



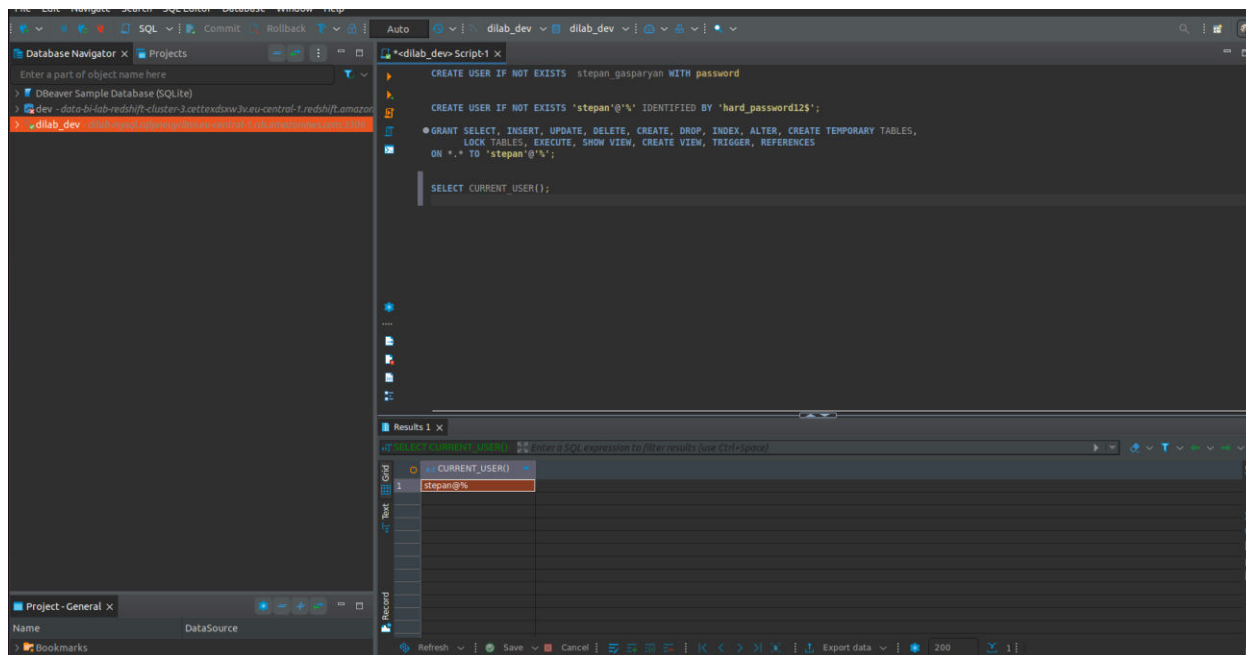
AWS Cloud Data Services

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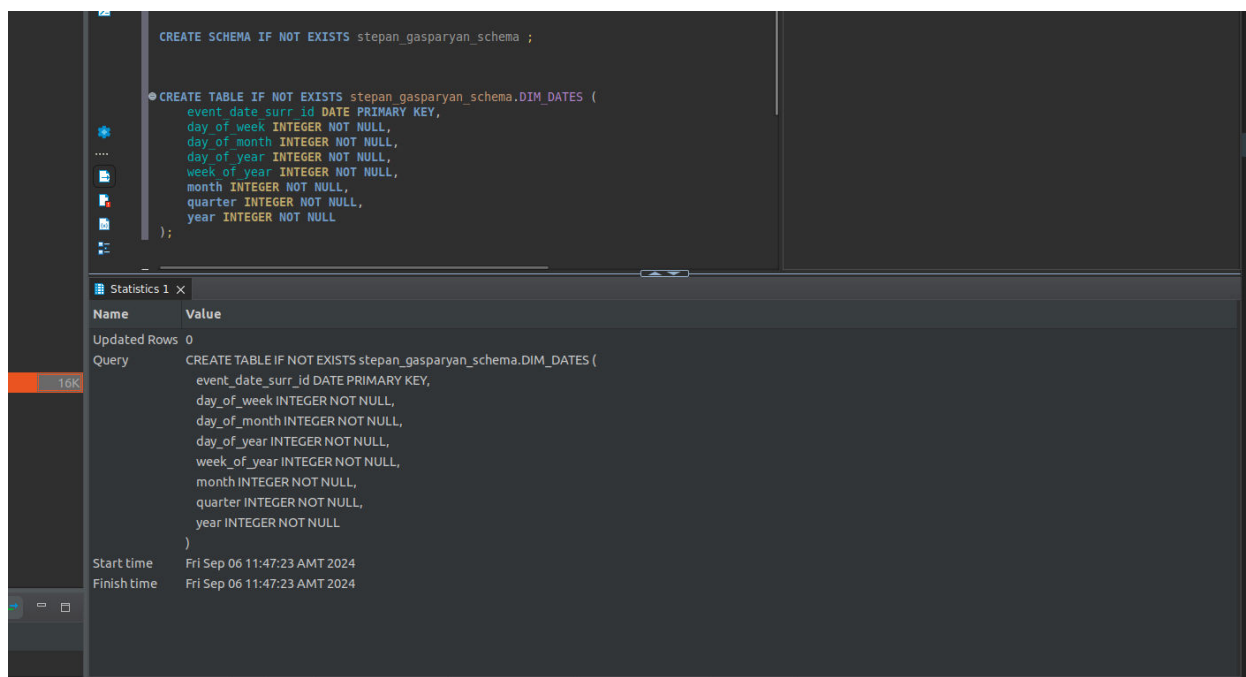
Confidential

1. RDS MYSQL

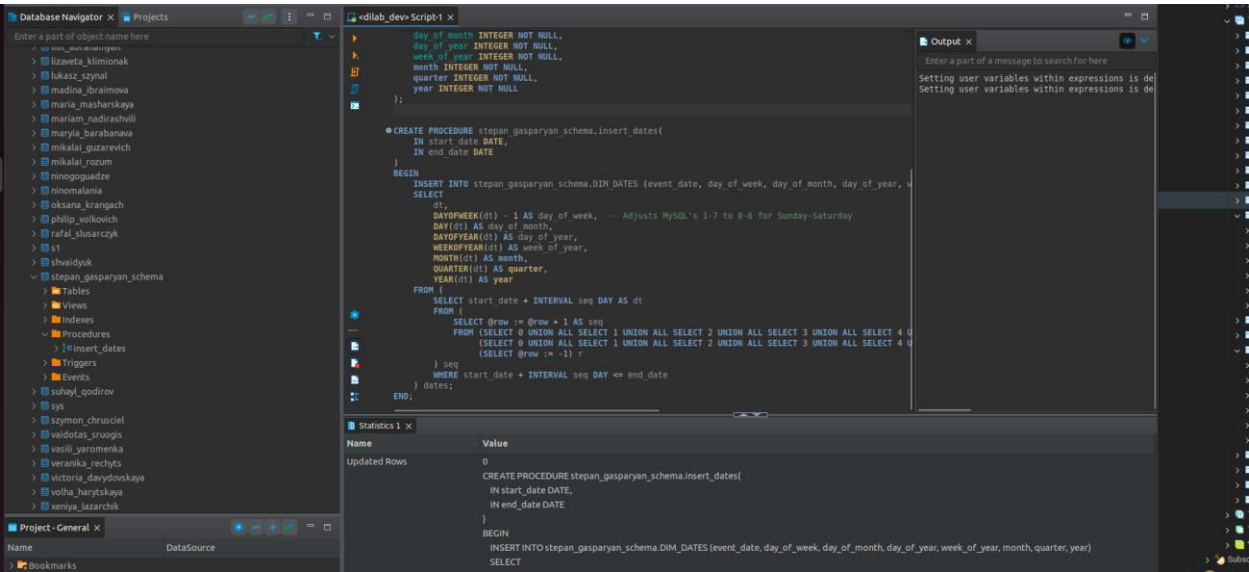
Connected and new user created with all necessary permissions.



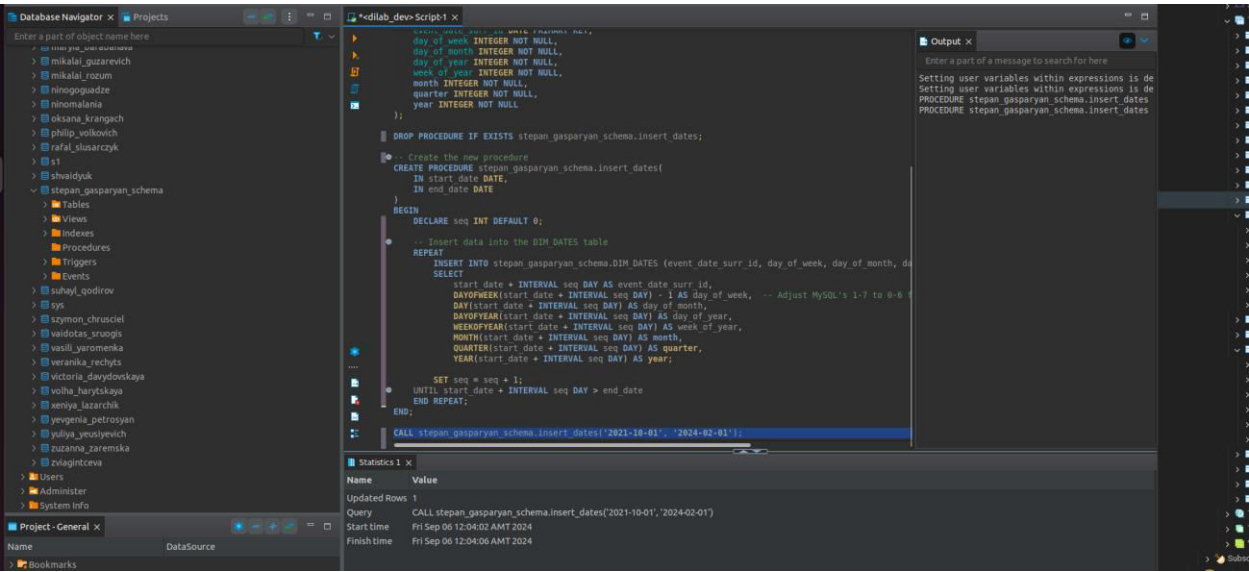
Schema and table created



Procedure to load some data into table



Loaded



The screenshot shows a Database Navigator interface with a table named DIM_DATES. The table has 39 rows and 14 columns. The columns are: event_date_surr_id, day_of_week, day_of_month, day_of_year, week_of_year, month, quarter, and year. The data represents a sequence of dates from 2021-10-01 to 2021-11-01.

event_date_surr_id	day_of_week	day_of_month	day_of_year	week_of_year	month	quarter	year
1	5	1	274	39	10	4	2021
2	6	2	275	39	10	4	2021
3	0	3	276	39	10	4	2021
4	1	4	277	40	10	4	2021
5	2	5	278	40	10	4	2021
6	3	6	279	40	10	4	2021
7	4	7	280	40	10	4	2021
8	5	8	281	40	10	4	2021
9	6	9	282	40	10	4	2021
10	0	10	283	40	10	4	2021
11	1	11	284	41	10	4	2021
12	2	12	285	41	10	4	2021
13	3	13	286	41	10	4	2021
14	4	14	287	41	10	4	2021
15	5	15	288	41	10	4	2021
16	6	16	289	41	10	4	2021
17	0	17	290	41	10	4	2021
18	1	18	291	42	10	4	2021
19	2	19	292	42	10	4	2021
20	3	20	293	42	10	4	2021
21	4	21	294	42	10	4	2021
22	5	22	295	42	10	4	2021
23	6	23	296	42	10	4	2021
24	0	24	297	42	10	4	2021
25	1	25	298	43	10	4	2021
26	2	26	299	43	10	4	2021
27	3	27	300	43	10	4	2021
28	4	28	301	43	10	4	2021
29	5	29	302	43	10	4	2021
30	6	30	303	43	10	4	2021
31	0	31	304	43	10	4	2021
32	1	1	305	44	11	4	2021
33	2	2	306	44	11	4	2021
34	3	3	307	44	11	4	2021
35	4	4	308	44	11	4	2021
36	5	5	309	44	11	4	2021
37	6	6	310	44	11	4	2021
38	0	7	311	44	11	4	2021
39	1	8	312	45	11	4	2021

2. RDS Aurora

Schema and table created in Aurora

The screenshot shows the Amazon RDS console with the SQL statement editor. The statement is to create a schema named 'stepan_gasparyan_schem' and a table named 'DIM_DATES' with the following columns: event_date_surr_id (DATE PRIMARY KEY), day_of_week (INTEGER NOT NULL), day_of_month (INTEGER NOT NULL), day_of_year (INTEGER NOT NULL), week_of_year (INTEGER NOT NULL), month (INTEGER NOT NULL), quarter (INTEGER NOT NULL), and year (INTEGER NOT NULL).

```

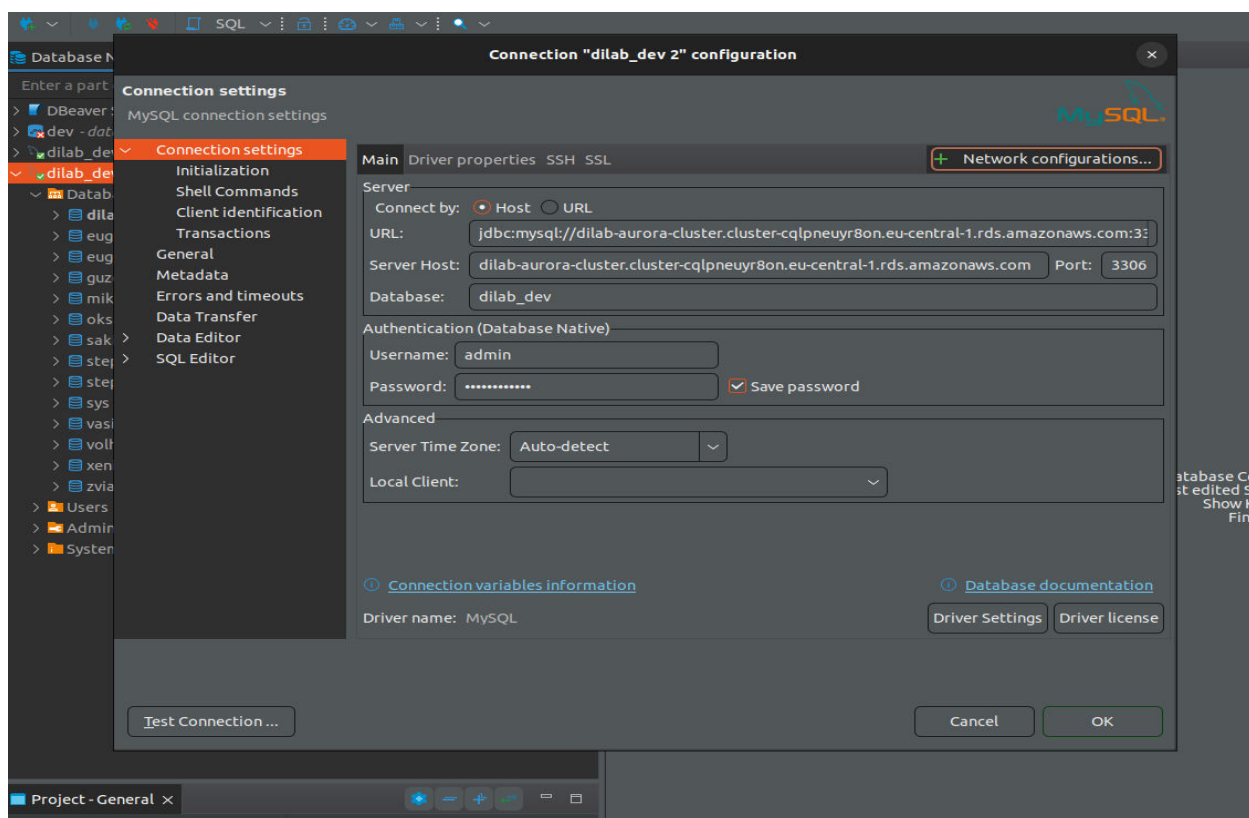
1 CREATE SCHEMA IF NOT EXISTS stepan_gasparyan_schem ;
2
3 CREATE TABLE IF NOT EXISTS stepan_gasparyan_schem.DIM_DATES (
4   event_date_surr_id DATE PRIMARY KEY,
5   day_of_week INTEGER NOT NULL,
6   day_of_month INTEGER NOT NULL,
7   day_of_year INTEGER NOT NULL,
8   week_of_year INTEGER NOT NULL,
9   month INTEGER NOT NULL,
10  quarter INTEGER NOT NULL,
11  year INTEGER NOT NULL
12 );
13

```

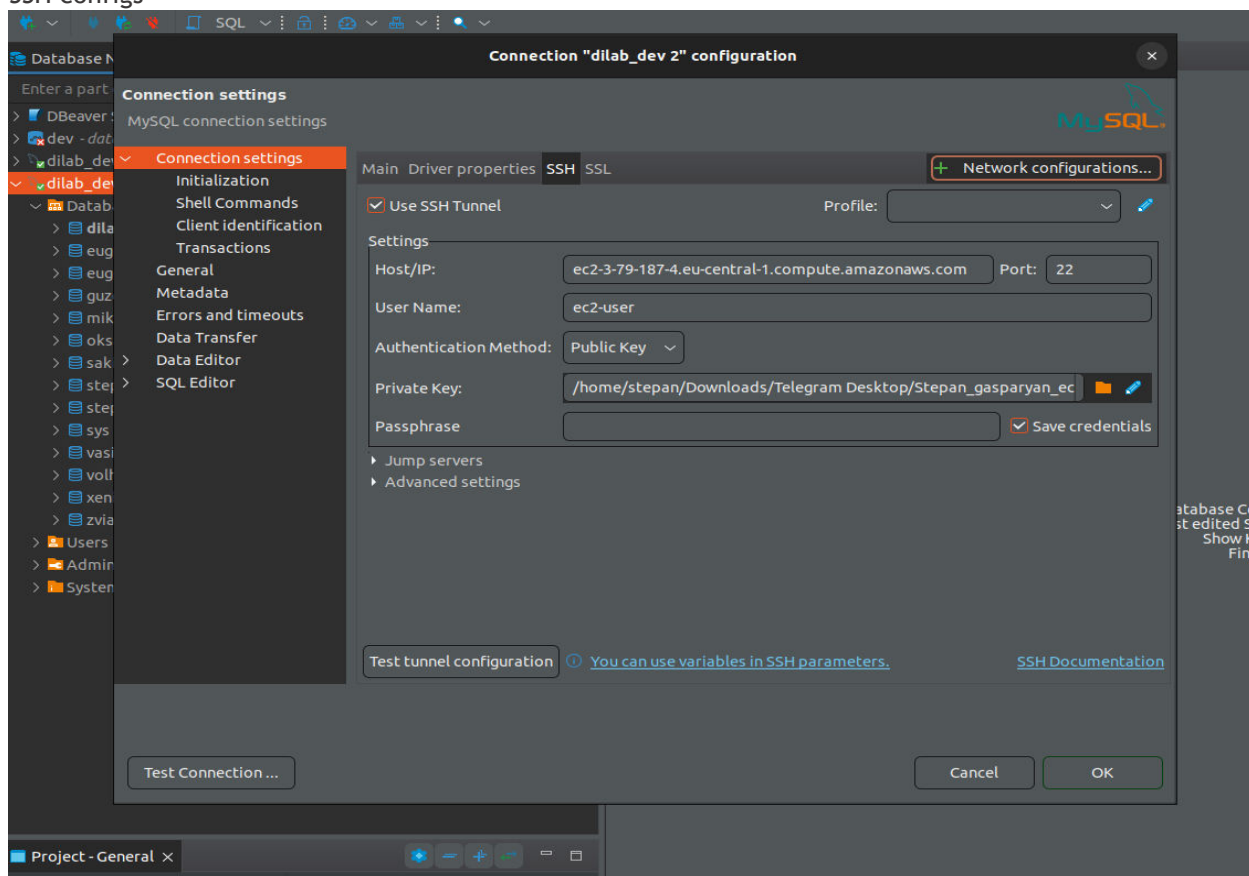
The output shows the statement was executed successfully at 13:42:7.

Id	Start	Statement
1	13:42:7	CREATE SCHEMA IF NOT EXISTS stepan_gasparyan_schem

Connecting to Aurora from my pc using SSH tunnel.



SSH configs



We can't connect directly to Aurora db because connection is not allowed from public and we need to connect to EC2 which is in same VPC subnet with Aurora db.

3. DynamoDB

Table created from AWS console

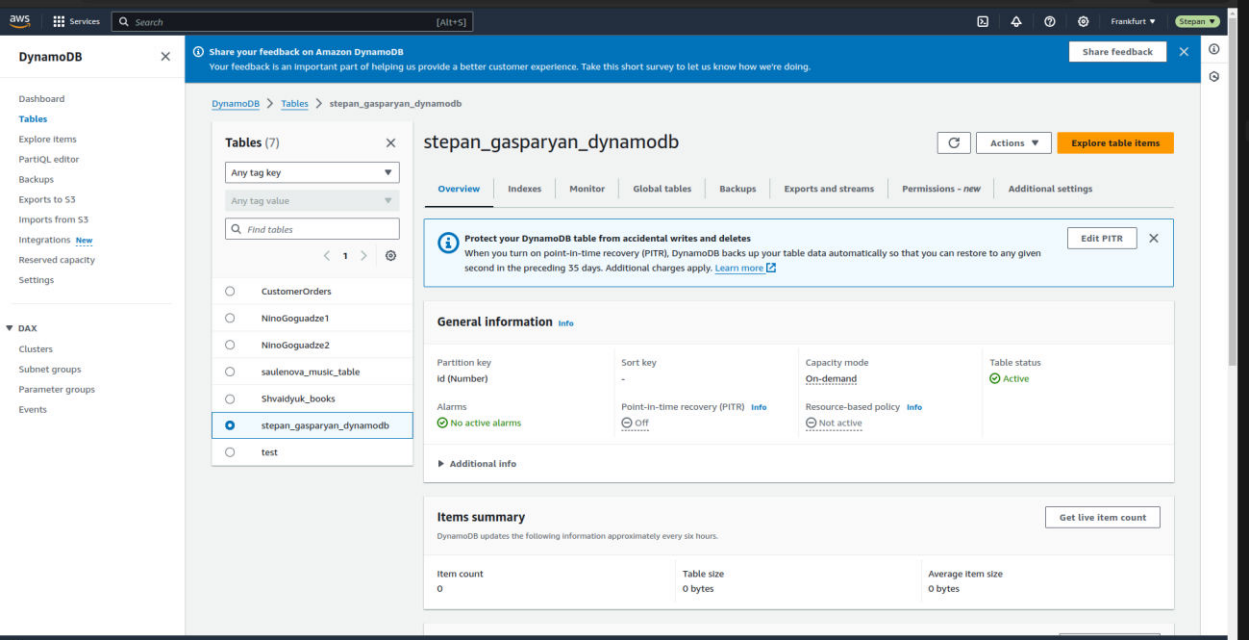
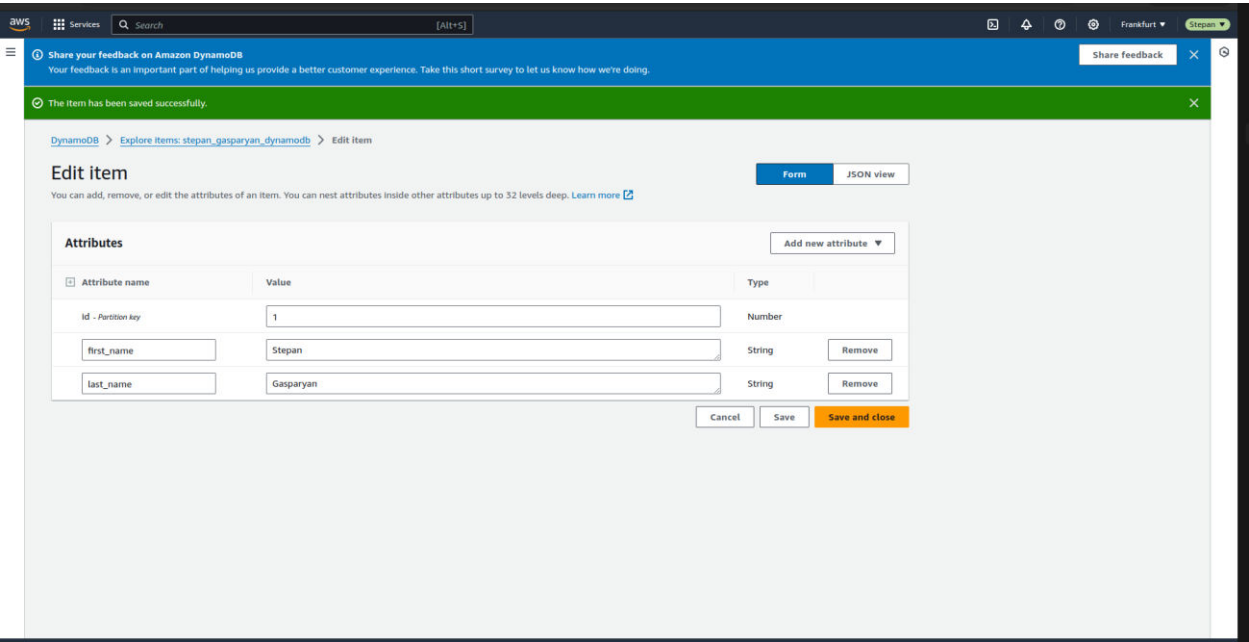


Table item created



To load 20 record into dynamo db table I created Json file`

```
GNU nano 5.8 items_to_add.json
{
  "stepan_gasparyan_dynamodb": [
    {
      "PutRequest": {
        "Item": {
          "customer_id": { "N": "1" },
          "region": { "S": "Europe" },
          "first_name": { "S": "Stepan" }
        }
      }
    },
    {
      "PutRequest": {
        "Item": {
          "customer_id": { "N": "2" },
          "region": { "S": "Asia" },
          "first_name": { "S": "John" }
        }
      }
    },
    {
      "PutRequest": {
        "Item": {
          "customer_id": { "N": "3" },
          "region": { "S": "North America" },
          "first_name": { "S": "Anna" }
        }
      }
    },
    {
      "PutRequest": {
        "Item": {
          "customer_id": { "N": "4" },
          "region": { "S": "South America" },
          "first_name": { "S": "Mike" }
        }
      }
    },
    {
      "PutRequest": {
        "Item": {
          "customer_id": { "N": "5" },
          "region": { "S": "Europe" },
          "first_name": { "S": "Sophia" }
        }
      }
    },
    {
      "PutRequest": {
        "Item": {
          "customer_id": { "N": "6" },

```

For single record I use this command to put item into it`

```
aws dynamodb put-item --table-name stepan_gasparyan_dynamodb --item '{"customer_id": {"N": "1"}, "region": {"S": "Europe"}, "first_name": {"S": "Stepan"}}' --profile students-role
```

And run this`

```
touch: cannot touch 'items_to_add.json': Permission denied
[ec2-user@ip-172-31-26-63 ~]$ sudo touch items_to_add.json
[ec2-user@ip-172-31-26-63 ~]$ nano items_to_add.json
[ec2-user@ip-172-31-26-63 ~]$ sudo nano items_to_add.json
[ec2-user@ip-172-31-26-63 ~]$ aws dynamodb batch-write-item \
--request-items file://batch-items.json \
--profile students-role
Error parsing parameter '--request-items': Unable to load paramfile file://batch-items.json: [Errno 2] No such file or directory: 'batch-items.json'
[ec2-user@ip-172-31-26-63 ~]$ aws dynamodb batch-write-item --request-items file://items_to_add.json --profile students-role
[ec2-user@ip-172-31-26-63 ~]$
```

Here is loaded records

Items returned (20)

Actions

Create Item

< 1 >

<input type="checkbox"/>	customer_id (Number)	region (String)	first_name
<input type="checkbox"/>	7	North America	Emma
<input type="checkbox"/>	8	South America	Chris
<input type="checkbox"/>	10	Asia	Lucas
<input type="checkbox"/>	3	North America	Anna
<input type="checkbox"/>	2	Asia	John
<input type="checkbox"/>	14	Asia	Ella
<input type="checkbox"/>	18	Asia	Alexander
<input type="checkbox"/>	12	South America	Mia
<input type="checkbox"/>	9	Europe	Olivia
<input type="checkbox"/>	4	South America	Mike
<input type="checkbox"/>	13	Europe	Daniel
<input type="checkbox"/>	16	South America	Liam
<input type="checkbox"/>	17	Europe	Isabella
<input type="checkbox"/>	6	Asia	David
<input type="checkbox"/>	11	South America	Mark

Same approach for retrieving data`

```
GNU nano 5.8
"stepan_gasparyan_dynamodb": {
  "Keys": [
    { "customer_id": { "N": "1" } },
    { "customer_id": { "N": "2" } },
    { "customer_id": { "N": "3" } },
    { "customer_id": { "N": "4" } },
    { "customer_id": { "N": "5" } }
  ]
}
```


Get items`

```
[ec2-user@ip-172-31-26-63 /]$ sudo nano get_keys.json
[ec2-user@ip-172-31-26-63 /]$ aws dynamodb batch-get-item --request-items '{"stepan_gasparyan_dynamodb": {"Keys": [{"customer_id": {"N": "7"},
"region": {"S": "North America"}}]}}' --profile students-role
CUSTOMER_ID      7
FIRST_NAME       Emma
REGION           North America
[ec2-user@ip-172-31-26-63 /]$ aws dynamodb batch-get-item --request-items '{"stepan_gasparyan_dynamodb": {"Keys": [{"customer_id": {"N": "7"},
"region": {"S": "North America"}}, {"customer_id": {"N": "2"}, "region": {"S": "Asia"}}]}}' --profile students-role
CUSTOMER_ID      7
FIRST_NAME       Emma
REGION           North America
CUSTOMER_ID      2
FIRST_NAME       John
REGION           Asia
[ec2-user@ip-172-31-26-63 /]$
```