Report

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Description

This application is building a simple web application that interacts with the database through AWS cloud service. The structure of the application relies heavily on AWS. Functions are called through the AWS API gateway. The gateway in charge of request/response to the AWS Lambda. The Lambda then invokes the function from the back-end code (*See the structure view for more information*).

AWS Region

US West (Oregon) us-west-2

Main page

https://css436lab4.s3.us-west-2.amazonaws.com/frontpage.html

Usability

- The user is able to load the data following the pre-formatted. (view)
- The user is able to delete the data; all the data will be deleted from the database. (view)
- The user is able to query by given names; last name and first name, one of the names, or none of them. (view)
- The user is able to view the table after load. (view)

Programming Languages

The application is built major in Java and minor in Python.

- Java
  - The load, delete, and query functions are implemented. It will all return a response by string.

- Python
  - The display data function is implemented. It returns a JSON file containing stored items in the AWS DynamoDB.

Database

The application implements the AWS DynamoDB. It is simple to handle and implement through AWS cloud service.

Submission

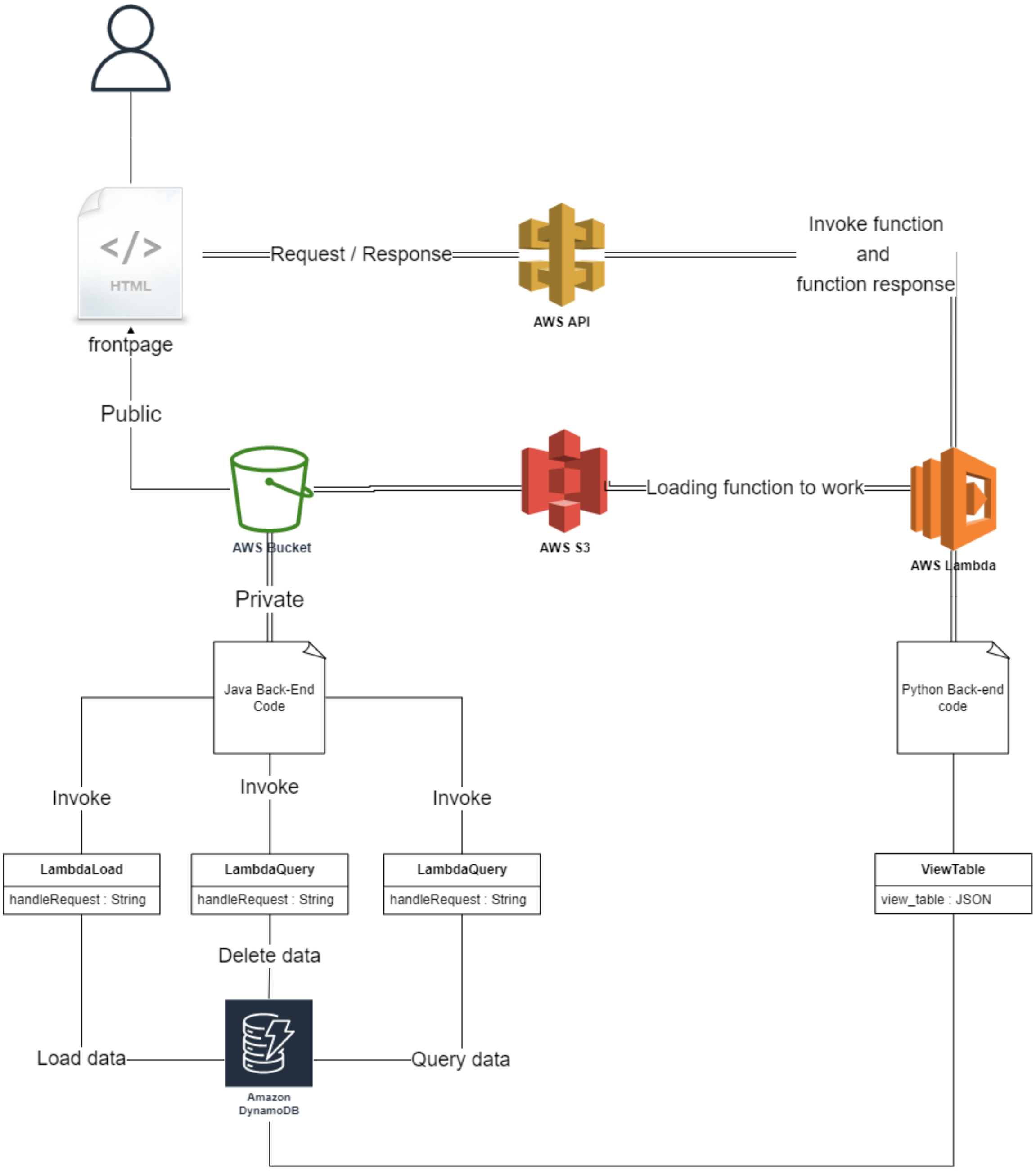
- A package includes Java, Python, HTML sources code, the Maven source file for the build tool. They are all zip in one package

SLA Estimate

- Datastore(front-end, back-end) in AWS S3 -> Durability is **99.999999999%**
- AWS S3 -> **available 99.99%** (more information)
- AWS DynamoDB -> **available 99.999%** (more information)
- AWS API gateway specifies that they are deployed without downtime -> **at least available 99.95%**. (more information)
- AWS Lambda specifies that mostly available -> **at least available 99.95%**. (more information)
- **In summary, the program has the durability 99.999999999%, availability 99.889%**

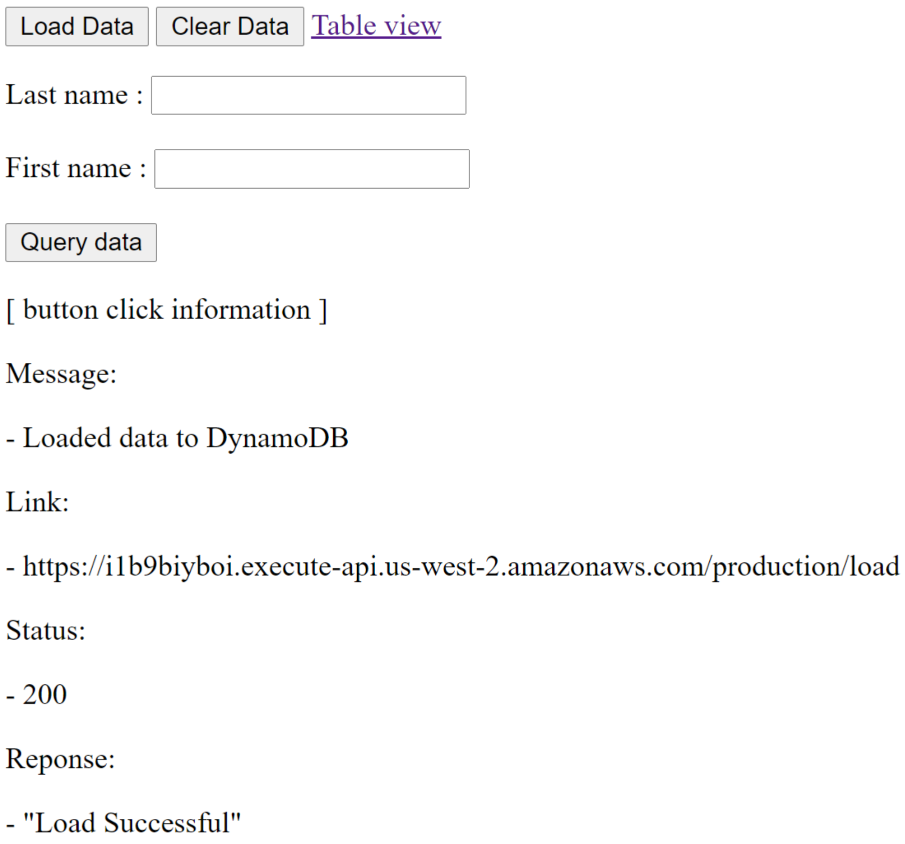
Structure View

Link



Result sample:

- Load button



[button click information]

Message:

- Loaded data to DynamoDB

Link:

- https://i1b9biyboi.execute-api.us-west-2.amazonaws.com/production/load

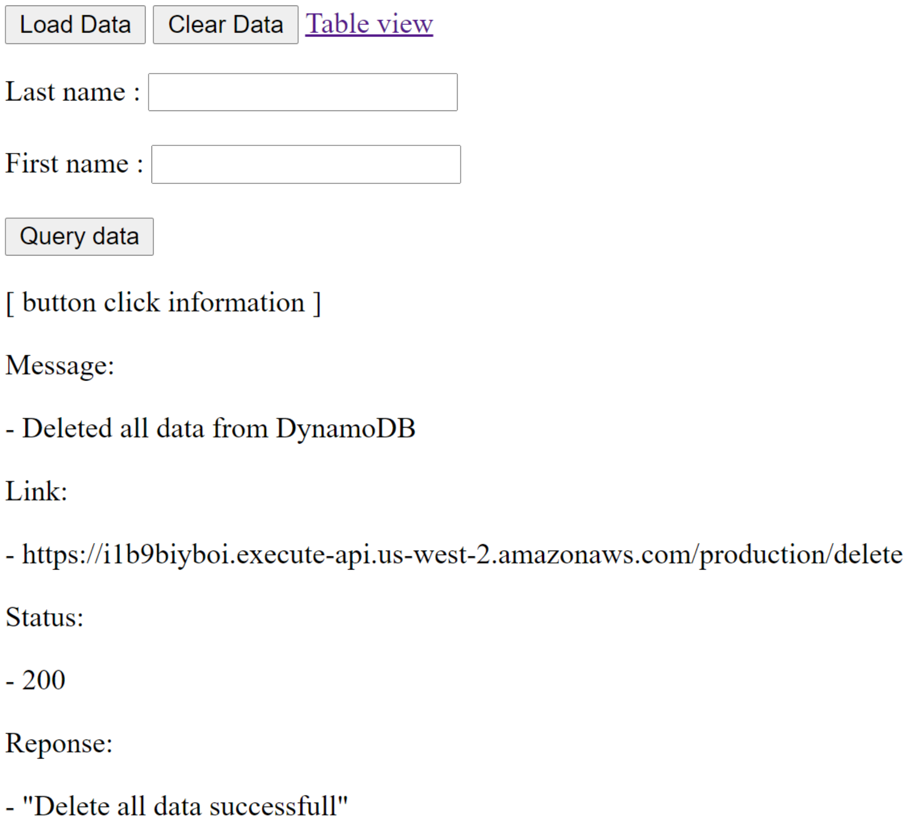
Status:

- 200

Reponse:

- "Load Successful"

- Delete button



[button click information]

Message:

- Deleted all data from DynamoDB

Link:

- https://i1b9biyboi.execute-api.us-west-2.amazonaws.com/production/delete

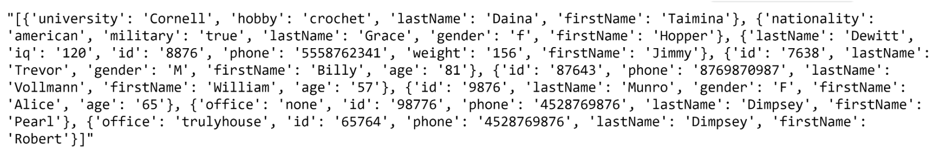
Status:

- 200

Reponse:

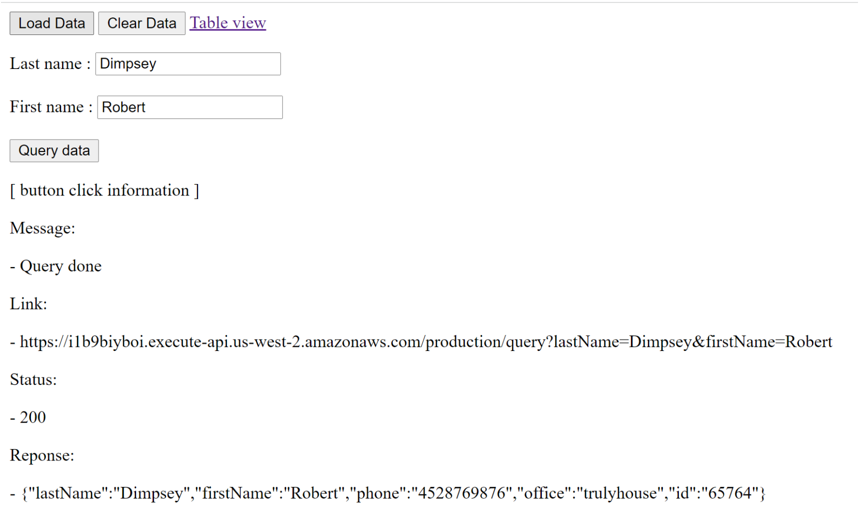
- "Delete all data successfull"

- View Table link



```
"[{'university': 'Cornell', 'hobby': 'crochet', 'lastName': 'Daina', 'firstName': 'Taimina'}, {'nationality':
'american', 'military': 'true', 'lastName': 'Grace', 'gender': 'f', 'firstName': 'Hopper'}, {'lastName': 'Dewitt',
'iq': '120', 'id': '8876', 'phone': '5558762341', 'weight': '156', 'firstName': 'Jimmy'}, {'id': '7638', 'lastName':
'Trevor', 'gender': 'M', 'firstName': 'Billy', 'age': '81'}, {'id': '87643', 'phone': '8769870987', 'lastName':
'Vollmann', 'firstName': 'William', 'age': '57'}, {'id': '9876', 'lastName': 'Munro', 'gender': 'F', 'firstName':
'Alice', 'age': '65'}, {'office': 'none', 'id': '98776', 'phone': '4528769876', 'lastName': 'Dimpsey', 'firstName':
'Pearl'}, {'office': 'trulyhouse', 'id': '65764', 'phone': '4528769876', 'lastName': 'Dimpsey', 'firstName':
'Robert'}]"
```

- Query button
  - Both names. Print exactly



Last name : Dimpsey

First name : Robert

[button click information]

Message:

- Query done

Link:

- https://i1b9biyboi.execute-api.us-west-2.amazonaws.com/production/query?lastName=Dimpsey&firstName=Robert

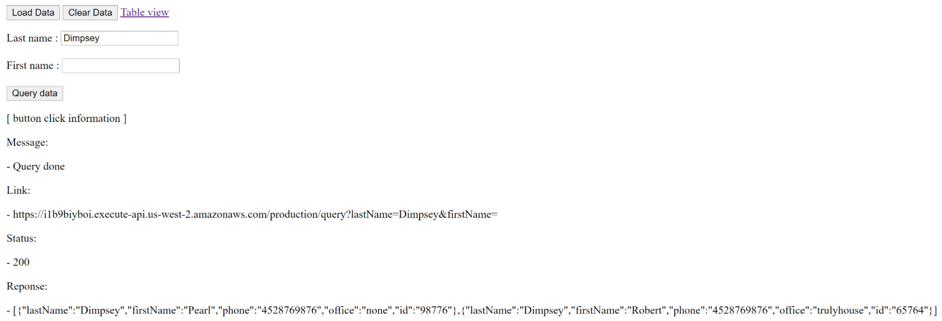
Status:

- 200

Reponse:

- {"lastName":"Dimpsey","firstName":"Robert","phone":"4528769876","office":"trulyhouse","id":"65764"}

  - One of the names. Print all that match one of the names



Last name : Dimpsey

First name :

[button click information]

Message:

- Query done

Link:

- https://i1b9biyboi.execute-api.us-west-2.amazonaws.com/production/query?lastName=Dimpsey&firstName=

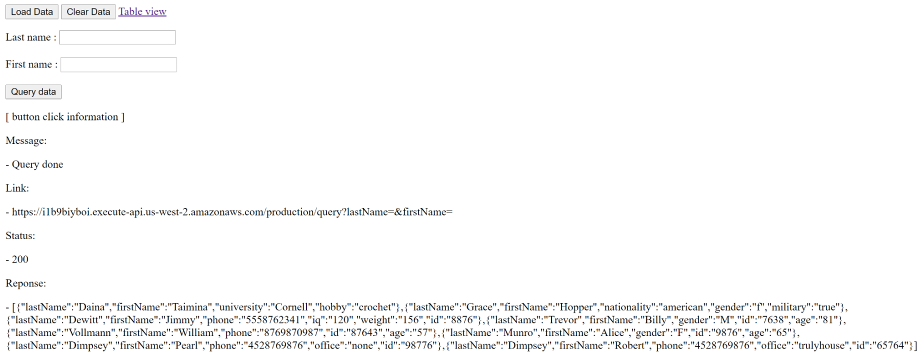
Status:

- 200

Reponse:

- [{"lastName":"Dimpsey","firstName":"Pearl","phone":"4528769876","office":"none","id":"98776"},{"lastName":"Dimpsey","firstName":"Robert","phone":"4528769876","office":"trulyhouse","id":"65764"}]

  - None of the names. Print all



Last name :

First name :

[button click information]

Message:

- Query done

Link:

- https://i1b9biyboi.execute-api.us-west-2.amazonaws.com/production/query?lastName=&firstName=

Status:

- 200

Reponse:

- [{"lastName":"Daina","firstName":"Taimina","university":"Cornell","hobby":"crochet"},{"lastName":"Grace","firstName":"Hopper","nationality":"american","gender":"f","military":"true"},
{"lastName":"Dewitt","firstName":"Jimmy","phone":"5558762341","iq":"120","weight":"156","id":"8876"},{"lastName":"Trevor","firstName":"Billy","gender":"M","id":"7638","age":"81"},
{"lastName":"Vollmann","firstName":"William","phone":"8769870987","id":"87643","age":"57"},{"lastName":"Munro","firstName":"Alice","gender":"F","id":"9876","age":"65"},
{"lastName":"Dimpsey","firstName":"Pearl","phone":"4528769876","office":"none","id":"98776"},{"lastName":"Dimpsey","firstName":"Robert","phone":"4528769876","office":"trulyhouse","id":"65764"}]