CS5551 – Advanced Software Engineering

Dr. Yugyung Lee

Assignment# 7

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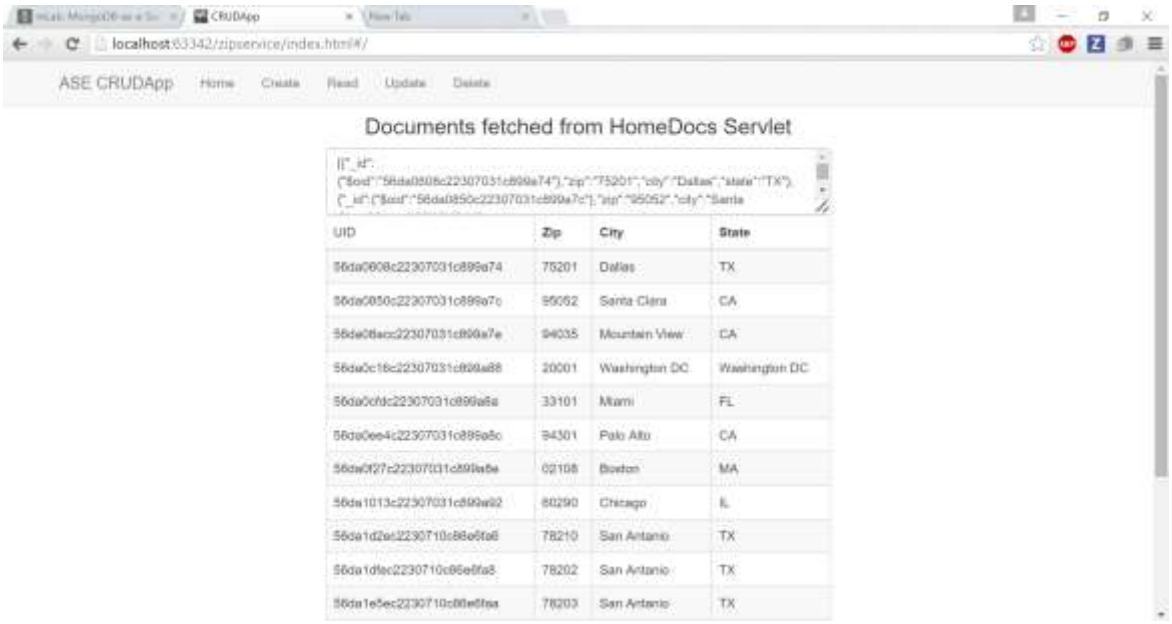
Task: Develop a CRUD Application.

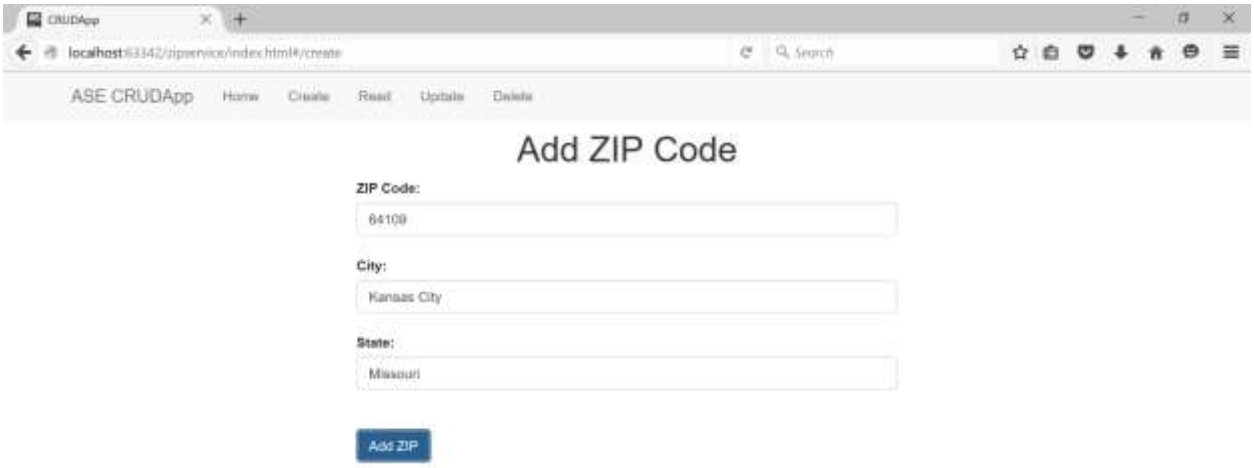
Application: Zip code service.

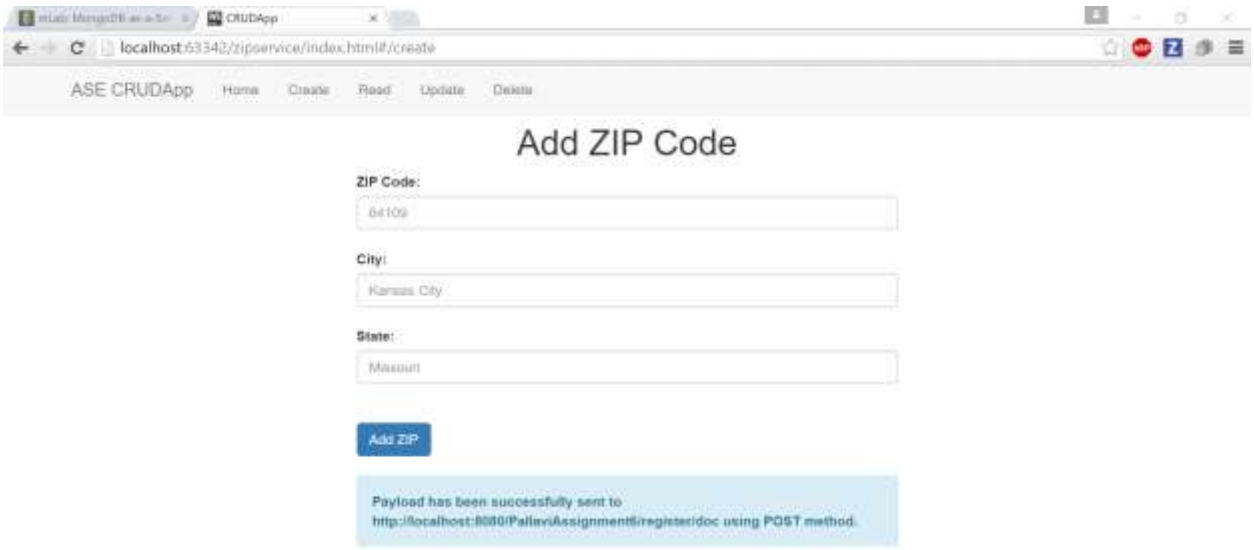
Steps:

1. Open existing Project on Eclipse and create a new Java file for handling POST requests (**CREATE**). POST, GET, PUT, DELETE requests will be handled by doPost, doGet, doPut and doDelete methods of HttpServlet class.
2. Create an account on mlab.com, which is a Mongo as a Service provider. Create a Database and a collection (zipcodes) in the database.
3. In order to communicate with MongoDB, we will need MongoDB drivers, which are included in build path of the project.
4. Register.java file is used to insert documents into the Collection. URL Pattern for RegistrationServlet is */register/post*.
5. RetrieveDoc.java file is used to read / find documents from the Collection. URL Pattern for RetrieveServelet is */retrieve/doc*.
6. UpdateDoc.java file is used to update documents in the collection. URL Pattern for UpdateServlet is */update/doc*.
7. DeleteDoc.java file is used to delete document in the collection using remove function. URL Pattern for DeleteServlet is */delete/doc*.
8. An AngularJS application is developed to make HTTP calls to the CRUD application. The homepage of the application displays all the available documents in both raw JSON format and tabular form.

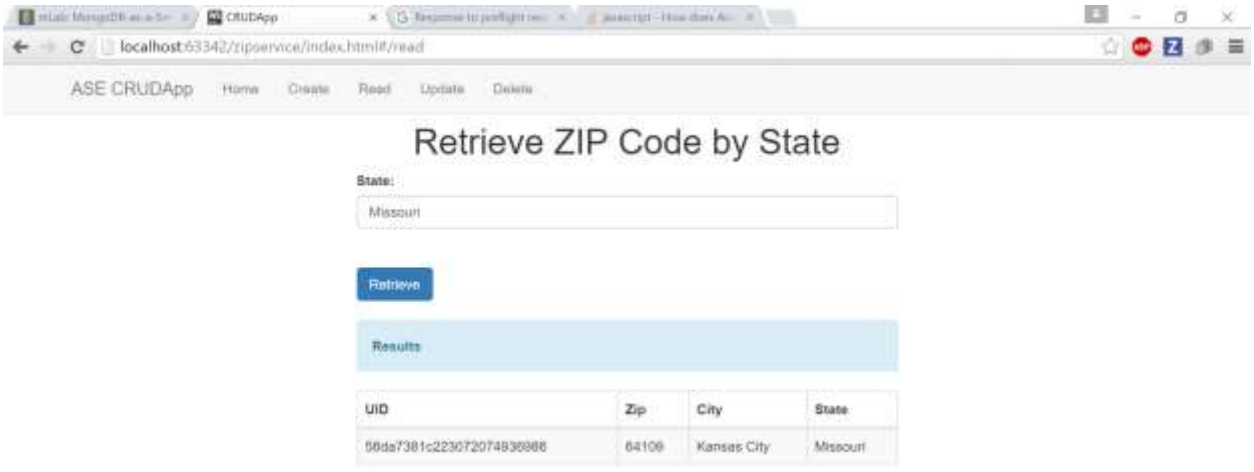


9. Create view of the app will generate a payload and send the payload to the Java Middleware using POST method to create a document in collection.

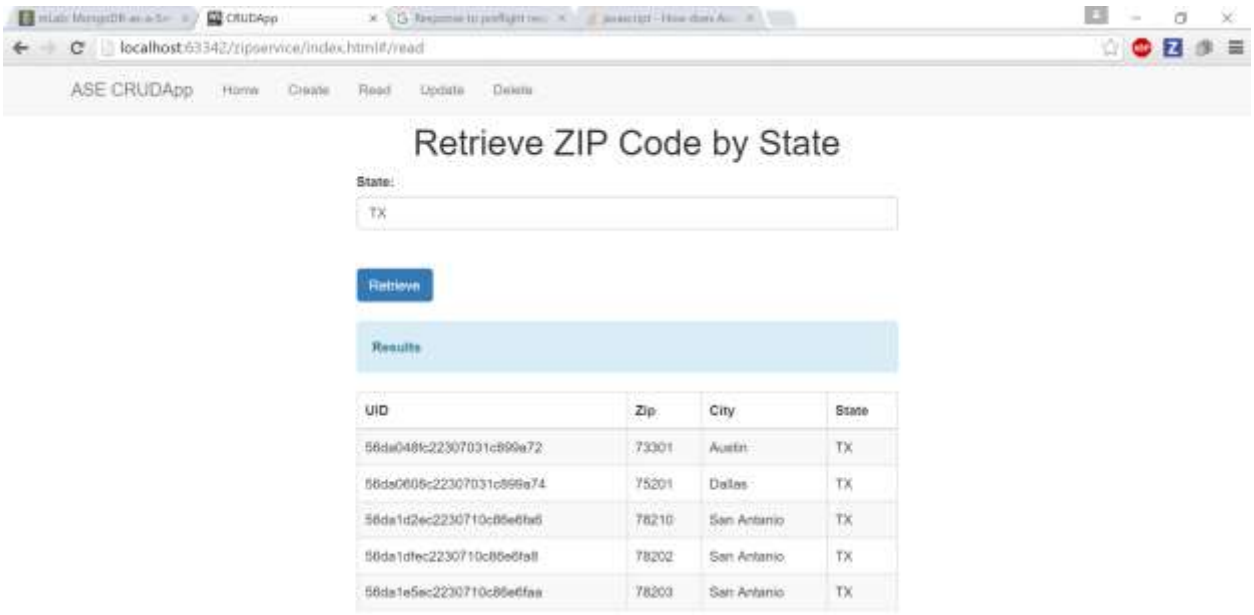




10. Retrieve view of the app will request documents using Java Middleware and fetch the collection based on the *state* (example: TX for Texas) parameter provided by the user using GET method.

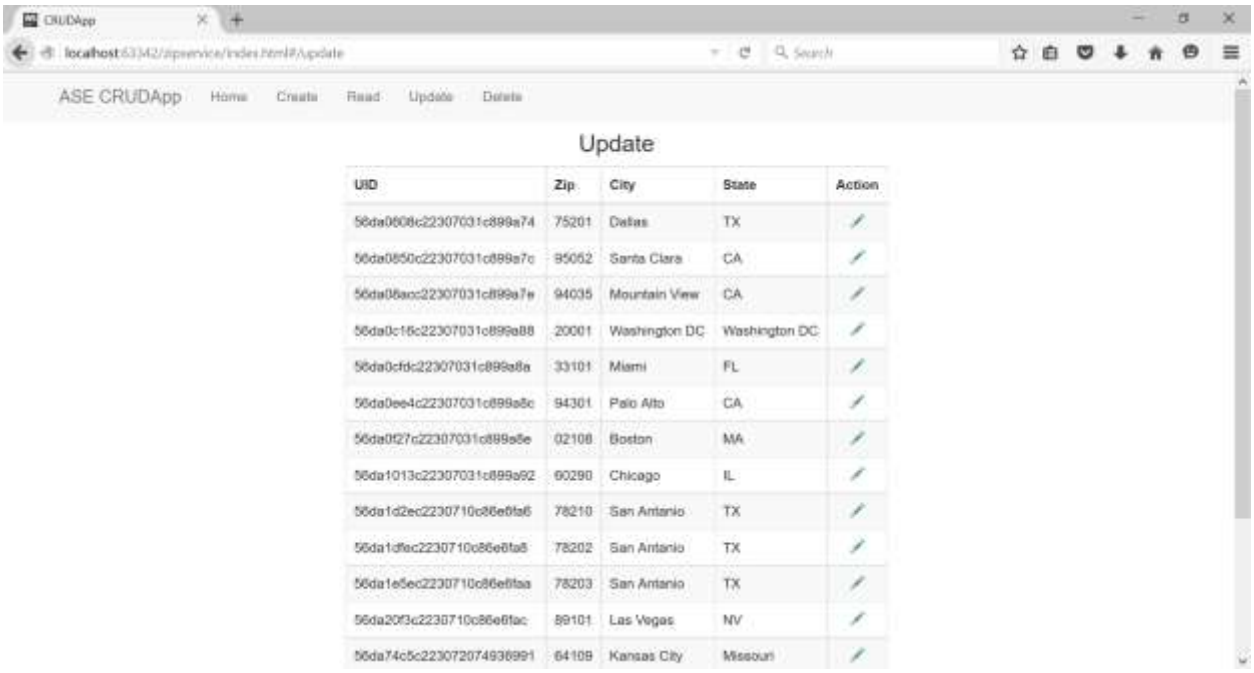

CRUDApp
localhost:63342/zipservice/index.html#/read
ASE CRUDApp
Home
Create
Read
Update
Delete
Retrieve ZIP Code by State
State:
Missouri
Retrieve
Results
UID
Zip
City
State
58da7381c223072074836986
64109
Kansas City
Missouri


CRUDApp
localhost:63342/zipservice/index.html#/read
ASE CRUDApp
Home
Create
Read
Update
Delete
Retrieve ZIP Code by State
State:
Missouri
Please wait..

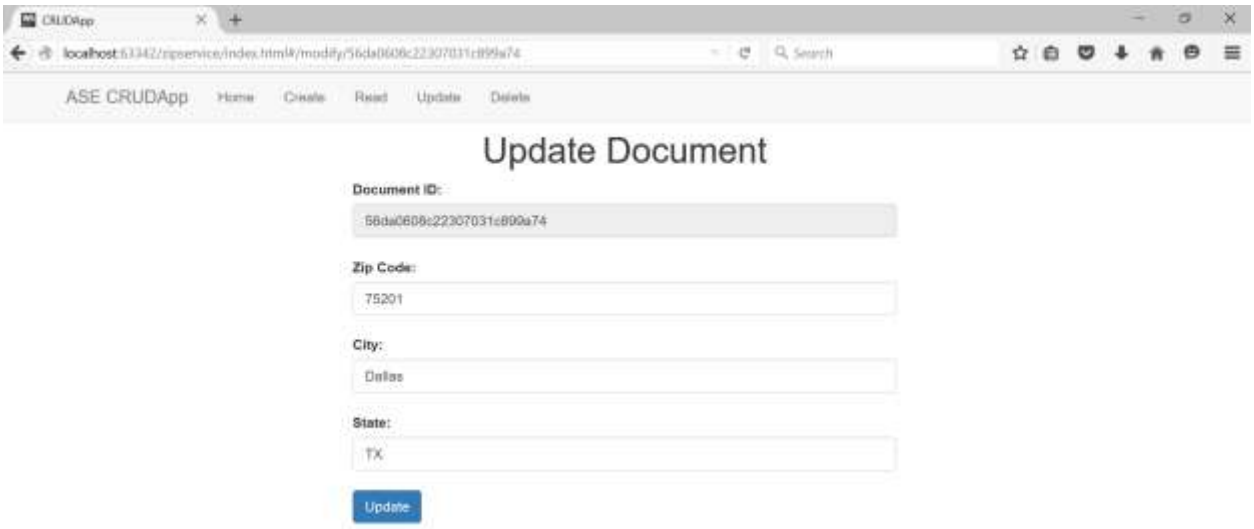


11. Update view of the app displays available list of documents and upon clicking edit button opens a new view that will update the document in the collection based on the unique object ID ($oid) of the document using POST method.

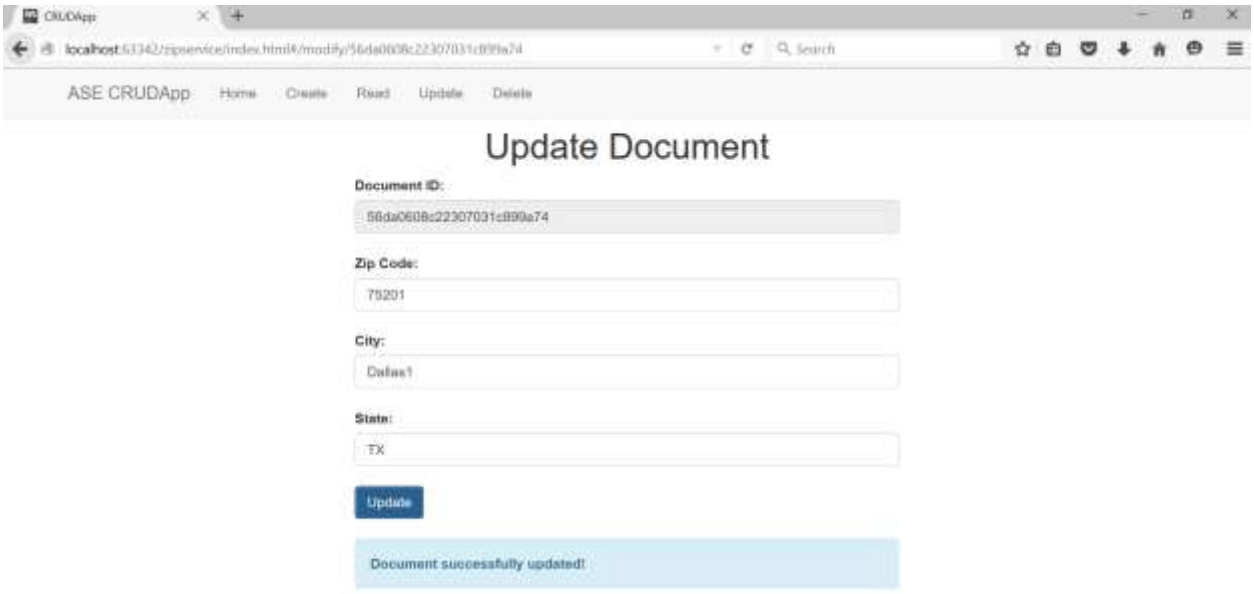
    List of Documents



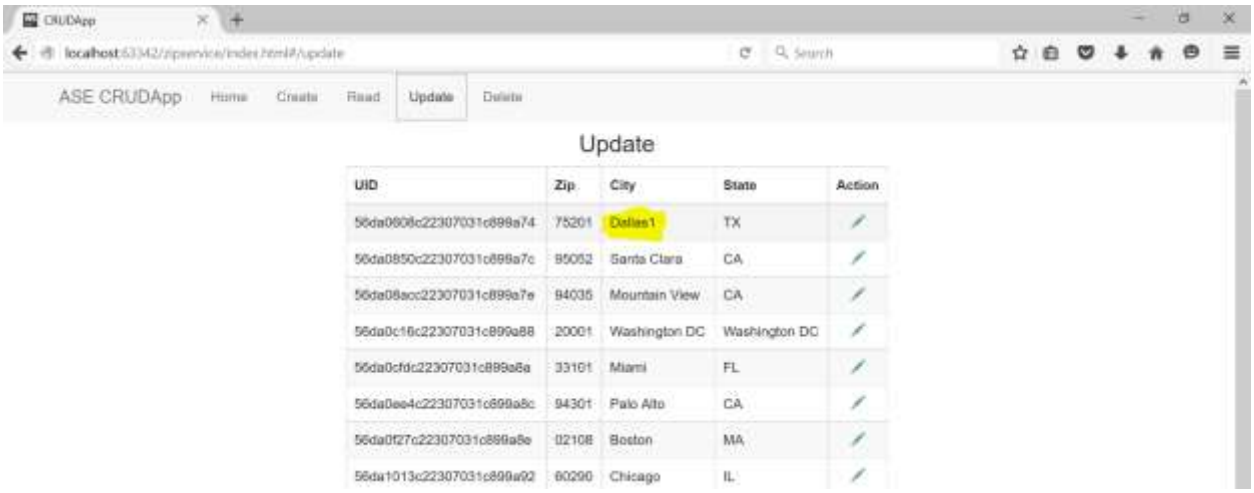
Document Details



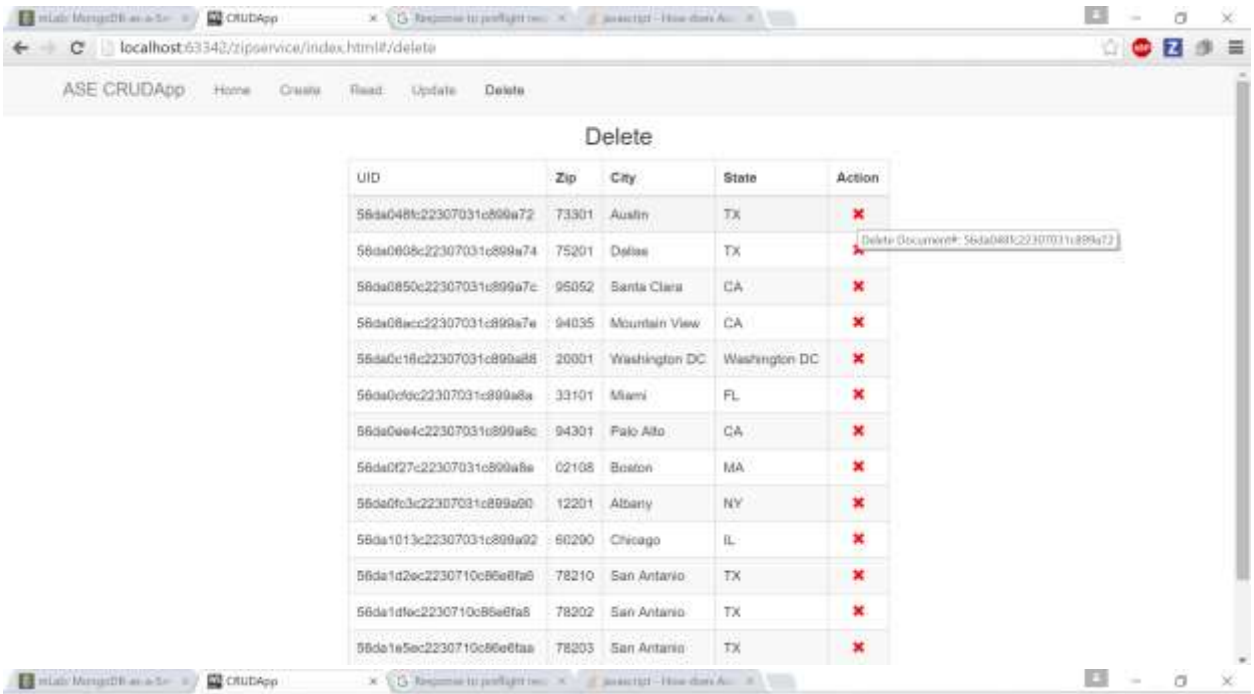
Changes

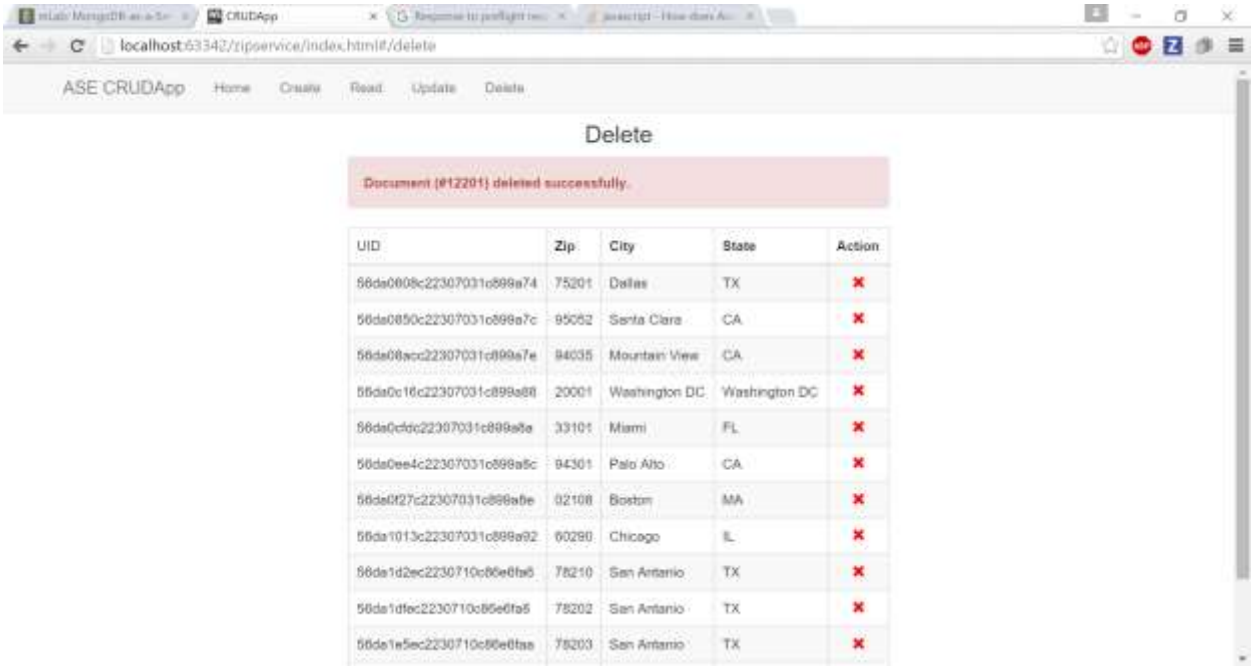


Updated Documents



12. Delete view of the app will delete the document in the collection based on the zipcode parameter. Upon deletion a confirmation message is displayed.


CRUDApp
localhost:63342/zipservice/index.html#/delete
ASE CRUDApp
Home
Create
Read
Update
Delete
Delete
UID
Zip
City
State
Action
56da048fc22307031c899a72 73301 Austin TX
56da0808c22307031c899a74 75201 Dallas TX
56da0850c22307031c899a7c 95052 Santa Clara CA
56da08accc22307031c899a7e 94035 Mountain View CA
56da0c16c22307031c899a88 20001 Washington DC Washington DC
56da0cfdc22307031c899a8a 33101 Miami FL
56da0ee4c22307031c899a8c 94301 Palo Alto CA
56da0f27c22307031c899a8e 02108 Boston MA
56da0fc3c22307031c899a90 12201 Albany NY
56da1013c22307031c899a92 60290 Chicago IL
56da1d2ec2230710c86e6fa6 78210 San Antonio TX
56da1dfec2230710c86e6fa8 78202 San Antonio TX
56da1e5ec2230710c86e6faa 78203 San Antonio TX


CRUDApp
localhost:63342/zipservice/index.html#/delete
ASE CRUDApp
Home
Create
Read
Update
Delete
Delete
Document (#12201) deleted successfully.
UID
Zip
City
State
Action
56da0808c22307031c899a74 75201 Dallas TX
56da0850c22307031c899a7c 95052 Santa Clara CA
56da08accc22307031c899a7e 94035 Mountain View CA
56da0c16c22307031c899a88 20001 Washington DC Washington DC
56da0cfdc22307031c899a8a 33101 Miami FL
56da0ee4c22307031c899a8c 94301 Palo Alto CA
56da0f27c22307031c899a8e 02108 Boston MA
56da1013c22307031c899a92 60290 Chicago IL
56da1d2ec2230710c86e6fa6 78210 San Antonio TX
56da1dfec2230710c86e6fa8 78202 San Antonio TX
56da1e5ec2230710c86e6faa 78203 San Antonio TX