# ASSIGNMENT 1: PART C

**Task A** : **Screenshots of process of creating table and inserting and updating data in table "*Parks_NovaScotia*".**



***Figure 1.*** *Screenshot of manual creation of Parks_NovaScotia table.*
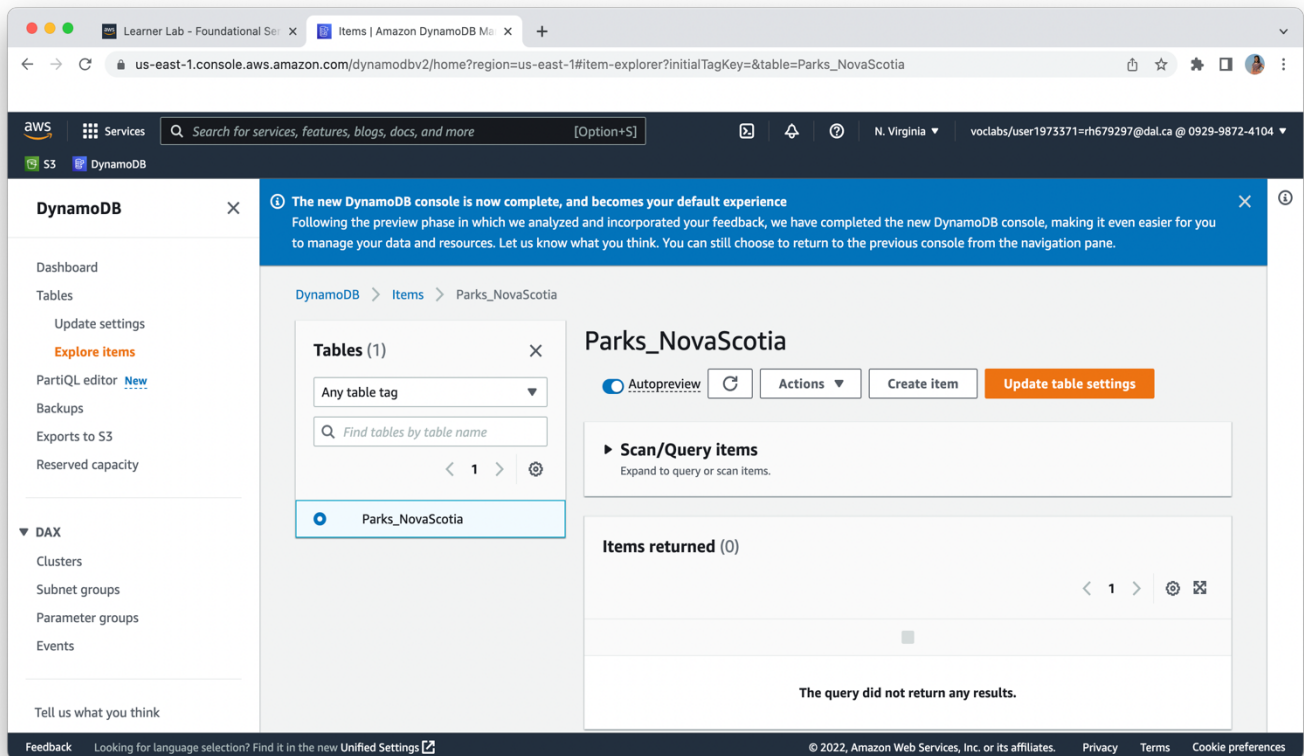
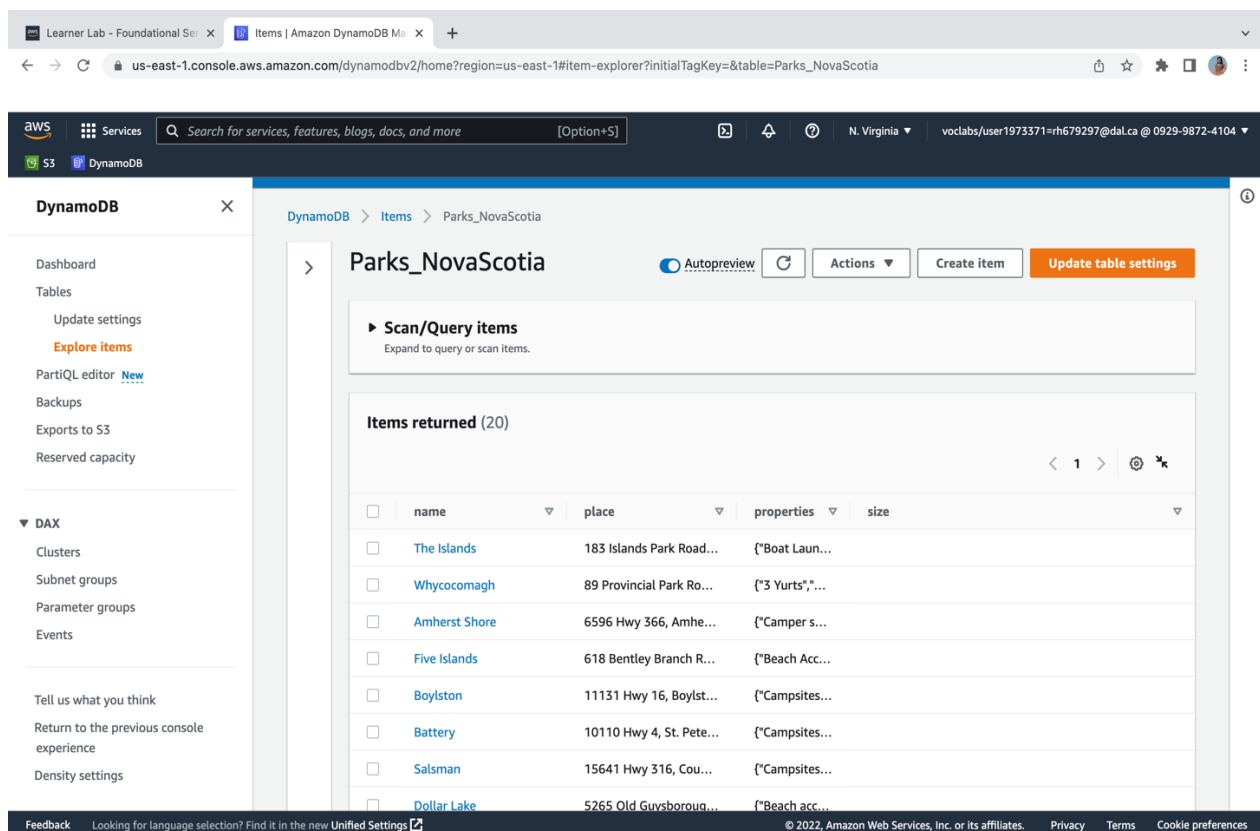**Figure 2.** *Screenshot of empty table.*



**Figure 3.** *Screenshot of inserted data using insertIntoTable() class.*
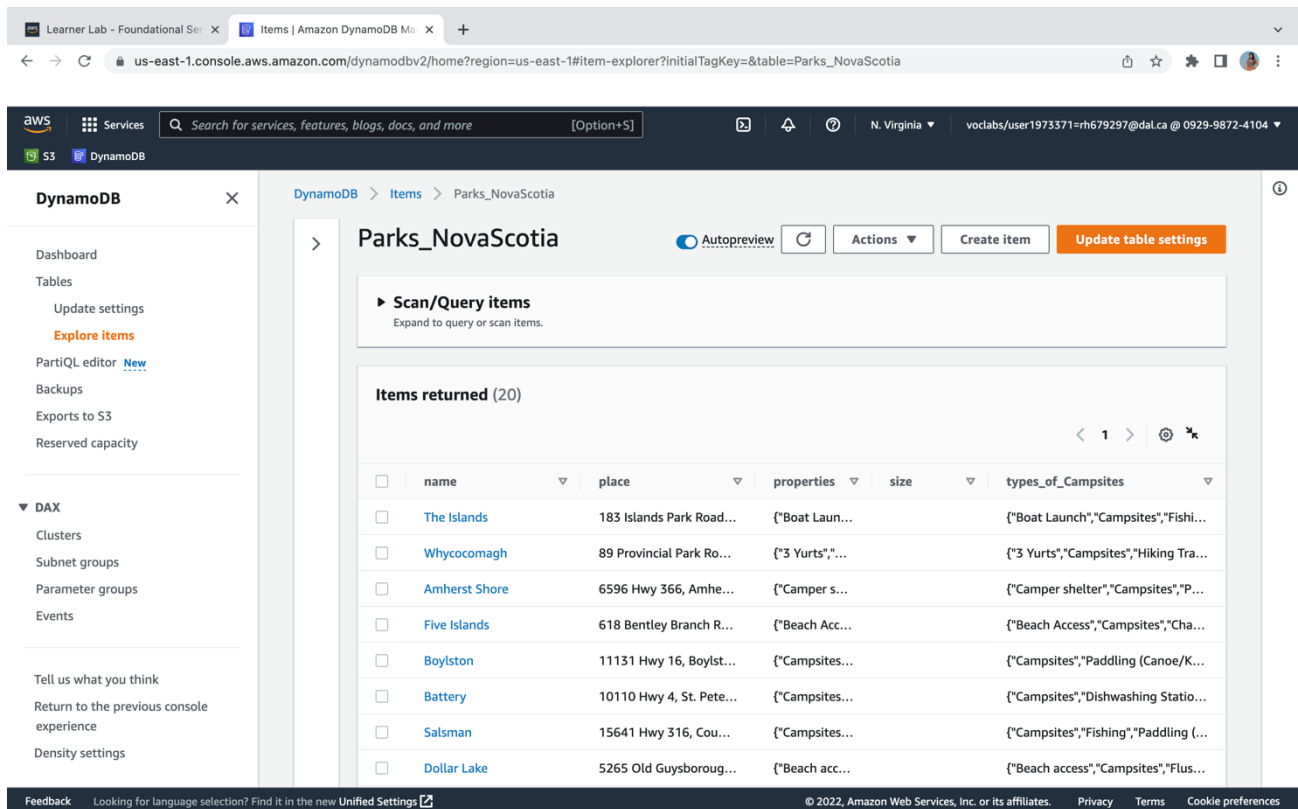
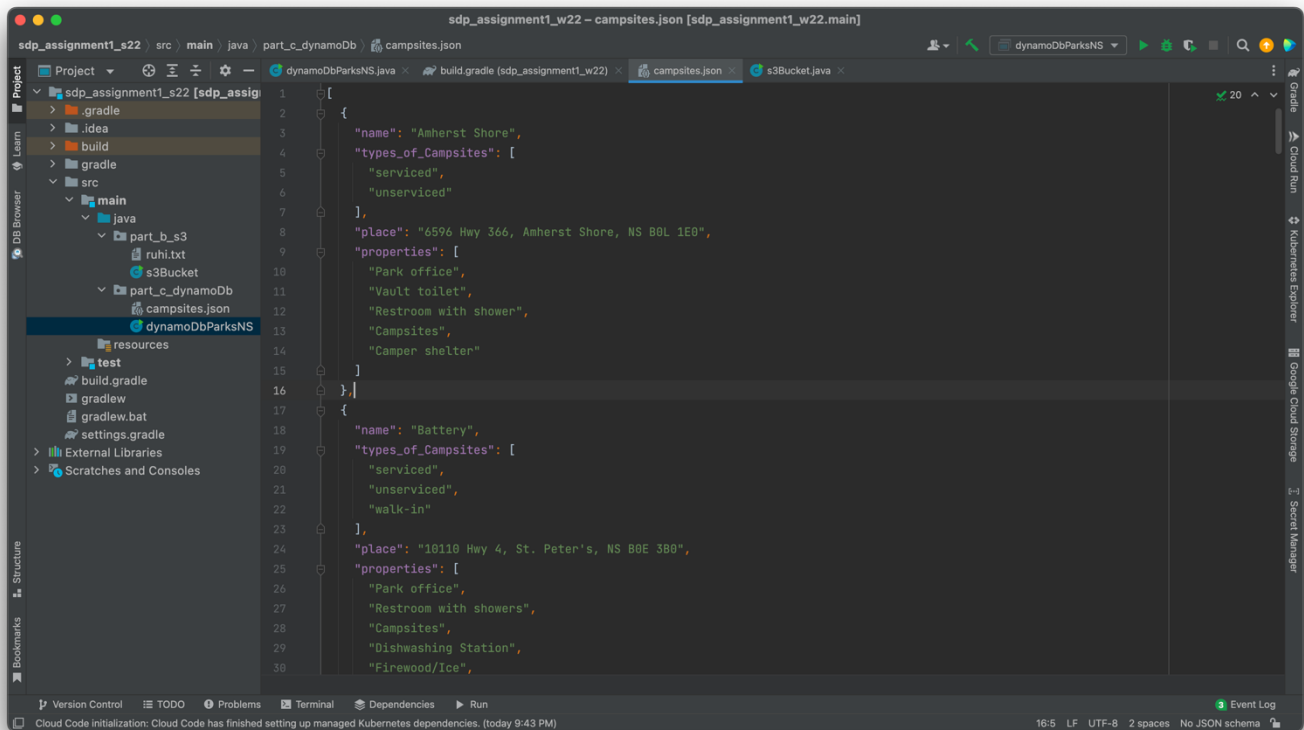**Figure 4.** *Screenshot of updated data using updateTable() class.*



**Figure 5.** *Screenshot of campsites.json file used for inserting and updating data.*

**Task B** : **Code snapshot.**

*dynamoDbParksNS.java*

```java
package part_c_dynamoDb;

import com.amazonaws.AmazonServiceException;
import com.amazonaws.services.dynamodbv2.AmazonDynamoDB;
import com.amazonaws.services.dynamodbv2.AmazonDynamoDBClientBuilder;
import com.amazonaws.services.dynamodbv2.model.*;
import org.json.simple.JSONArray;
import org.json.simple.JSONObject;
import org.json.simple.parser.JSONParser;
import java.io.Reader;
import java.nio.file.Files;
import java.nio.file.Paths;
import java.util.ArrayList;
import java.util.HashMap;
import java.util.Map;

public class dynamoDbParksNS {
    // method to insert data into the table
    public static void insertIntoTable(String tableName) {
        JSONParser jsonParser = new JSONParser();
        try {
            Reader reader =
Files.newBufferedReader(Paths.get("/Users/ruhityagi/Downloads/sdp_assignment1_s22/src/m
ain/java/part_c_dynamoDb/campsites.json"));
            Object obj = jsonParser.parse(reader);
            JSONArray campSites = (JSONArray) obj;
            campSites.forEach(camp -> {
                HashMap<String, AttributeValue> item_values =
                        new HashMap<String, AttributeValue>();
                item_values.put("name", new AttributeValue((String) ((JSONObject)
camp).get("name")));
                item_values.put("place", new AttributeValue((String) ((JSONObject)
camp).get("place")));
                if (((JSONObject) camp).get("size") != null) {
                    item_values.put("size", new AttributeValue((String) ((JSONObject)
camp).get("size")));
                }
                item_values.put("properties", new AttributeValue((ArrayList<String>)
((JSONObject) camp).get("properties")));
                final AmazonDynamoDB ddb = AmazonDynamoDBClientBuilder.defaultClient();
                try {
                    ddb.putItem(tableName, item_values);
                } catch (AmazonServiceException e) {
                    e.printStackTrace();
                }
            });
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
    //method to update types_ofcampsites in table
    public static void updateTable(String tableName) {
        JSONParser jsonParser = new JSONParser();
        try {
            Reader reader =
Files.newBufferedReader(Paths.get("/Users/ruhityagi/Downloads/sdp_assignment1_s22/src/m
ain/java/part_c_dynamoDb/campsites.json"));
            Object obj = jsonParser.parse(reader);
            JSONArray campSites = (JSONArray) obj;
```

```java
            campSites.forEach(camp -> {
                UpdateItemRequest request = new UpdateItemRequest();
                request.setTableName(tableName);
                request.setReturnConsumedCapacity(ReturnConsumedCapacity.TOTAL);
                request.setReturnValues(ReturnValue.UPDATED_OLD);
                Map<String, AttributeValue> keysMap = new HashMap<>();
                keysMap.put("name", new AttributeValue((String) ((JSONObject)
camp).get("name")));
                keysMap.put("place", new AttributeValue((String) ((JSONObject)
camp).get("place")));
                request.setKey(keysMap);
                Map<String, AttributeValueUpdate> map = new HashMap<>();
                map.put("types_of_Campsites", new AttributeValueUpdate(
                        new AttributeValue((ArrayList<String>) ((JSONObject)
camp).get("properties")), "PUT"));
                request.setAttributeUpdates(map);
                try {
                    AmazonDynamoDB dbClient =
AmazonDynamoDBClientBuilder.defaultClient();
                    dbClient.updateItem(request);
                } catch (Exception e) {
                    e.printStackTrace();
                }
            });
        } catch (Exception e) {
            e.printStackTrace();
        }
    }

    public static void main(String[] args) {
        insertIntoTable("Parks_NovaScotia");
        updateTable("Parks_NovaScotia");
    }
}
```

**_campsites.json:_**

```json
[
  {
    "name": "Amherst Shore",
    "types_of_Campsites": [
      "serviced",
      "unserviced"
    ],
    "place": "6596 Hwy 366, Amherst Shore, NS B0L 1E0",
    "properties": [
      "Park office",
      "Vault toilet",
      "Restroom with shower",
      "Campsites",
      "Camper shelter"
    ]
  },
  {
    "name": "Battery",
    "types_of_Campsites": [
      "serviced",
      "unserviced",
      "walk-in"
    ],
    "place": "10110 Hwy 4, St. Peter's, NS B0E 3B0",
    "properties": [
```

```json
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Dishwashing Station",
      "Firewood/Ice",
      "Program Area"
    ]
  },
  {
    "name": "Blomidon",
    "types_of_Campsites": [
      "unserviced",
      "group campsite"
    ],
    "place": "3138 Pereau Road, Canning, NS B0P 1H0",
    "properties": [
      "Park office",
      "Registration Kiosk",
      "Restrooms with showers",
      "Day Use/Picnic Area",
      "Hiking Trail"
    ],
    "size": "759 ha (1,875 acres)"
  },
  {
    "name": "Boylston",
    "types_of_Campsites": [
      "unserviced"
    ],
    "place": "11131 Hwy 16, Boylston, NS B0H 1N0",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Program Area",
      "Shoreline Access",
      "Paddling (Canoe/Kayak)"
    ]
  },
  {
    "name": "Cape Chignecto",
    "types_of_Campsites": [
      "backcountry",
      "walk-in",
      "kayak",
      "group campsite"
    ],
    "place": "1108 West Advocate Road, Advocate Harbour, NS B0M 1A0",
    "properties": [
      "Park office",
      "Pit Privies",
      "BBQ's/Fires",
      "Look Off"
    ]
  },
  {
    "name": "Caribou-Munroes Island",
    "types_of_Campsites": [
      "serviced",
      "unserviced",
      "walk-in"
    ],
    "place": "2119 Three Brooks Road, Caribou, NS B0K 1H0",
    "properties": [
```

```json
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Trailer Dump",
      "Swimming Unsupervised",
      "Day Use/Picnic Area"
    ]
  },
  {
    "name": "Dollar Lake",
    "types_of_Campsites": [
      "unserviced",
      "group campsite"
    ],
    "place": "5265 Old Guysborough Road, Wyses Corner, NS B0N 1V0",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Flush toilets (day use)",
      "Beach access"
    ]
  },
  {
    "name": "Ellenwood Lake",
    "types_of_Campsites": [
      "serviced",
      "unserviced",
      "walk-in"
    ],
    "place": "1888 Mood Road, Deerfield, NS B0W 3E0",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Registration Kiosk",
      "Firewood/Ice",
      "Beach Access",
      "Change House"
    ],
    "size": "114 ha (280 acre)"
  },
  {
    "name": "Five Islands",
    "types_of_Campsites": [
      "serviced",
      "unserviced",
      "walk-in"
    ],
    "place": "618 Bentley Branch Road (Hwy 2), Five Islands, NS B0M 1K0",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Firewood/Ice",
      "Beach Access",
      "Change House"
    ]
  },
  {
    "name": "Graves Island",
    "types_of_Campsites": [
      "serviced",
      "unserviced",
      "walk-in"
```

```
    ],
    "place": "230 Graves Island Road, East Chester, NS B0J 1J0",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Paddling (Canoe/Kayak)",
      "Firewood/Ice",
      "Beach Access",
      "Change House"
    ]
  },
  {
    "name": "Laurie",
    "types_of_Campsites": [
      "unserviced",
      "walk-in"
    ],
    "place": "4949 Hwy 2, Grand Lake, NS B0N 1Z0\n",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Paddling (Canoe/Kayak)",
      "Firewood/Ice",
      "Beach Access"
    ]
  },
  {
    "name": "Mira River",
    "types_of_Campsites": [
      "serviced",
      "unserviced",
      "walk-in"
    ],
    "place": "439 Brickyard Road, Albert Bridge, NS  B1K 2R9",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Paddling (Canoe/Kayak)",
      "Firewood/Ice",
      "Unsupervised swimming"
    ]
  },
  {
    "name": "Porters Lake",
    "types_of_Campsites": [
      "serviced",
      "unserviced",
      "walk-in"
    ],
    "place": "1160 West Porters Lake Road, Porters Lake, NS B3E 1L3",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Paddling (Canoe/Kayak)",
      "Firewood/Ice",
      "Unsupervised swimming"
    ]
  },
  {
    "name": "Rissers Beach",
```

```json
    "types_of_Campsites": [
      "serviced",
      "unserviced",
      "walk-in"
    ],
    "place": "5366 Hwy 331, Crescent Beach, NS B4V 6P2",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Paddling (Canoe/Kayak)",
      "Firewood/Ice",
      "Unsupervised swimming"
    ]
  },
  {
    "name": "Salsman",
    "types_of_Campsites": [
      "unserviced"
    ],
    "place": "15641 Hwy 316, Country Harbour, NS B0H 1J0",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Paddling (Canoe/Kayak)",
      "Fishing"
    ]
  },
  {
    "name": "Smileys",
    "types_of_Campsites": [
      "unserviced",
      "walk-in",
      "group campsite"
    ],
    "place": "109 Clayton McKay Road, Hwy 14, Brooklyn, NS B0N 2A0",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Swimming Unsupervised",
      "Fishing",
      "Change House"
    ]
  },
  {
    "name": "The Islands",
    "types_of_Campsites": [
      "unserviced",
      "walk-in",
      "group campsite"
    ],
    "place": "183 Islands Park Road, Shelburne, NS B0T 1W0",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Fishing",
      "Boat Launch"
    ]
  },
  {
    "name": "Thomas Raddall",
```

```json
      "types_of_Campsites": [
        "unserviced",
        "walk-in",
        "group campsite"
      ],
      "place": "529 Raddall Park Road, Port Joli, NS B0T 1S0",
      "properties": [
        "Park office",
        "Restroom with showers",
        "Campsites",
        "Swimming Unsupervised",
        "Fishing",
        "Paddling (Canoe/Kayak)"
      ]
  },
  {
    "name": "Valleyview",
    "types_of_Campsites": [
      "unserviced",
      "walk-in",
      "group campsite"
    ],
    "place": "960 Hampton Mountain Road, Bridgetown, NS B0S 1L0",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "Day Use/Picnic Area",
      "Fishing",
      "Hiking Trail"
    ]
  },
  {
    "name": "Whycocomagh",
    "types_of_Campsites": [
      "serviced",
      "unserviced",
      "walk-in",
      "group campsite"
    ],
    "place": "89 Provincial Park Road, Whycocomagh, NS B0E 3M0",
    "properties": [
      "Park office",
      "Restroom with showers",
      "Campsites",
      "3 Yurts",
      "Hiking Trail",
      "Playground"
    ]
  }
]
```

**Link to gitlab: https://git.cs.dal.ca/rtyagi/csci5410_b00872269_ruhirajnish_tyagi/-/tree/main/src/main/java/part_c_dynamoDb**