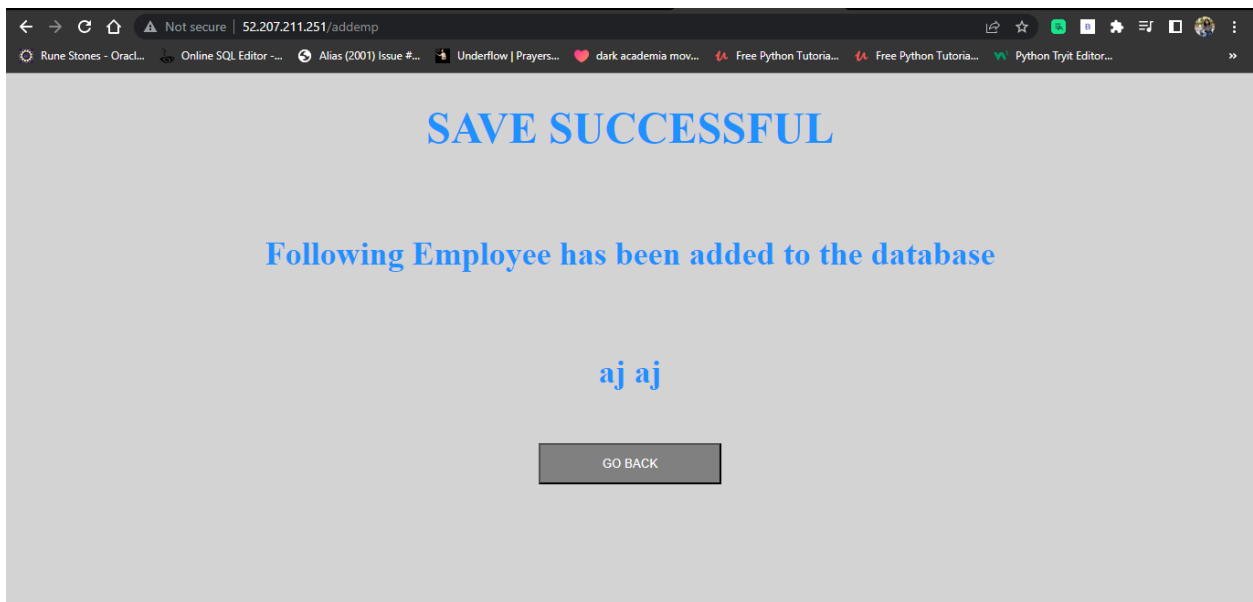


The screenshot shows a web browser window with the URL 52.207.211.251. The page title is "Employee Database". It features a form with the following fields and values:

- GET EMPLOYEE INFORMATION (button)
- Employee ID: 2
- First Name: Ab
- Last Name: fhni
- Primary Skills: feui
- Location: fnsdjk
- Image: Choose File (button) | DALL·E 202...digital art.png
- UPDATE DATABASE (button)

At the bottom left, there is a status bar that says "Waiting for api.ultimateadb.com..."

Confirmation page:



The screenshot shows a web browser window with the URL 52.207.211.251/addemp. The page displays a confirmation message:

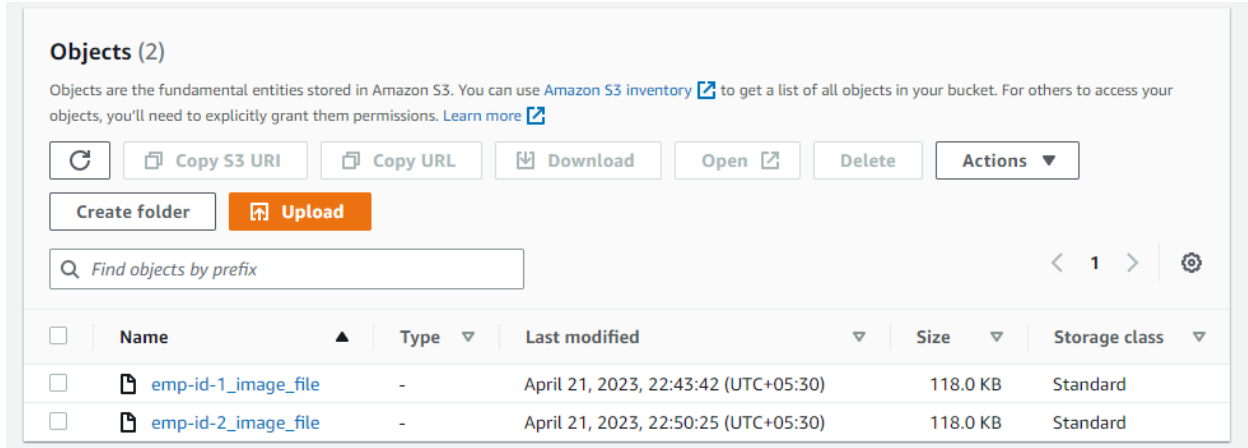
SAVE SUCCESSFUL

Following Employee has been added to the database

aj aj

At the bottom, there is a button labeled "GO BACK".

Information available in bucket created:



Objects (2)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Refresh](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#)

[Create folder](#) [Upload](#)

Find objects by prefix

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	emp-id-1_image_file	-	April 21, 2023, 22:43:42 (UTC+05:30)	118.0 KB	Standard
<input type="checkbox"/>	emp-id-2_image_file	-	April 21, 2023, 22:50:25 (UTC+05:30)	118.0 KB	Standard

Connected to MySQL on local machine and data saved to table:

```
ubuntu@ip-172-31-94-12:~$ mysql -h employee.c4uka3ea8kul.us-east-1.rds.amazonaws.com -u aj -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 53
Server version: 8.0.32 Source distribution

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use employee;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> select * from employee;
+-----+-----+-----+-----+-----+
| empid | fname | lname | pri_skill | location |
+-----+-----+-----+-----+-----+
| 1     | Aditi | Jain  | Python   | Blr      |
| 2     | aj    | aj    | aj       | aj       |
+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)

mysql>
```

This website is only accessible through the public IPv4 address in EC2 instance. If you wanted to have an actual accessible hostname you can continue configuring with Route53.