Ganpat University | Institute of Computer Technology

॥ विद्यया समाजोत्कर्षः ॥

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Sub: EADC (Enterprise Application Development for Cloud)

Branch: CBA

Batch:61

----------PRACTICAL 10----------

- **Question :**

You are a developer tasked with deploying an application that requires connectivity to a Cloudant database on IBM Cloud. The application is developed using a serverless architecture and needs to be deployed on IBM Cloud Code Engine.

Steps to be accomplished to deploy the application based on Cloudant database connectivity on IBM Cloud Code Engine:

Practical 10.1: Prepare Your Application

Ensure your application is configured to connect
to the Cloudant database. This may involve providing the necessary credentials and endpoint information in your application code or configuration files.

Practical 10.2: Set Up IBM Cloudant Database

If you haven't already, create a Cloudant database instance on IBM Cloud. Take note of the credentials and endpoint URL for this database as you will need them to configure the connection in your application.

Practical 10.3: Create IBM Cloud Code Engine Project

Log in to your IBM Cloud account and navigate to the IBM Cloud Code Engine dashboard. Create a new project to organize your application resources.

Practical 10.4: Deploy Application

Use the IBM Cloud Code Engine CLI or web interface to deploy your application

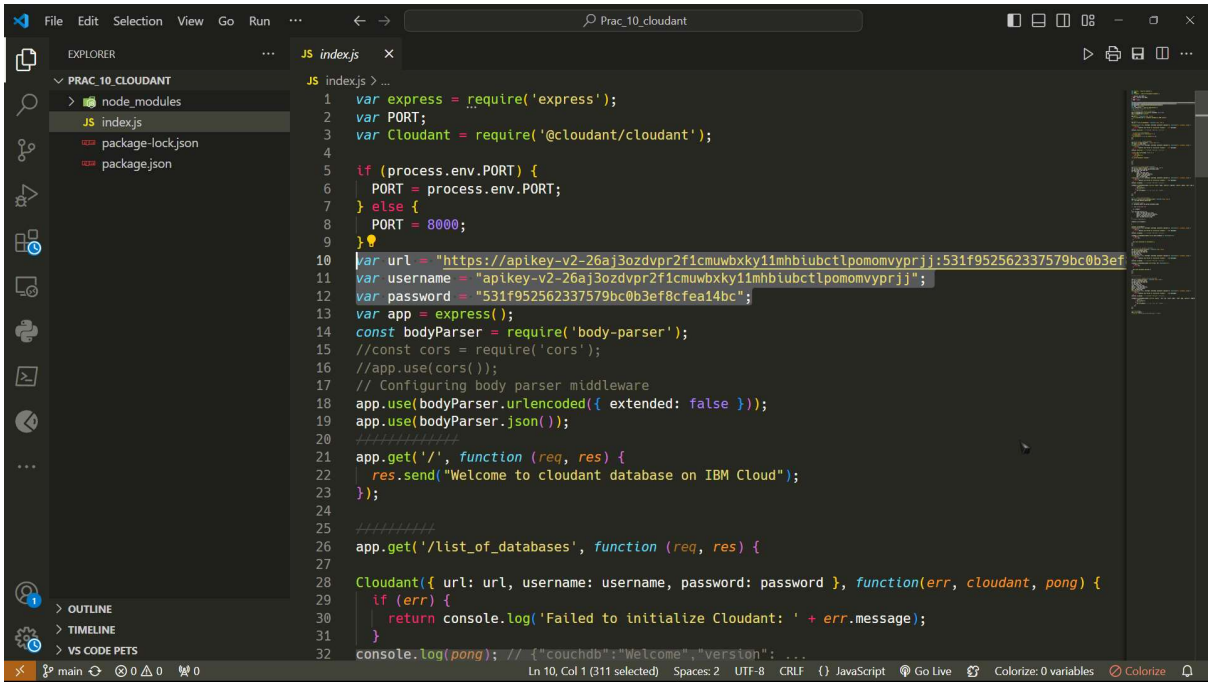
Practical 10.5: Test Connectivity

Test the connectivity between your application and the Cloudant database to ensure that data can be read from and written to the database as expected.

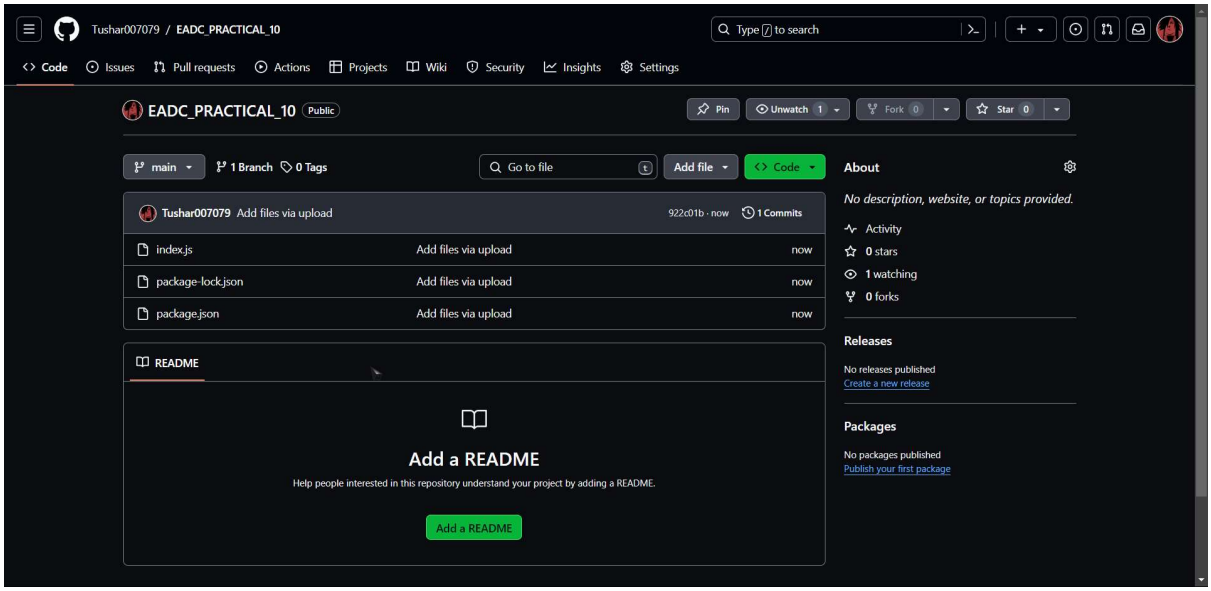
TASK: Create a sample HTML form to collect data from the user for registration including fields like name, phone number, email address, city, country, pincode. Integrate it with node js application to collect the data from the form and update the same data on cloudant database.

» Practical 10.1 : Prepare your application.

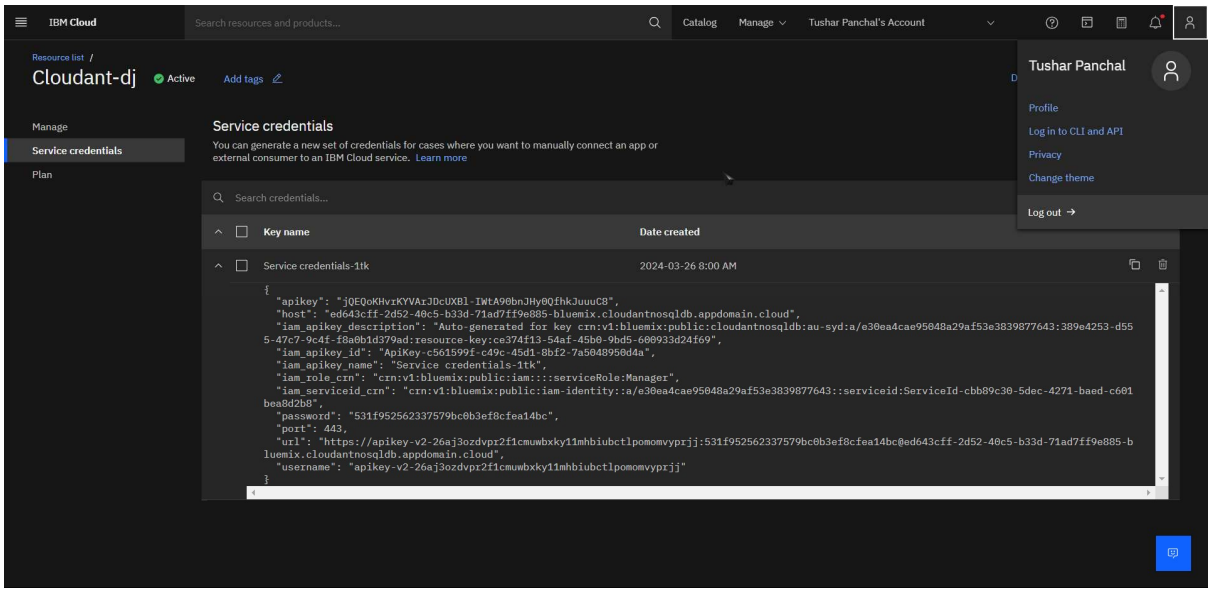
First make sure you enter cloudant service credentials in code:



Now push it on github repository:



» Practical 10.2 : Set Up IBM Cloudant Database.



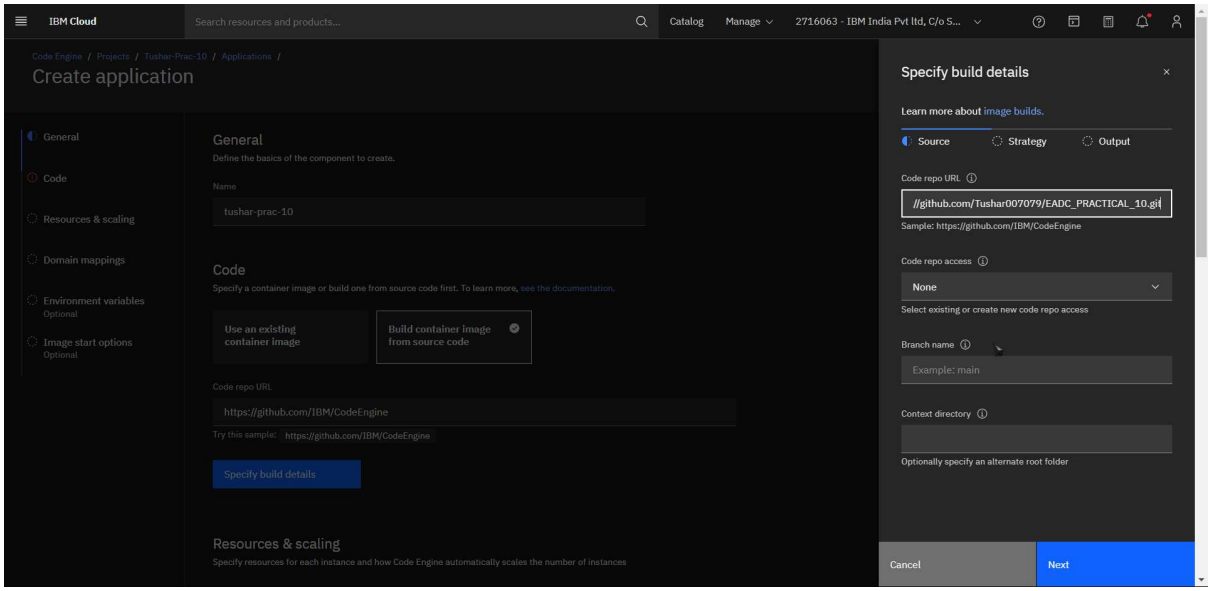
» Practical 10.3 : Create IBM Cloud Code Engine Project.

» Practical 10.4 : Deploy Application.

Now in code engine project we have create a new application.

Name it and select build container image from source and don't do any changes in other things

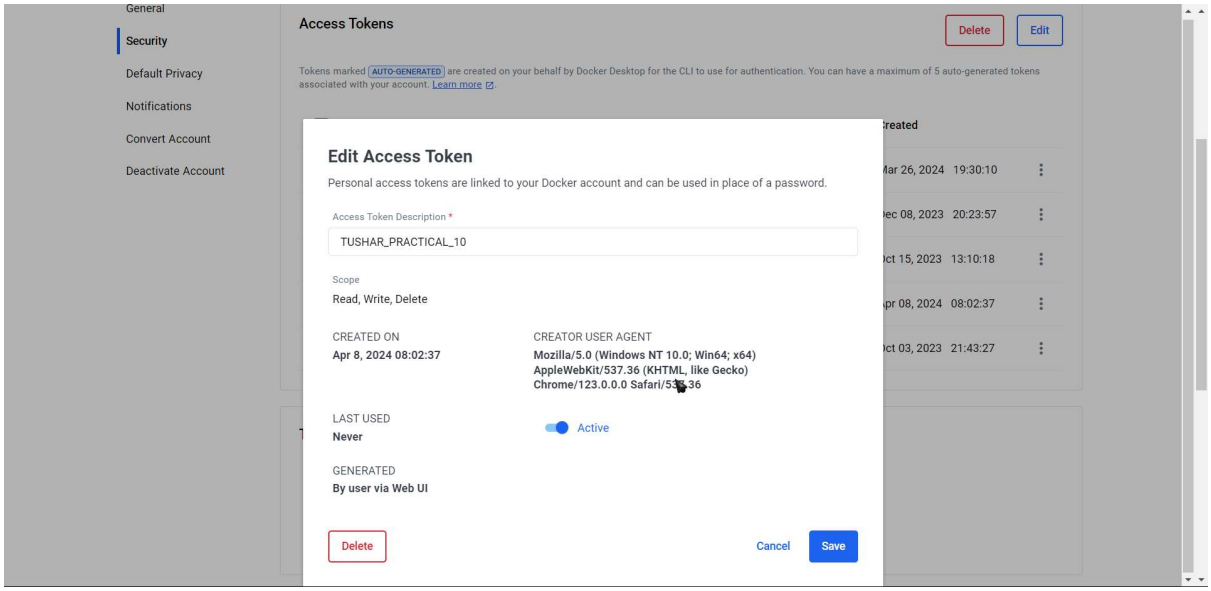
Now hit specify build details in that provide your github repo url:



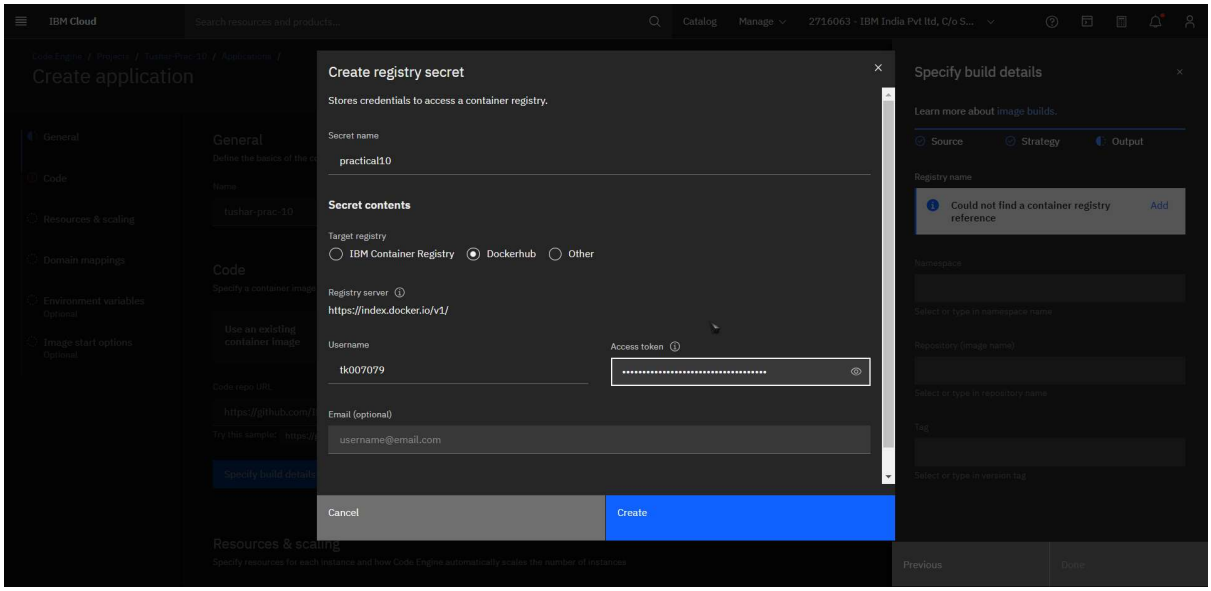
In strategy select cloud native buildpacks

Now log in to dockehub and get access token to create registry container for output

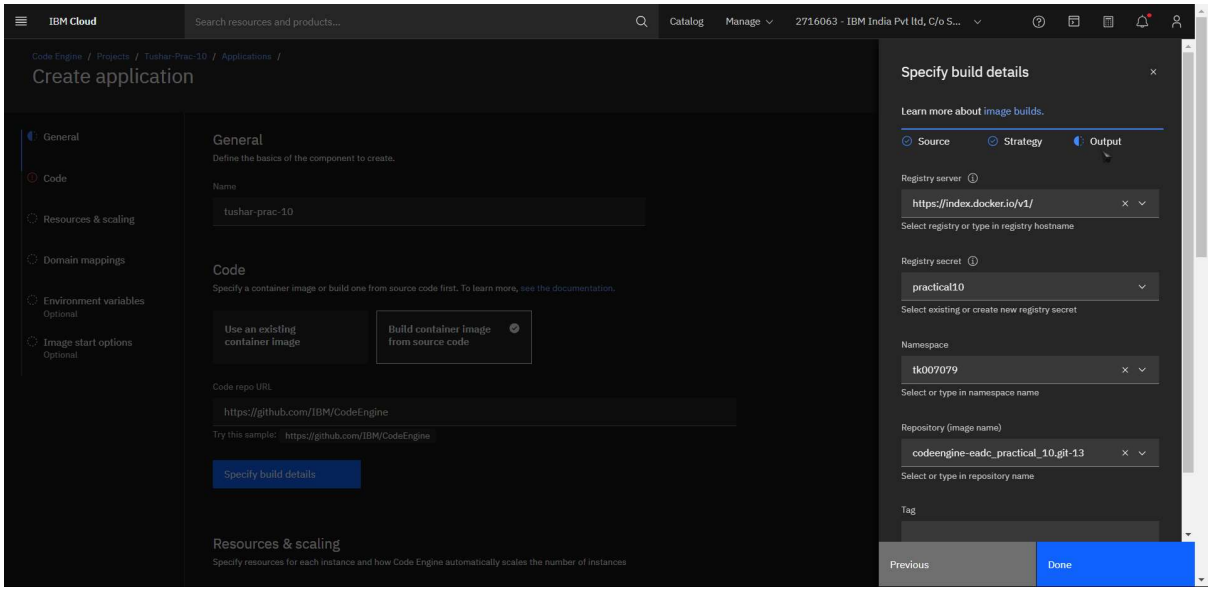
In dockerhub click on your profile and enter into my account then in security section create new access token:



Then in target registry select dockehub and provide that access token and your username of dockerhub:

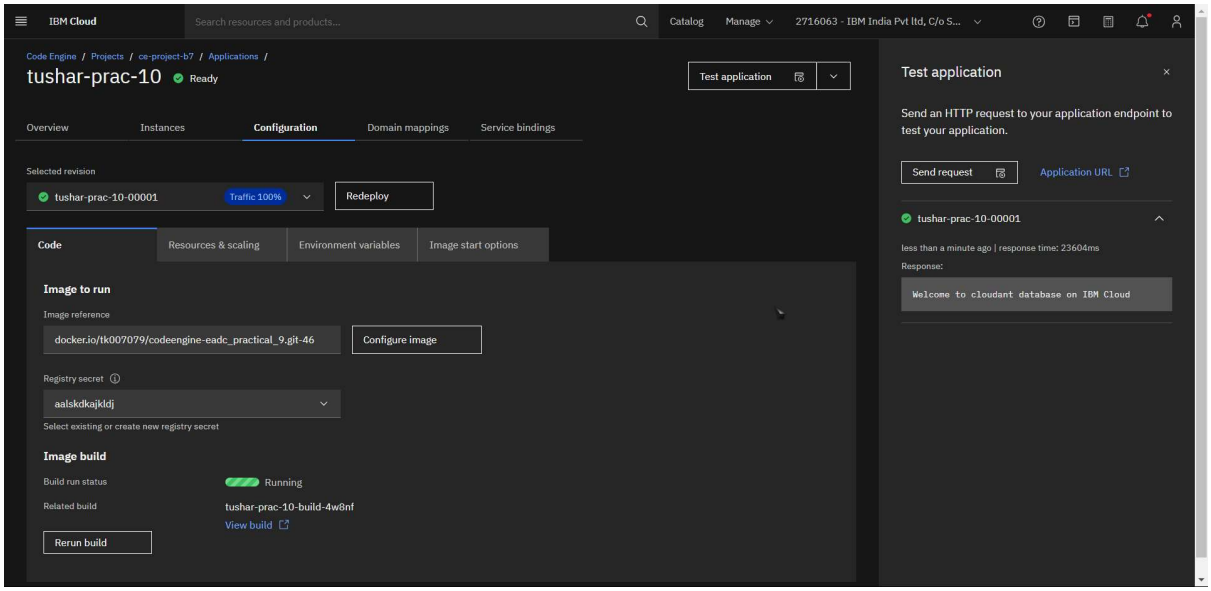


That's it now our registry secret has been added :

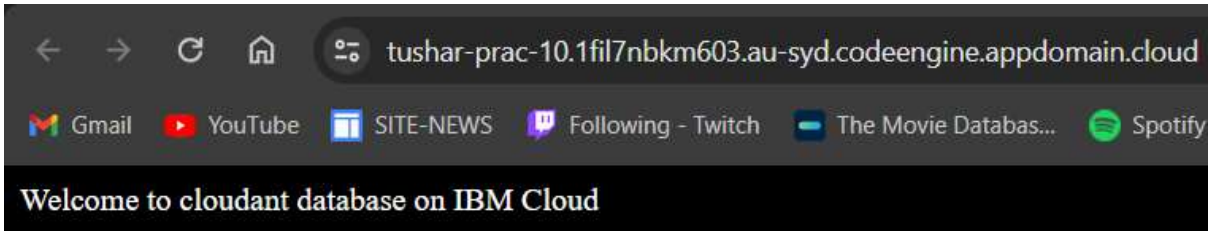


Now hit create to create application.

Now test application & send request then access application url.

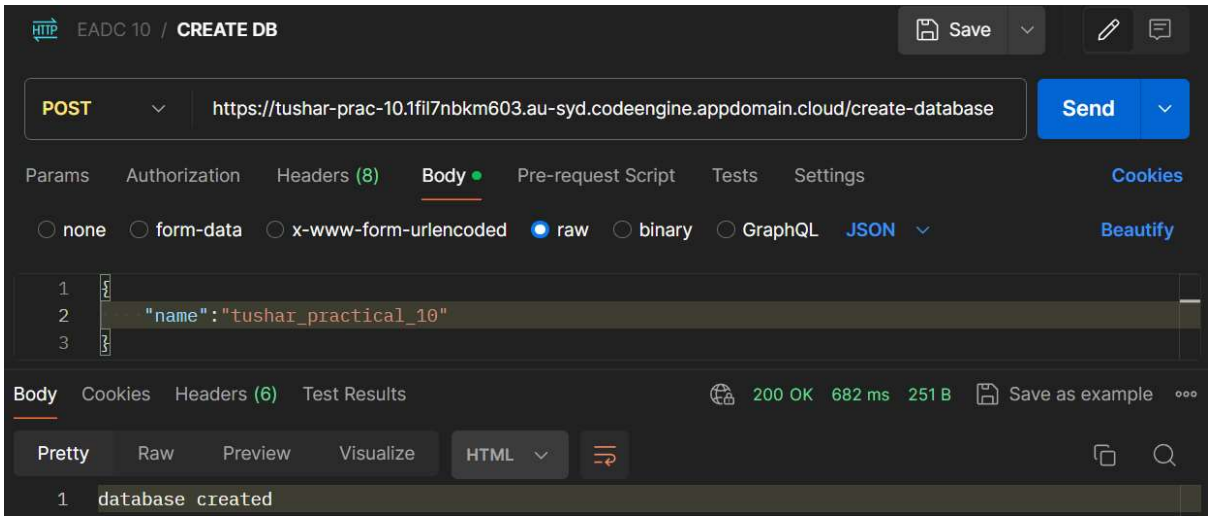


» As you can see our application url is working :

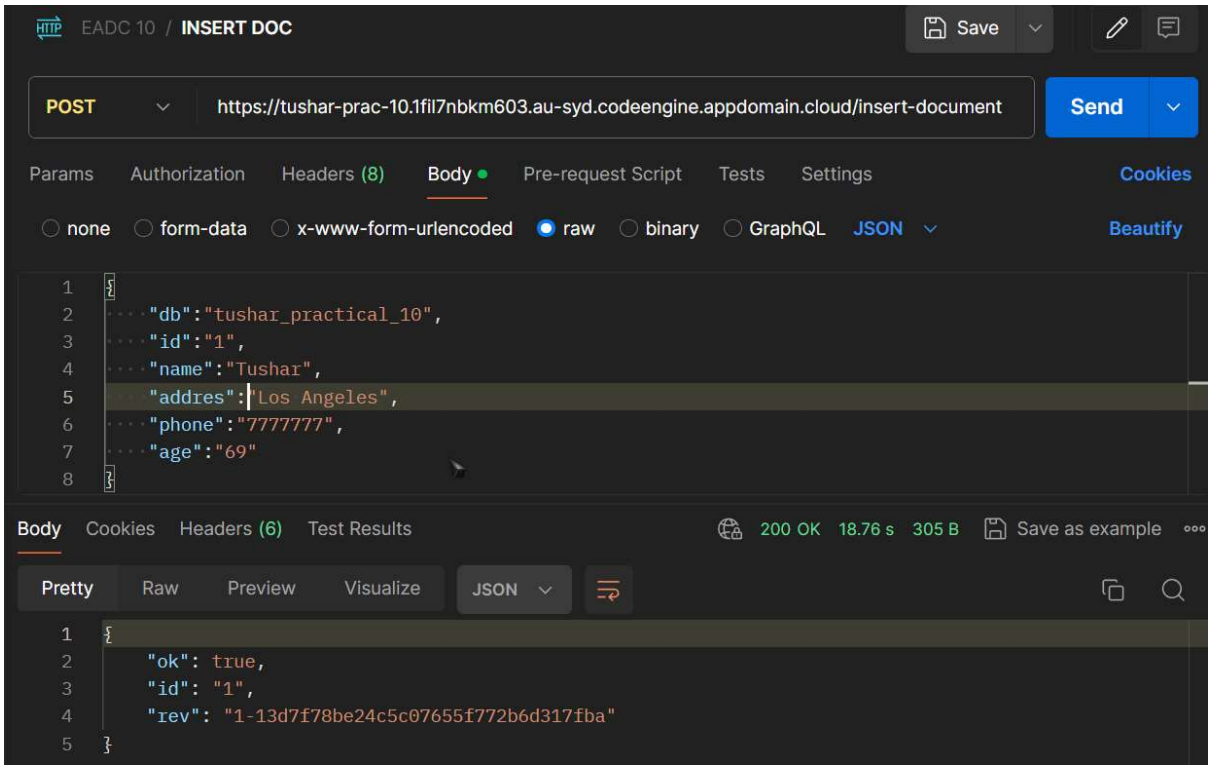


» Practical 10.5 : Test Connectivity.

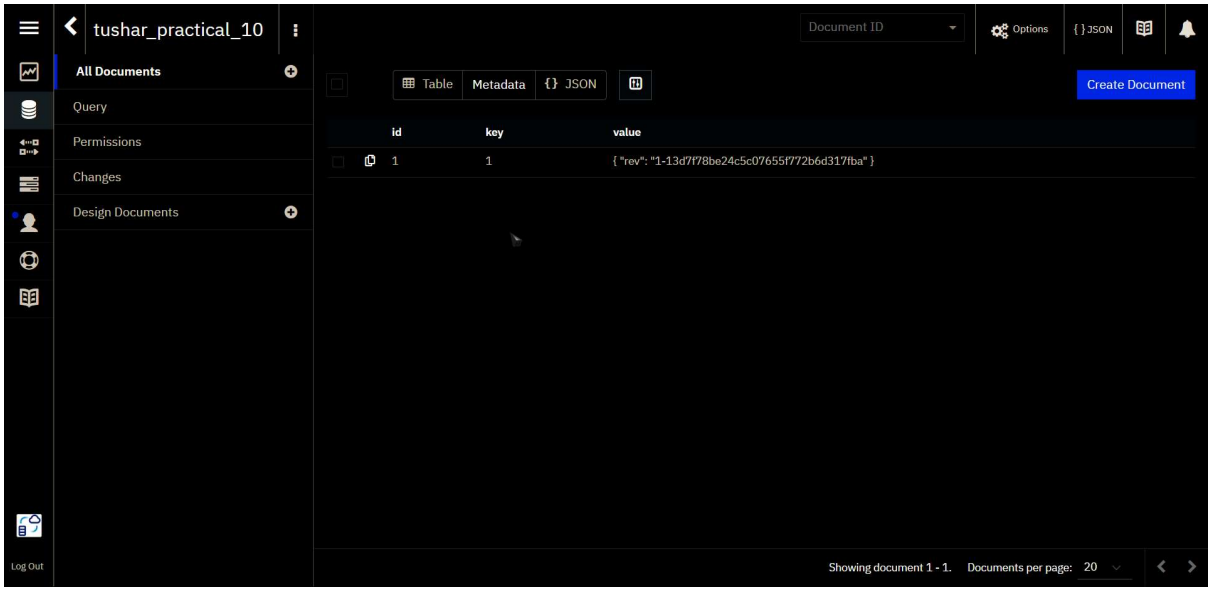
Now to test our application I send post request to create a DB.



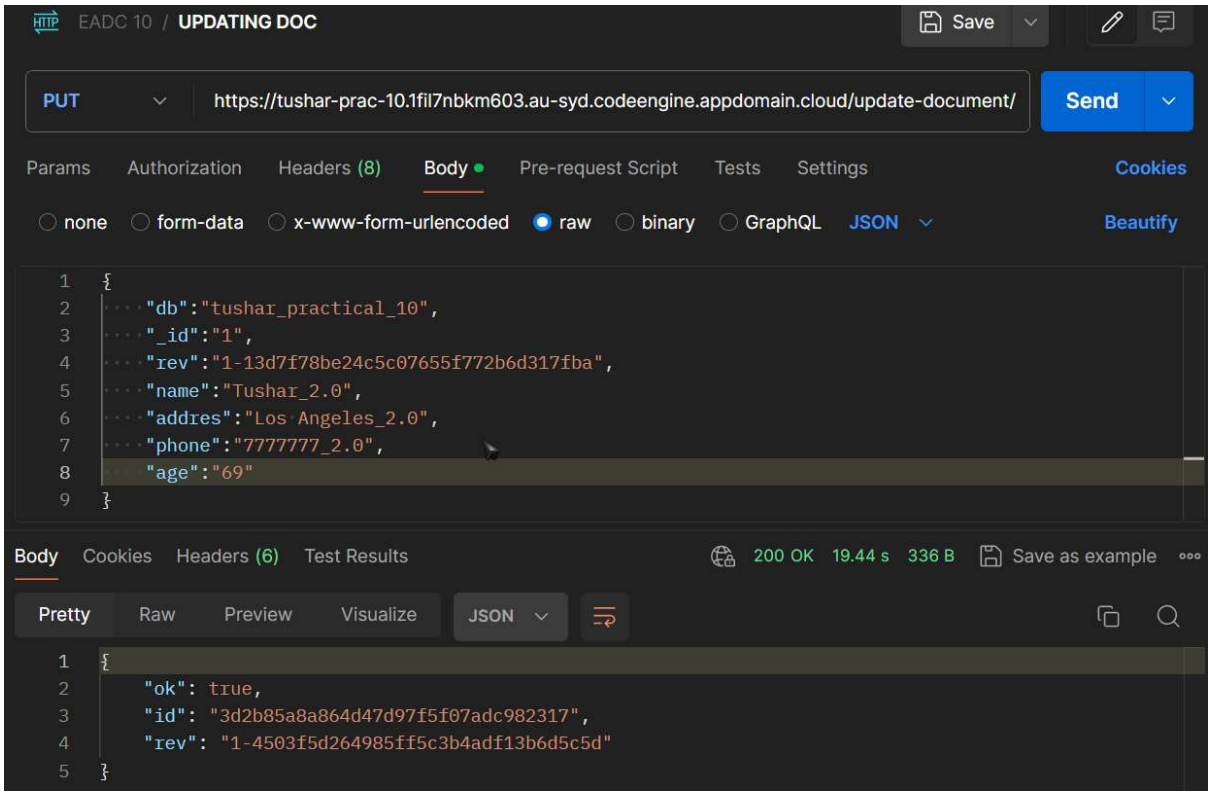
Now inserting one document in database:



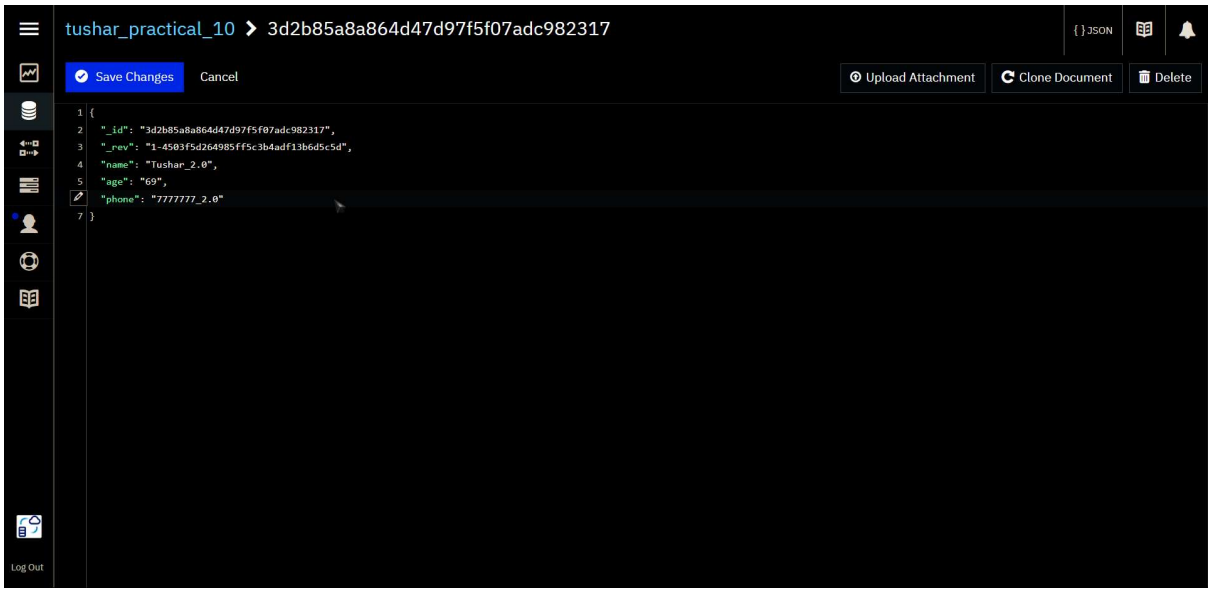
Now we can also see in cloudant dashboard that the document is created:



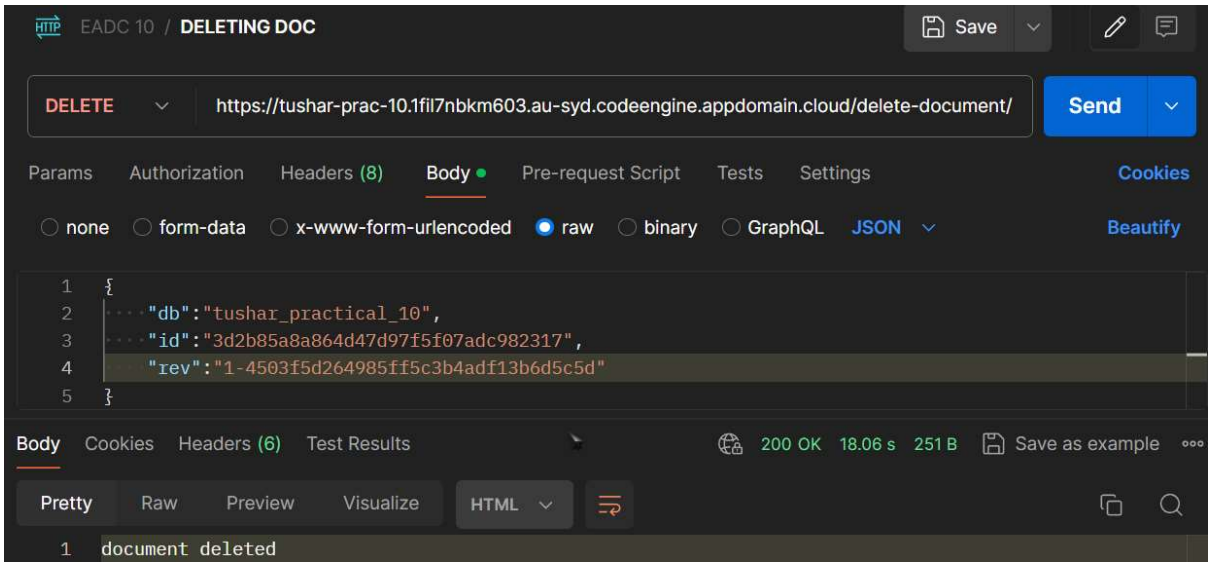
Now I'm updating a document that already exist:



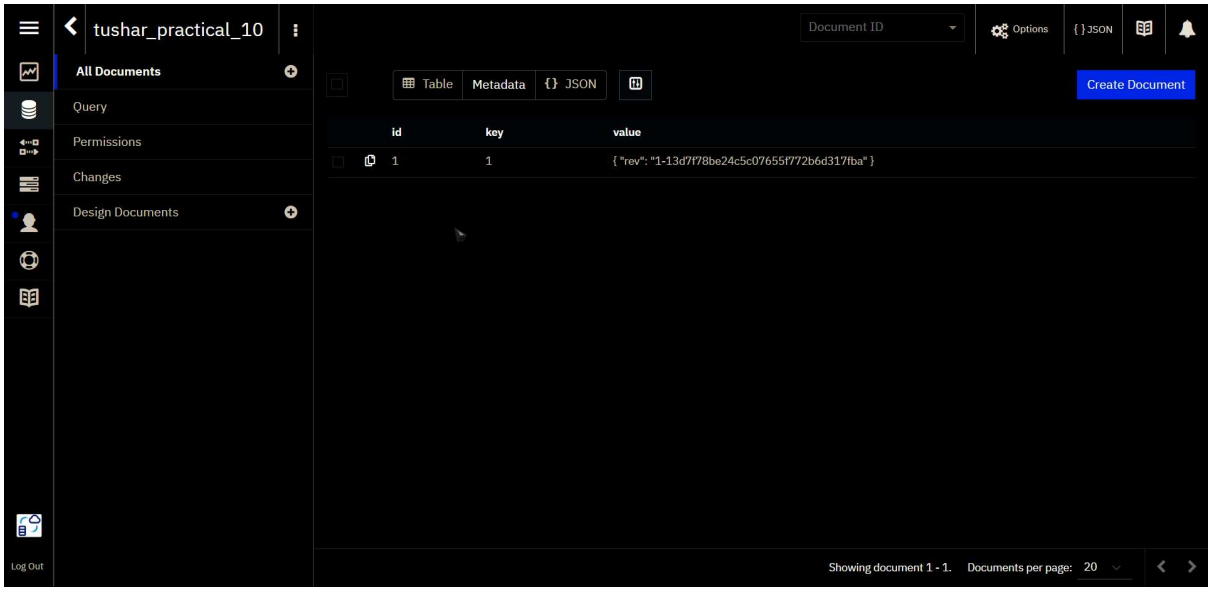
Now we can also see in cloudant dashboard that the document is updated..



Delete a one document in database:



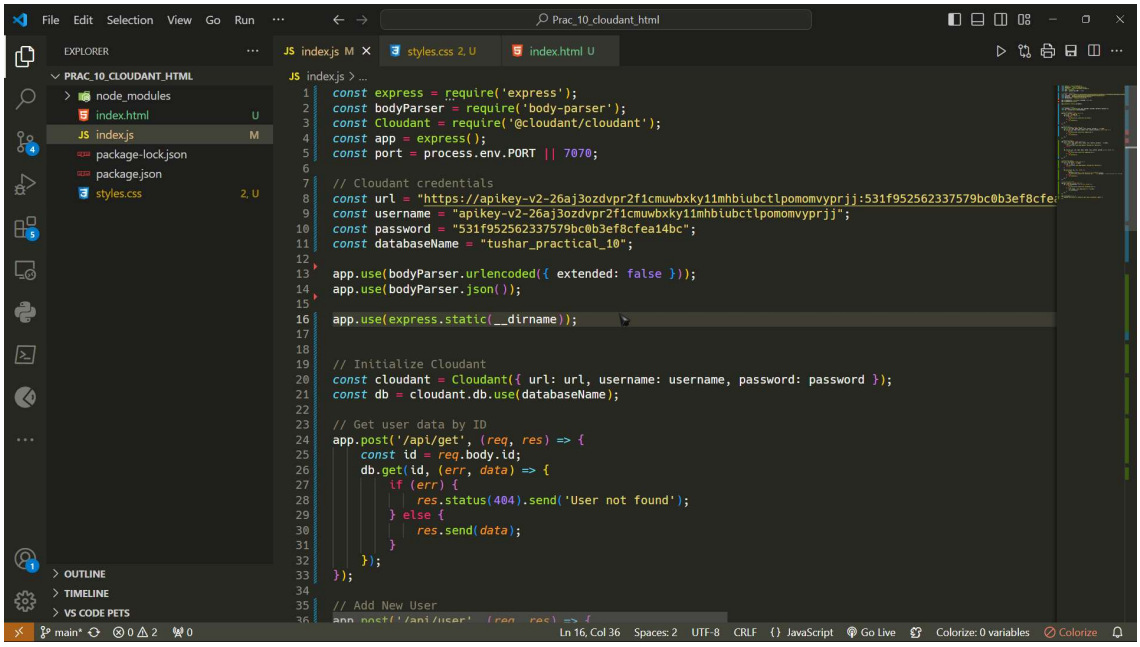
Now we can also see in cloudant dashboard that the document is deleted..

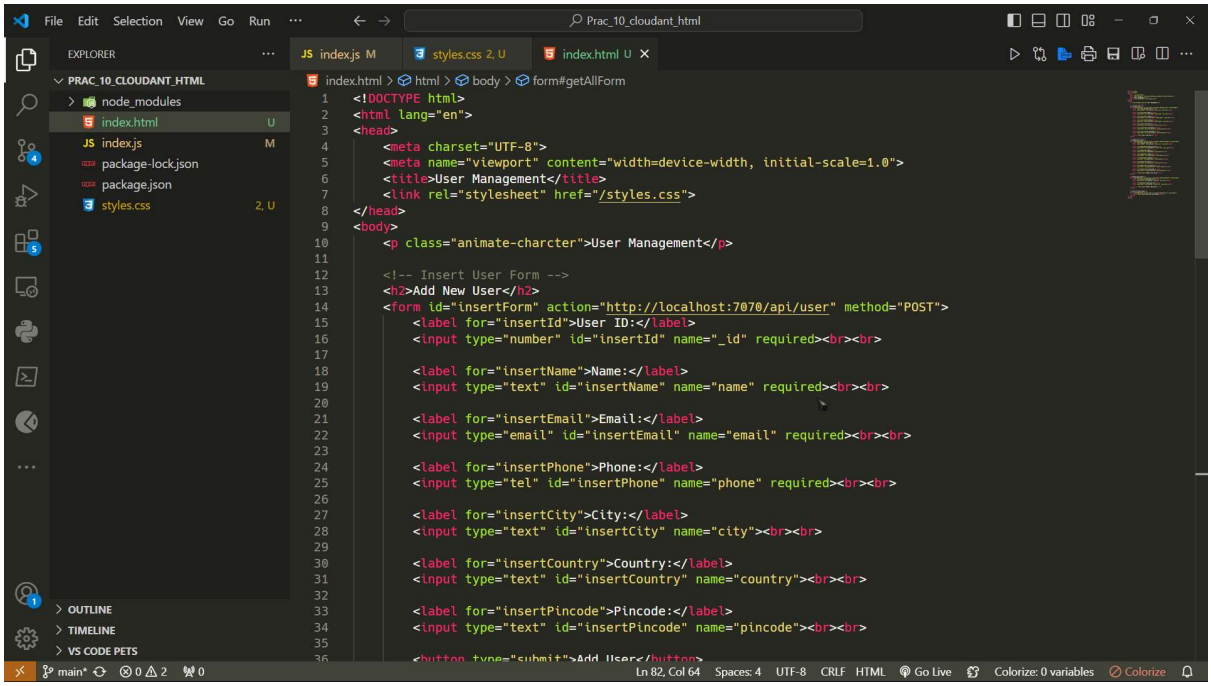


» TASK: Create a sample HTML form to collect data from the user for registration including fields like name, phone number, email address, city, country, pincode. Integrate it with node js application to collect the data from the form and update the same data on cloudant database.

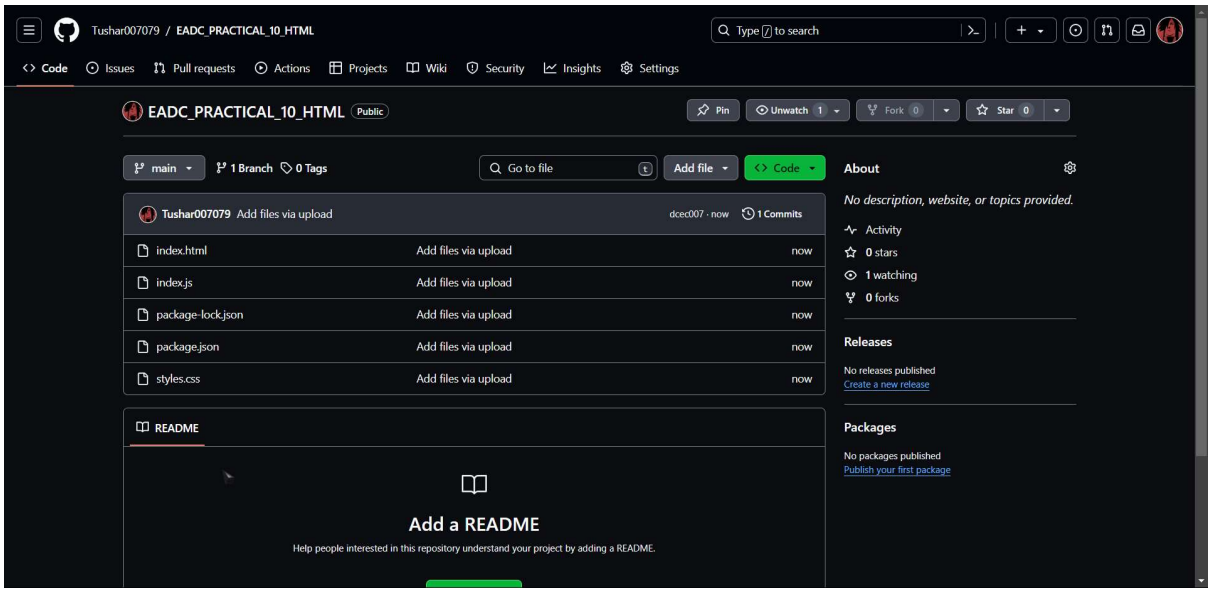
For this create a html form and api :

In first we deploy using this endpoint **http://localhost:7070**

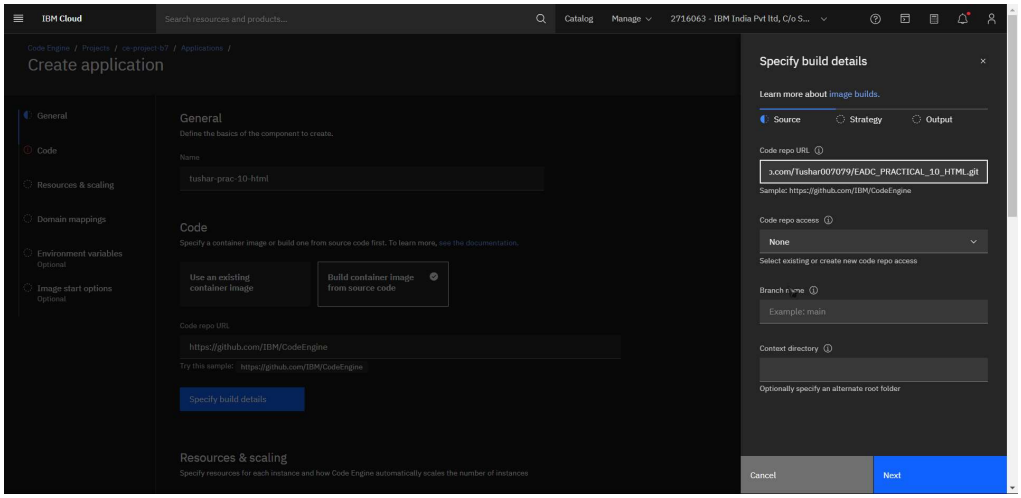


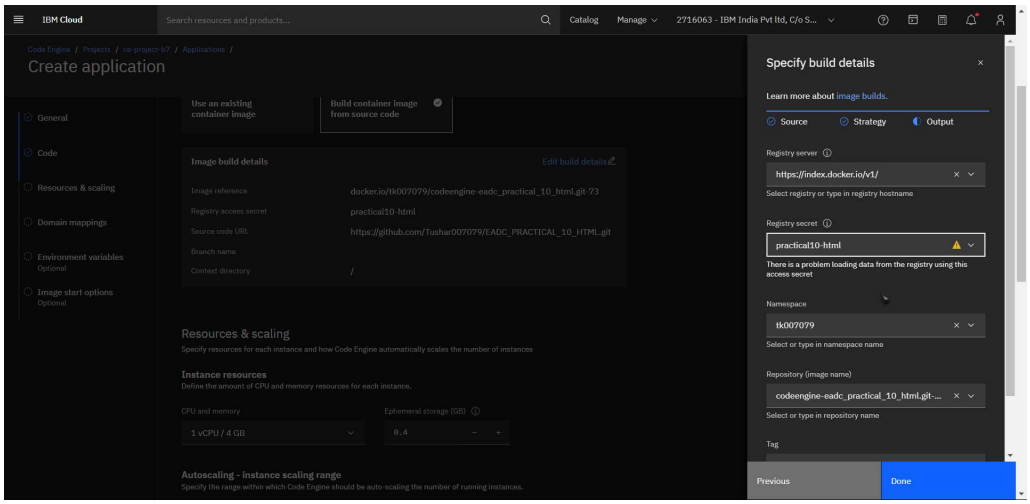


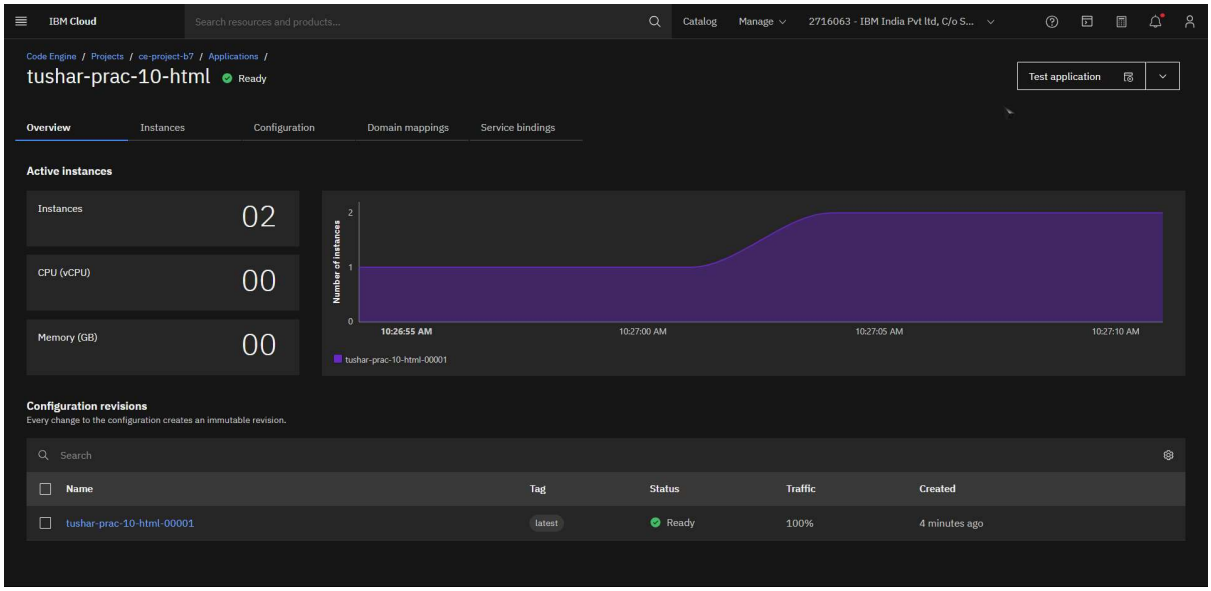
Then push it on github repository:



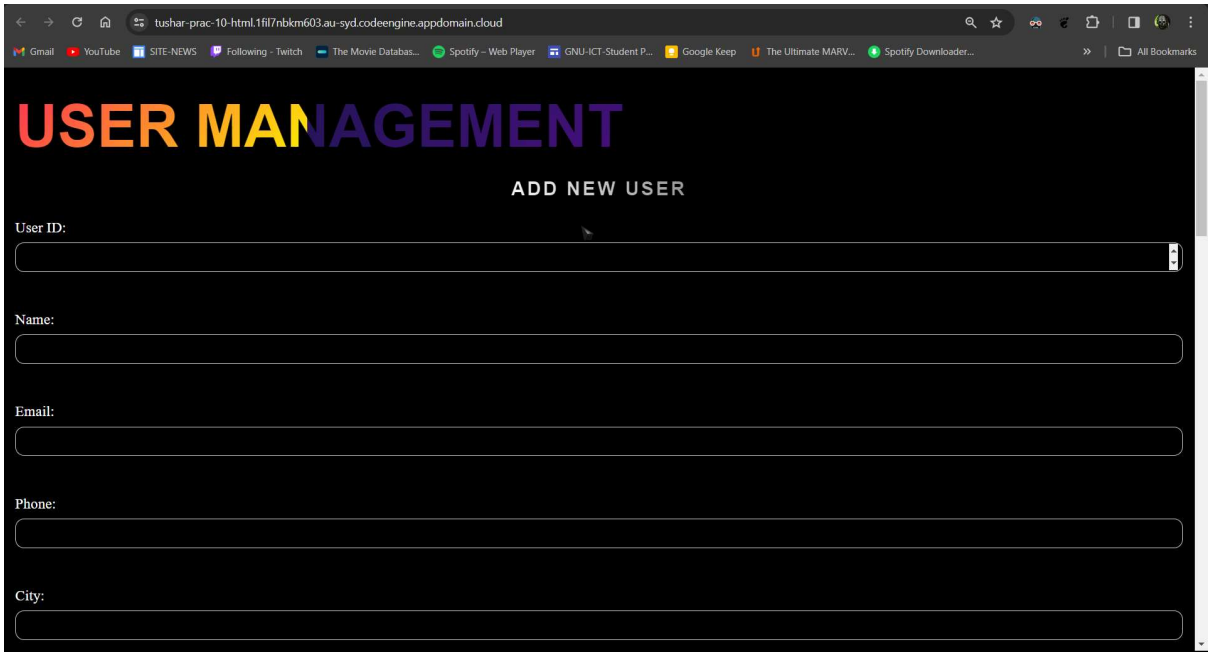
Now deploy it on code engine:







We can see our application in the URL.



After that we will get an application url :

https://tushar-prac-10-html.1fil7nbkm603.au-syd.codeengine.appdomain.cloud

now you have to update this endpoint on github repository

Files

main

Go to file

index.html

index.js

package-lock.json

package.json

styles.css

EADC_PRACTICAL_10_HTML / index.html

Code Blame 86 lines (65 loc) · 3.38 KB Code 55% faster with GitHub Copilot

```html
        <link rel="stylesheet" href="/styles.css">
    </head>
    <body>
        <p class="animate-charcter">User Management</p>

        <!-- Insert User Form -->
        <h2>Add New User</h2>
        <form id="insertForm" action="https://tushar-prac-10-html.1fil7nbkm603.au-syd.codeengine.appdomain.cloud/api/user" method="POST">
            <label for="insertId">User ID:</label>
            <input type="number" id="insertId" name="_id" required><br><br>

            <label for="insertName">Name:</label>
            <input type="text" id="insertName" name="name" required><br><br>

            <label for="insertEmail">Email:</label>
            <input type="email" id="insertEmail" name="email" required><br><br>

            <label for="insertPhone">Phone:</label>
            <input type="tel" id="insertPhone" name="phone" required><br><br>

            <label for="insertCity">City:</label>
            <input type="text" id="insertCity" name="city"><br><br>

            <label for="insertCountry">Country:</label>
            <input type="text" id="insertCountry" name="country"><br><br>

            <label for="insertPincode">Pincode:</label>
            <input type="text" id="insertPincode" name="pincode"><br><br>

            <button type="submit">Add User</button>
        </form>
```

Then make new application and deploy this updated repository

Now I'm adding data:

USER MANAGEMENT

ADD NEW USER

User ID: 7

Name: James Bond

Email: jamesbond@gmail.com

Phone: 777777777

City: New York

Country: United States

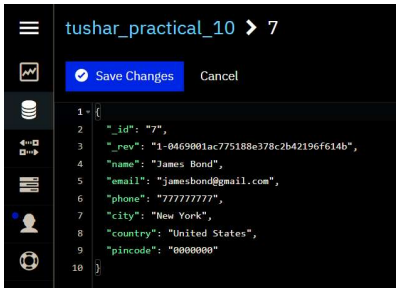
Pincode: 0000000

ADD USER

UPDATE USER DATA

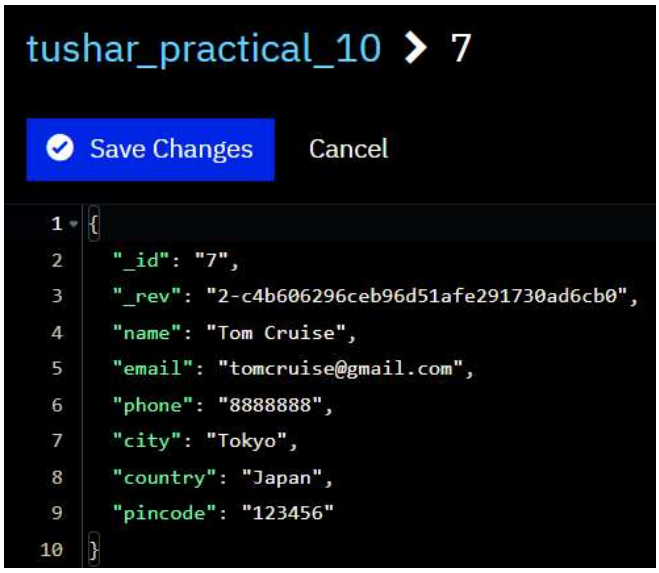
```
{
  "ok": true,
  "id": "7",
  "rev": "1-0469001ac775188e378c2b42196f614b"
}
```

Now we can also see in cloudant dashboard that the document is created.

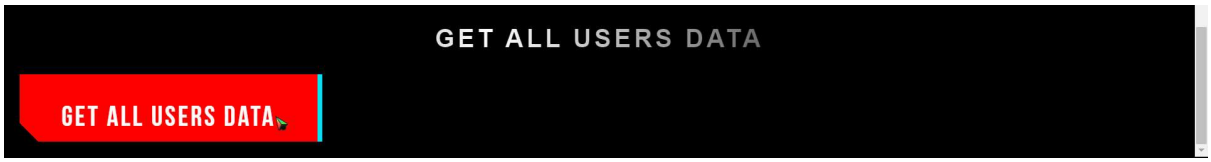


Updating data of existing document:

Now we can also see in cloudant dashboard that the document is updated:

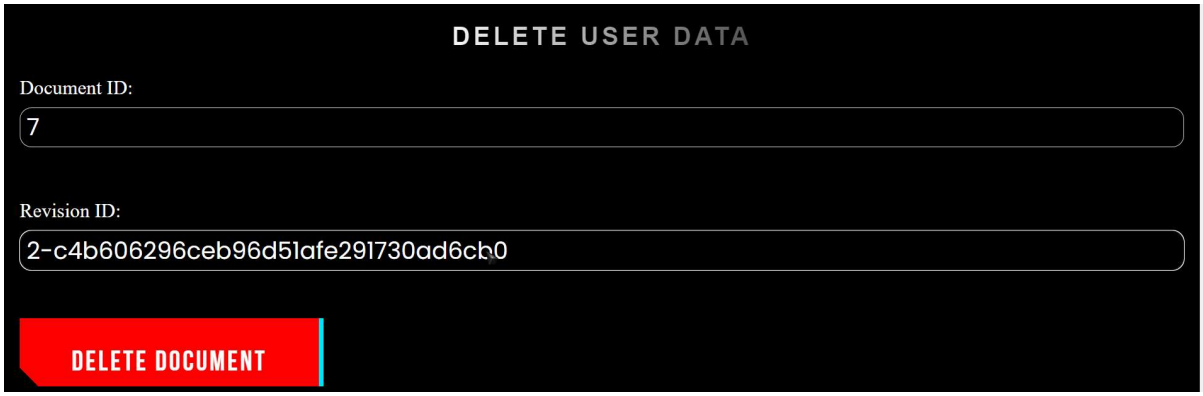


Getting details of all existing users or documents of DB:




```
[
  {
    "_id": "1",
    "_rev": "1-13d7f78be24c5c07655f772b6d317fba",
    "name": "Tushar",
    "phone": "7777777",
    "age": "69"
  },
  {
    "_id": "7",
    "_rev": "2-c4b606296ceb96d51afe291730ad6cb0",
    "name": "Tom Cruise",
    "email": "tomcruise@gmail.com",
    "phone": "8888888",
    "city": "Tokyo",
    "country": "Japan",
    "pincode": "123456"
  }
]
```


Now deleting existing user :



You can see here my document deleted from DB