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1  const express = require("express")
2  const path = require("path")
3  const fetch = require("node-fetch")
4  const app = express()
5  const AWS = require("aws-sdk");
6  const port = 8080
7
8  const AWS_BUCKET = "csu44000assign2useast20";
9  const AWS_FILENAME = "moviedata.json";
10
11  AWS.config.update({
12      region: "us-east-1"
13  });
14
15  var dynamodb = new AWS.DynamoDB();
16  var docClient = new AWS.DynamoDB.DocumentClient();
17
18  let publicPath = path.resolve(__dirname, "public")
19  app.use(express.static(publicPath))
20  app.get("/", function (req, res) {res.sendFile(path
    .join(__dirname + "/client.html"))})
21
22  app.listen(port, function () {
23      console.log("App is listening on port " +port)
24  })
25
26  app.post('/create', (req, res) => {
27      var params = {
28          TableName: "Movies",
29          KeySchema: [
30              { AttributeName: "year", KeyType: "HASH
31              " }, //Partition key
32              { AttributeName: "title", KeyType: "
33              RANGE" } //Sort key
34          ],
35          AttributeDefinitions: [
36              { AttributeName: "year", AttributeType
37              : "N" },
38              { AttributeName: "title", AttributeType
39              : "S" }
40          ],
41          ProvisionedThroughput: {
42              ReadCapacityUnits: 1,
43              WriteCapacityUnits: 1
44          }
45      }
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40     }
41 };
42     dynamodb.createTable(params, function (err,
data) {
43         if (err) {
44             console.error("Error creating table :\"",
JSON.stringify(err, null, 2));
45         } else {
46             console.log("Created table successfully
:", JSON.stringify(data, null, 2));
47         }
48     });
49     var s3params = {
50         Bucket: AWS_BUCKET,
51         Key: AWS_FILENAME
52     }
53     var s3 = new AWS.S3();
54     s3.getObject(s3params, function (err, data) {
55         if (err) {
56             console.log(err, err.stack);
57         } else {
58             var allMovies = JSON.parse(data.Body.
toString());
59             allMovies.forEach(function (movie) {
60                 var params = {
61                     TableName: "Movies",
62                     Item: {
63                         "year": movie.year,
64                         "title": movie.title,
65                         "director": movie.info.
directors,
66                         "rating": movie.info.rating
67                     },
68                     "rank": movie.info.rank,
69                     "release_date": movie.info.
release_date
70                 };
71             }
72             docClient.put(params, function (err
, data) {
73                 if (err) {
74                     console.error("Error adding
movie to database :", movie.title, ". Error JSON:"

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74 , JSON.stringify(err, null, 2));
75         } else {
76             console.log("Added movie
successfully :", movie.title);
77         }
78     });
79 });
80 }
81     console.log("Database created successfully
");
82 })
83 });
84
85
86 app.post('/query/:title/:year', (req, res) => {
87     var myArray = {
88         myList :[]
89     }
90     var year = parseInt(req.params.year)
91     var title = req.params.title
92     var params = {
93         TableName : "Movies",
94         ProjectionExpression:"#yr, title, director
, rating, #r, #re",
95         KeyConditionExpression: "#yr = :yyyy and
begins_with (title, :letter1)",
96         ExpressionAttributeNames:{
97             "#yr": "year",
98             "#r": "rank",
99             "#re": "release"
100     },
101     ExpressionAttributeValues: {
102         ":yyyy": year,
103         ":letter1": title
104     }
105 };
106
107     docClient.query(params, function(err, data) {
108         if (err) {
109             console.log("Error querying database:"
, JSON.stringify(err, null, 2));
110         } else {
111             data.Items.forEach(function(item) {
112                 console.log(item.year + ' ' + item.

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112 title+' ' + item.director+' ' + item.rating);
113         var yearPush = item.year
114         var titlePush = item.title
115         var directorPush = item.director
116         var ratingPush = item.rating
117         var rankPush = item.rank
118         var releasePush = item.release
119         myArray.myList.push(
120             {
121                 Title: titlePush,
122                 Year : yearPush,
123                 Director: directorPush,
124                 Rating: ratingPush,
125                 Rank: rankPush,
126                 Release: releasePush
127             }
128         )
129     });
130     console.log("Query executed
successfully.");
131     res.json(myArray)
132 }
133 });
134 });
135
136
137
138 app.post('/delete', (req, res) => {
139     console.log("Deleting Database");
140     var params = {TableName : "Movies"};
141     dynamodb.deleteTable(params, function(err,
data) {
142         if (err) {
143             console.error("Error deleting table :",
JSON.stringify(err, null, 2));
144         } else {
145             console.log("Deleted table
successfully :", JSON.stringify(data, null, 2));
146         }
147     });
148 });
```