

# HomeWork9\_AparnaBharathiSuresh

## 1.Create a cluster named 'redshift\_hw9' (only use free tier)

The screenshot shows two browser tabs. The top tab is titled "Amazon Redshift | us-east-2" and the bottom tab is titled "us-east-2.console.aws.amazon.com/redshiftv2/home?region=us-east-2#clusters". Both tabs are part of the AWS Management Console.

**Top Tab (Amazon Redshift Cluster Creation):**

- Shows the "Clusters" section under "Connect to Redshift clusters".
- Contains sections for "Query data using Redshift query editor", "Work with your client tools", and "Choose your JDBC or ODBC driver".
- A table lists a single cluster: "redshift-hw9" (Status: Available, Cluster namespace: 5e795144-b819-47a0..., Availability Zone: us-east-2b, Multi-AZ: No).

**Bottom Tab (Provisioned Clusters Dashboard):**

- Shows the "Provisioned clusters dashboard" for the US East (Ohio) Region.
- Summary statistics:
  - Total nodes: 1
  - On-demand nodes: 1
  - Reserved nodes: 0
  - Reserved nodes available: 0 (0 of 0 used)
  - Automated snapshots: 1
  - Manual snapshots: 1
- Cluster overview (1):
  - Cluster: redshift-hw9 (Status: Available)
  - View all clusters
- Cluster metrics:
  - Number of queries
  - Database connections
  - Disk space used
  - CPU utilization
- Datashares:
  - Require authorization: 0
  - Require association: 0

## 2. Create/Show the required IAM roles for the task.

Amazon Redshift | us-east-2

Upload objects - S3 bucket

Amazon Redshift | us-east-2

Object in - alvents\_pipe.txt

Roles | IAM | Global

Amazon Redshift

Redshift Serverless New

Provisioned clusters dashboard

Clusters

Reserved nodes

Snapshots

Query editor

Query editor v2

Queries and loads

Datasources

Zero-ETL Integrations New

IAM Identity Center

Configurations

AWS Partner Integration

Informatica Data Loader

CloudShell Feedback

Cluster permissions

Create an IAM role as the default for this cluster that has the [AmazonRedshiftAllCommandsFullAccess](#) policy attached. This policy includes permissions to run SQL commands to COPY, UNLOAD, and query data with Amazon Redshift. The policy also grants permissions to run SELECT statements for related services, such as Amazon S3, Amazon CloudWatch logs, Amazon SageMaker, and AWS Glue.

Associated IAM roles (1) Info

Create, associate, or remove an IAM role. You can associate up to 50 IAM roles. You can also choose an IAM role and set it as the default for this cluster.

Search for associated IAM role by name, status, or role type

IAM roles Status Role type

for-reds-s3 adding --

Granted accounts (0) Info

VPCs in other accounts that are allowed to access this cluster. Learn more

Find accounts or VPCs

Account ID VPC Endpoints created

No granted accounts

You haven't granted access to this cluster.

Set defaults Manage IAM roles

Edit Revoke Grant access

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Amazon Redshift | us-east-2

S3 buckets | S3 | us-east-2

Roles | IAM | Global

Identity and Access Management (IAM)

Search IAM

Dashboard

Access management

User groups

Users

Roles

Policies

Identity providers

Account settings

Access reports

Access Analyzer

Unused access

Analyzer settings

Credential report

Organization activity

Service control policies

Related consoles

IAM Identity Center

AWS Organizations

Role for-reds-s3 created.

IAM > Roles

Roles (5) Info

An IAM role is an identity you can create that has specific permissions with credentials that are valid for short durations. Roles can be assumed by entities that you trust.

Search

Role name	Trusted entities	Last activity
AWSServiceRoleForRDS	AWS Service: rds	1 hour ago
AWSServiceRoleForRedshift	AWS Service: redshift	3 days ago
AWSServiceRoleForSupport	AWS Service: support	-
AWSServiceRoleForTrustedAdvisor	AWS Service: trustedadvisor	-
for-reds-s3	AWS Service: redshift	-
rds-monitoring-role	AWS Service: monitoring.rds	-

Create role

View role

Roles Anywhere Info

Authenticate your non AWS workloads and securely provide access to AWS services.

Access AWS from your non AWS workloads

Operate your non AWS workloads using the same authentication and authorization strategy that you use within AWS.

X.509 Standard

Use your own existing PKI infrastructure or use AWS Certificate Manager Private Certificate Authority to authenticate identities.

Temporary credentials

Use temporary credentials with ease and benefit from the enhanced security they provide.

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us-east-1.console.aws.amazon.com/iam/home?region=us-east-2#/roles/details/for-reds-s3?section=permissions

Identity and Access Management (IAM)

for-reds-s3 Info

Allows Redshift clusters to call AWS services on your behalf.

**Summary**

Creation date: April 19, 2024, 12:57 (UTC-07:00) ARN: arn:aws:iam::637423453534:role/for-reds-s3

Last activity: 2 days ago Maximum session duration: 1 hour

**Permissions** Trust relationships Tags Access Advisor Revoke sessions

**Permissions policies (1) Info**

You can attach up to 10 managed policies.

Filter by Type: All types

Policy name	Type	Attached entities
PowerUserAccess	AWS managed - job function	1

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### 3. Create an S3 bucket and load the ticketdb files.

The screenshot shows two consecutive screenshots of the AWS S3 console.

**Screenshot 1: Bucket Deletion Confirmation**

A green banner at the top of the S3 console window indicates: "Successfully deleted bucket 's3-forredshift'". The main interface shows the "General purpose buckets" section with one item listed:

Name	AWS Region	IAM Access Analyzer	Creation date
s3-for-hw9	US East (Ohio) us-east-2	View analyzer for us-east-2	April 19, 2024, 12:50:12 (UTC-07:00)

**Screenshot 2: Uploading Files to S3**

The user is navigating through the S3 console to upload files to the "s3-for-hw9" bucket. The "Upload" page shows the following details:

- Upload:** Info
- Destination:** s3://s3-for-hw9
- Destination details:** Bucket settings that impact new objects stored in the specified destination

The "Files and folders" section lists 7 items with a total size of 27.9 MB:

Name
allevents_pipe.txt
allusers_pipe.txt
category_pipe.txt
date2008_pipe.txt
listings_pipe.txt
sales_tab.txt
venue_pipe.txt

Amazon Redshift | us-east-2 | Upload objects: S3 bucket s3 | Roles | IAM | Global

Upload succeeded

View details below.

### Upload: status

The information below will no longer be available after you navigate away from this page.

#### Summary

Destination	Succeeded	Failed
s3://s3-for-hw9	7 files, 27.9 MB (100.00%)	0 files, 0 B (0%)

[Close](#)

[Files and folders](#) [Configuration](#)

#### Files and folders (7 Total, 27.9 MB)

Name	Folder	Type	Size	Status	Error
allevents_pipe.txt	-	text/plain	435.4 KB	Succeeded	-
allusers_pipe.txt	-	text/plain	5.6 MB	Succeeded	-
category_pipe.txt	-	text/plain	465.0 B	Succeeded	-
date2008_pipe.txt	-	text/plain	14.2 KB	Succeeded	-
listings_pipe.txt	-	text/plain	11.0 MB	Succeeded	-
sales_tab.txt	-	text/plain	10.7 MB	Succeeded	-
venue_pipe....	-	text/plain	7.8 KB	Succeeded	-

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Files | Database | Console | Inbox - ap... | Partner C... | Getting St... | Amazon R... | s3-for-hw9 | Home Page | Assignmen... | + | Ohio | Aparna Bharathi Suresh

Amazon S3 > Buckets > s3-for-hw9

### s3-for-hw9

Objects (7) [Info](#)

[Actions](#) [Create folder](#) [Upload](#)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Name	Type	Last modified	Size	Storage class
allevents_pipe.txt	txt	April 19, 2024, 13:00:53 (UTC-07:00)	435.4 KB	Standard
allusers_pipe.txt	txt	April 19, 2024, 13:00:57 (UTC-07:00)	5.6 MB	Standard
category_pipe.txt	txt	April 19, 2024, 13:00:58 (UTC-07:00)	465.0 B	Standard
date2008_pipe.txt	txt	April 19, 2024, 13:00:58 (UTC-07:00)	14.2 KB	Standard
		April 19, 2024, 13:01:02		

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#### 4. Create tables on your cluster. (CATEGORY table, DATE table, EVENT table, VENUE table, USERS table, LISTING table, SALES table)

The screenshot shows the AWS Management Console Query Editor for an Amazon Redshift cluster. The query window contains the following SQL code:

```
1 CREATE DATABASE demoaws
2
3 CREATE SCHEMA s3red
```

The 'Resources' sidebar on the left shows 'Select database info' set to 'demoaws' and 'Select schema info' set to 's3red'. Below these, there is a 'Filter tables' search bar and a note stating 'No resources to display'.

The screenshot shows the AWS Management Console Query Editor for an Amazon Redshift cluster. The query window contains the following SQL code:

```
4
5   column_name,
6   data_type,
7   is_nullable
8   FROM information_schema.columns
9 WHERE table_name = 'category';
10
11
12 CREATE TABLE demoaws.s3red.category (
13   catid SMALLINT NOT NULL,
14   catdesc VARCHAR,
```

The 'Resources' sidebar on the left shows 'Select schema info' set to 'public'. Below this, there is a 'Filter tables' search bar and a tree view of tables: category, date, event, listing, sales, users, and venue. The 'category' table is expanded, showing its columns: catid, catdesc, catname, catgroup, and catdesc.

The 'Query results' tab shows the execution status: 'Completed, started on April 19, 2024 at 15:09:20' and 'ELAPSED TIME: 00 m 02 s'. The results table displays the columns and data for the newly created 'category' table:

column_name	data_type	is_nullable
catid	smallint	NO
catdesc	character varying	YES
catname	character varying	YES
catgroup	character varying	YES

```

CREATE TABLE demoaws.s3red.CATEGORY (
    catid SMALLINT NOT NULL,
    catgroup VARCHAR(100),
    catname VARCHAR(100),
    catdesc VARCHAR(100)
);

```

The screenshot shows the AWS Management Console with the Query Editor open. The query being run is:

```

CREATE TABLE demoaws.s3red.CATEGORY (
    catid SMALLINT NOT NULL,
    catgroup VARCHAR(100),
    catname VARCHAR(100),
    catdesc VARCHAR(100)
);

```

The 'Resources' sidebar on the left shows the database 'demoaws' and schema 's3red'. The 'category' table is selected, displaying columns: catid, catgroup, catname, and catdesc.

```

CREATE TABLE demoaws.s3red.DATE (
    dateid SMALLINT NOT NULL,
    caldate DATE NOT NULL,
    day CHAR(2) NOT NULL,
    week SMALLINT NOT NULL,
    month CHAR(2) NOT NULL,
    qtr CHAR(1) NOT NULL,
    year SMALLINT NOT NULL,
    holiday BOOLEAN
);

```

The screenshot shows the AWS Redshift Query Editor interface. On the left, there's a sidebar with 'Resources' and 'Info' sections for database selection. The main area contains a query editor window titled 'Query 1'. The query code is as follows:

```
18 CREATE TABLE demoaws.s3red.DATE (
19     dateid SMALLINT NOT NULL,
20     catid DATE NOT NULL,
21     day CHAR(2) NOT NULL,
22     week SMALLINT NOT NULL,
23     month CHAR(2) NOT NULL,
24     qtr CHAR(1) NOT NULL,
25     year SMALLINT NOT NULL,
26     holiday BOOLEAN
27 );
28
29
30
31 CREATE TABLE demoaws.s3red.EVENT (
```

Below the code are buttons for 'Run', 'Save', 'Schedule', and 'Clear'. The status bar at the bottom indicates the query completed successfully on April 19, 2024, at 17:32:53, with an elapsed time of 00 m 12 s.

**CREATE TABLE demoaws.s3red.EVENT (**

eventid INTEGER NOT NULL,  
venueid SMALLINT NOT NULL,  
catid SMALLINT NOT NULL,  
dateid SMALLINT NOT NULL,  
eventname VARCHAR(100),  
starttime TIMESTAMP);

The screenshot shows the AWS Redshift Query Editor interface. The query editor window is open with a connection to 'Connected' database 'demoaws' as user 'awsuser'. The query text is:

```
26     year SMALLINT NOT NULL,  
27     holiday BOOLEAN  
28 );  
29  
30  
31 CREATE TABLE demoaws.s3red.EVENT (  
32     eventid INTEGER NOT NULL,  
33     venueid SMALLINT NOT NULL,  
34     catid SMALLINT NOT NULL,  
35     dateid SMALLINT NOT NULL,  
36     eventname VARCHAR(100),  
37     starttime TIMESTAMP  
38 );
```

The 'Run' button is highlighted. Below the query editor, the 'Query results' tab is selected, showing the message: 'Completed, started on April 19, 2024 at 17:33:38' and 'ELAPSED TIME: 00 m 10 s'. There are tabs for 'Execution', 'Data', and 'Visualize'.

CREATE TABLE demoaws.s3red.LISTING (

```
listid INTEGER NOT NULL,  
sellerid INTEGER NOT NULL,  
eventid INTEGER NOT NULL,  
dateid SMALLINT NOT NULL,  
numtickets SMALLINT NOT NULL,  
priceperticket NUMERIC,  
totalprice NUMERIC,  
listtime TIMESTAMP  
);
```

The screenshot shows the AWS Redshift Query Editor interface. The database is set to 'demoaws' and the schema to 's3red'. A query is being run to create a table named 'SALES' with various columns including salesid, listid, sellerid, eventid, dateid, numtickets, priceperTicket, totalprice, and saletime. The query has completed successfully.

```
CREATE TABLE demoaws.s3red.SALES (
    salesid INTEGER NOT NULL,
    listid INTEGER NOT NULL,
    sellerid INTEGER NOT NULL,
    eventid INTEGER NOT NULL,
    dateid SMALLINT NOT NULL,
    numtickets SMALLINT NOT NULL,
    priceperTicket NUMERIC,
    totalprice NUMERIC,
    saletime TIMESTAMP
);
```

**CREATE TABLE demoaws.s3red.SALES (**

**salesid INTEGER NOT NULL,**

**listid INTEGER NOT NULL,**

**sellerid INTEGER NOT NULL,**

**eventid INTEGER NOT NULL,**

**dateid SMALLINT NOT NULL,**

**numtickets SMALLINT NOT NULL,**

**pricepaid NUMERIC,**

**commission NUMERIC,**

**saletime TIMESTAMP**

**);**

The screenshot shows the AWS Redshift Query Editor interface. The left sidebar displays the database schema with tables like category, date, event, listing, sales, and salesid. The main area shows the SQL code for creating the 'SALES' table:

```
47     totalprice NUMERIC,
48     listtime TIMESTAMP
49 );
50
51 CREATE TABLE demoaws.s3red.SALES (
52     ssleid INTEGER NOT NULL,
53     listid INTEGER NOT NULL,
54     sellerid INTEGER NOT NULL,
55     buyerid INTEGER NOT NULL,
56     eventid INTEGER NOT NULL,
57     datedt SMALLINT NOT NULL,
58     qtsold SMALLINT NOT NULL,
59     pricepaid NUMERIC,
60     commission NUMERIC,
61     saletime
```

Below the code, there are 'Run', 'Save', 'Schedule', and 'Clear' buttons. The 'Query results' tab is selected, showing a green status icon indicating the query completed successfully on April 19, 2024, at 17:35:24, with an elapsed time of 00 m 10 s. There are also 'Execution', 'Data', and 'Visualize' tabs.

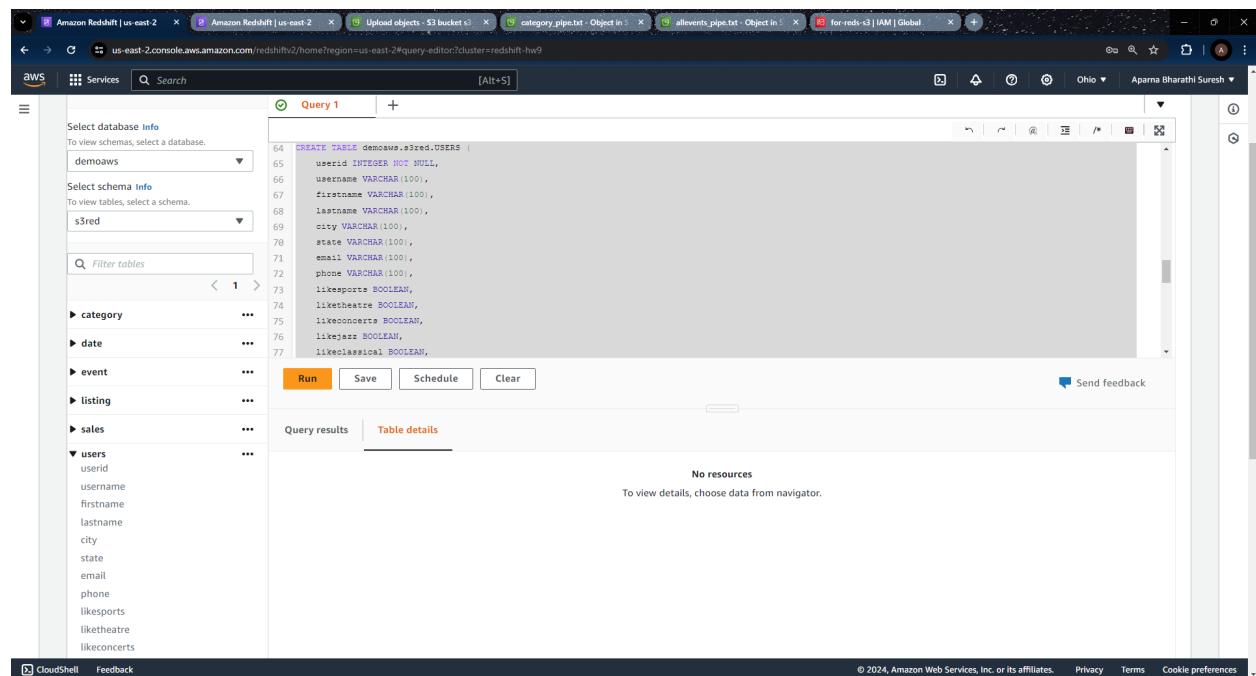
CREATE TABLE demoaws.s3red.USERS (

```
    userid INTEGER NOT NULL,  
    username VARCHAR(100),  
    firstname VARCHAR(100),  
    lastname VARCHAR(100),  
    city VARCHAR(100),  
    state VARCHAR(100),  
    email VARCHAR(100),  
    phone VARCHAR(100),  
    likesports BOOLEAN,  
    liketheatre BOOLEAN,  
    likeconcerts BOOLEAN,  
    likejazz BOOLEAN,  
    likeclassical BOOLEAN,  
    likeopera BOOLEAN,
```

```

    likerock BOOLEAN,
    likevegas BOOLEAN,
    likebroadway BOOLEAN,
    likemusicals BOOLEAN
);


```



The screenshot shows the AWS Redshift Query Editor interface. The left sidebar displays the database schema with tables like category, date, event, listing, sales, users, and a detailed view of the users table. The main area shows a code editor with the following SQL query:

```

CREATE TABLE demoaws.s3red.USERS (
    userid INTEGER NOT NULL,
    username VARCHAR(100),
    firstname VARCHAR(100),
    lastname VARCHAR(100),
    city VARCHAR(100),
    state VARCHAR(100),
    email VARCHAR(100),
    phone VARCHAR(100),
    likesports BOOLEAN,
    liketheatre BOOLEAN,
    likeconcerts BOOLEAN,
    likejazz BOOLEAN,
    likeclassical BOOLEAN
);

```

The code editor includes standard buttons for Run, Save, Schedule, and Clear. Below the editor, a message states "No resources" and "To view details, choose data from navigator." The bottom right corner shows copyright information: "© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences".

```

CREATE TABLE demoaws.s3red.venue (
    venueid SMALLINT NOT NULL,
    venuename VARCHAR(100),
    venuecity VARCHAR(100),
    venuestate CHAR(5),
    venueseats INTEGER
)


```

);

The screenshot shows the AWS Management Console Query Editor interface for Amazon Redshift. The query editor window is titled "Query 1". The code entered is:

```
83 /*
84
85 CREATE TABLE demaws.s3red.venue (
86     venueid SMALLINT NOT NULL,
87     venuename VARCHAR(100),
88     venuecity VARCHAR(100),
89     venuestate CHAR(5),
90     venueseats INTEGER
91 );
92
93
94 COPY demaws.s3red.category
95 FROM 's3://s3-for-hw9/category_pipe.txt'
96 IAM_ROLE 'arn:aws:iam::697423455539:role/for-reds-s3'
```

The "Run" button is highlighted in orange. Below the code, the status message "No resources" and "To view details, choose data from navigator." are displayed. The left sidebar shows the database schema with tables like category, date, event, listing, sales, users, and venue.

## 5. Copy the data from S3 to Redshift cluster 'redshift\_hw9'.

Query 5:

```
COPY demoaws.s3red.EVENT
```

```
FROM 's3://s3-for-hw9/allevents_pipe.txt'
```

```
IAM_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'
```

```
DELIMITER '|';
```

```
SELECT * FROM demoaws.s3red.EVENT;
```

The screenshot shows the AWS Redshift Query Editor interface. The query editor window displays the following SQL code:

```
95  FROM 's3://s3-for-hw9/category_pipe.txt';
96  IAM_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'
97  DELIMITER '|';
98
99  SELECT * FROM demoaws.s3red.CATEGORY;
100
101 COPY demoaws.s3red.EVENT
102 FROM 's3://s3-for-hw9/allevents_pipe.txt'
103 IAM_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'
104 DELIMITER '|';
105
106
107
```

The 'Run' button is highlighted in orange at the bottom of the query editor. Below the editor, the 'Query results' tab is selected, showing the status: 'Completed, started on April 19, 2024 at 17:40:45' and 'ELAPSED TIME: 00 m 21 s'. There is no data displayed in the results pane.

The screenshot shows the AWS Redshift Query Editor interface. The top navigation bar includes tabs for 'Amazon Redshift | us-east-2' and 'Amazon Redshift | us-east-2'. Below the navigation is a search bar and a 'Services' dropdown. The main area displays a code editor with the following SQL script:

```
100 COPY demoaws.s3red.EVENT
101 FROM 's3://s3-for-hw9/allevents_pipe.txt'
102 IAM_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'
103 DELIMITER '|';
104
105
106 SELECT * FROM demoaws.s3red.EVENT;
107
```

Below the code editor are buttons for 'Run', 'Save', 'Schedule', and 'Clear'. To the right is a 'Send feedback' link. The 'Query results' tab is selected, showing a status message: 'Completed, started on April 19, 2024 at 17:41:15' and 'ELAPSED TIME: 00 m 03 s'. The 'Rows returned [8798]' section contains a table with the following data:

eventid	venueid	catid	dateid	eventname	starttime
1	305	8	1851	Gotterdamerung	2008-01-25 14:30:00
2	306	8	2114	Boris Godunov	2008-10-15 20:00:00
3	302	8	1935	Salome	2008-04-19 14:30:00
4	309	8	2090	La Cenerentola (Cinderella)	2008-09-21 14:30:00
5	302	8	1982	Il Trovatore	2008-06-05 19:00:00

COPY demoaws.s3red.category

FROM 's3://s3-for-hw9/category\_pipe.txt'

IAM\_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'

DELIMITER '|';

SELECT \* FROM demoaws.s3red.CATEGORY;

The screenshot shows the AWS Redshift Query Editor interface. The query has been completed successfully on April 19, 2024, at 17:39:05. The results are displayed in a table format:

catid	catgroup	catname	catdesc
1	Sports	MLB	Major League Baseball
2	Sports	NHL	National Hockey League
3	Sports	NFL	National Football League
4	Sports	NBA	National Basketball Association
5	Sports	MLS	Major League Soccer

COPY demoaws.s3red.DATE

FROM 's3://s3-for-hw9/date2008\_pipe.txt'

IAM\_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'

DELIMITER '|';

SELECT \* FROM demoaws.s3red.DATE;

The screenshot shows the AWS Redshift Query Editor interface. The query window contains the following SQL code:

```

106 DELIMITER '|';
107
108 SELECT * FROM demoaws.s3red.EVENT;
109
110
111 COPY demoaws.s3red.DATE
112 FROM 's3://s3-for-hw9/date2008_pipe.txt'
113 IAM_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'
114 DELIMITER '|';
115
116 SELECT * FROM demoaws.s3red.DATE;
117
118 SELECT *

```

The status bar indicates the query completed successfully on April 19, 2024, at 17:45:50, with an elapsed time of 00 m 58 s.

The screenshot shows the AWS Redshift Query Editor interface. The query window contains the same SQL code as the previous screenshot, but the results section is now populated with data from the 'DATE' table. The results table has the following columns: dateid, caldate, day, week, month, qtr, year, and holiday. The data returned consists of 365 rows, starting with:

dateid	caldate	day	week	month	qtr	year	holiday
1827	2008-01-01	WE	1	JAN	1	2008	true
1828	2008-01-02	TH	1	JAN	1	2008	false
1829	2008-01-03	FR	1	JAN	1	2008	false
1830	2008-01-04	SA	2	JAN	1	2008	false
1831	2008-01-05	SU	2	JAN	1	2008	false
1832	2008-01-06	MO	2	JAN	1	2008	false

COPY demoaws.s3red.listing

FROM 's3://s3-for-hw9/listings\_pipe.txt'

IAM\_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'

DELIMITER '|';

SELECT \* FROM demoaws.s3red.listing;

Amazon Redshift | us-east-2 | Upload objects - S3 bucket s3 | Object in S3 | for-reds-s3 | IAM | Global

Services Search [Alt+S]

Amazon Redshift > Query editor

**Editor** | **Query history** | **Saved queries** | **Scheduled queries**

**Resources Info**

Select database **Info**  
To view schemas, select a database.  
**demosaws**

Select schema **Info**  
To view tables, select a schema.  
**public**

**Filter tables**

No resources  
No resources to display

**Query 1**

```

112 FROM 's3://s3-for-hw9/date2008_pipe.txt'
113 IAM_ROLE 'arn:aws:iam::63742345534:role/for-reds-s3'
114 DELIMITER '"';
115
116 SELECT * FROM demosaws.s3red.DATE;
117
118 COPY demosaws.s3red.listing
119 FROM 's3://s3-for-hw9/listings_pipe.txt'
120 IAM_ROLE 'arn:aws:iam::63742345534:role/for-reds-s3'
121 DELIMITER '"';
122
123 SELECT * FROM demosaws.s3red.listing;
124

```

**Run** | **Save** | **Schedule** | **Clear**

**Send feedback**

**Query results** | **Table details**

**Query 7674**

Completed, started on April 19, 2024 at 17:48:32  
ELAPSED TIME: 00 m 41 s

**Execution** | **Data** | **Visualize**

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Amazon Redshift | us-east-2 | Upload objects - S3 bucket s3 | Object in S3 | for-reds-s3 | IAM | Global

Services Search [Alt+S]

Amazon Redshift > Query editor

**Resources Info**

**Filter tables**

No resources  
No resources to display

**Query 7711**

```

118 COPY Demosaws.s3red.listing
119 FROM 's3://s3-for-hw9/listings_pipe.txt'
120 IAM_ROLE 'arn:aws:iam::63742345534:role/for-reds-s3'
121 DELIMITER '"';
122
123 SELECT * FROM Demosaws.s3red.listing;
124

```

**Run** | **Save** | **Schedule** | **Clear**

**Send feedback**

**Query results** | **Table details**

**Query 7711**

Completed, started on April 19, 2024 at 17:49:37  
ELAPSED TIME: 00 m 35 s

**Rows returned** (192497)

listid	sellerid	eventid	dateid	numtickets	priceperticket	totalprice	listtime
2	16002	4806	1890	7	233	1631	2008-03-05 12:25:29
4	8117	4337	1970	8	38	304	2008-05-24 01:18:37
6	47402	8240	2053	18	77	1386	2008-08-15 02:08:13
8	11891	8036	2139	6	82	492	2008-11-09 05:07:30
10	24858	3375	1994	16	197	3152	2008-06-17 09:44:54
12	45635	4769	2032	26	65	1690	2008-07-25 01:45:49

**Export**

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```
COPY demoaws.s3red.sales  
FROM 's3://s3-for-hw9/sales_tab.txt'  
IAM_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'  
DELIMITER '\t'  
TIMEFORMAT 'auto';
```

```
SELECT * FROM demoaws.s3red.sales;
```

The screenshot shows the AWS Management Console Query Editor for an Amazon Redshift cluster. The left sidebar displays the database and schema selection dropdowns, both set to 'demoaws' and 'public'. Below the schema dropdown is a 'Filter tables' search bar. The main area contains two queries:

```
124 COPY demoaws.s3red.sales  
125 FROM 's3://s3-for-hw9/sales_tab.txt'  
126 IAM_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'  
127 DELIMITER '\t'  
128 TIMEFORMAT 'auto';  
129  
130  
131 SELECT * FROM demoaws.s3red.listing;  
132  
133  
134  
135  
136
```

Below the first query is a row of buttons: Run, Save, Schedule, and Clear. To the right of the Run button is a 'Send feedback' link. The second query is labeled 'Query 7833' and includes tabs for Execution, Data, and Visualize. It shows a status message: 'Completed, started on April 19, 2024 at 17:53:22' and 'ELAPSED TIME: 00 m 26 s'. The bottom navigation bar includes CloudShell, Feedback, and links to AWS terms and conditions.

The screenshot shows the AWS Redshift Query Editor interface. A single query is run:

```

130
131 SELECT * FROM demoaws.s3red.sales;
132
133

```

The results show 172304 rows returned. The data is presented in a table with columns: salesid, listid, sellerid, buyerid, eventid, dateid, qtysold, pricepaid, commission, and saletime.

salesid	listid	sellerid	buyerid	eventid	dateid	qtysold	pricepaid	commission	saletime
2	4	8117	11498	4337	1983	2	76	11	2008-06-06 05:00:16
4	5	1616	19715	8647	1986	1	175	26	2008-06-09 08:38:52
6	10	24858	24888	3375	2023	2	394	59	2008-07-16 11:59:24
8	10	24858	19715	3375	2017	1	197	29	2008-07-10 02:12:56
10	12	45635	10542	4769	2044	1	65	9	2008-08-06 02:51:55
12	13	30606	9633	2147	1894	2	344	51	2008-03-09 03:18:56

COPY demoaws.s3red.users

FROM 's3://s3-for-hw9/allusers\_pipe.txt'

IAM\_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'

DELIMITER '|';

SELECT \* FROM demoaws.s3red.users;

```

129 TIMEFORMAT 'auto';
130
131 SELECT * FROM demoaws.s3red.sales;
132
133 COPY demoaws.s3red.users
134 FROM 's3://s3-for-hw9/allusers_pipe.txt';
135 IAM_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'
136 DELIMITER '|';
137
138 SELECT * FROM demoaws.s3red.listing;
139
140
141

```

**Query results**

Completed, started on April 19, 2024 at 17:57:16  
ELAPSED TIME: 00 m 37 s

```

127 IAM_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'
128 DELIMITER '|';
129 TIMEFORMAT 'auto';
130
131 SELECT * FROM demoaws.s3red.sales;
132
133 COPY demoaws.s3red.users
134 FROM 's3://s3-for-hw9/allusers_pipe.txt';
135 IAM_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'
136 DELIMITER '|';
137
138 SELECT * FROM demoaws.s3red.users;

```

**Rows returned (49990)**

userid	username	firstname	lastname	city	state	email	phone	likesp
1	JSG99FHE	Rafael	Taylor	Kent	WA	Etiam.loareet.libero@sodalesMaurisblandit.edu	(664) 602-4412	true
3	IFT66TXU	Lars	Ratliff	High Point	ME	amet.faucibus.ut@condimentumgetvoluptat.ca	(624) 767-2465	true

COPY demoaws.s3red.venue

FROM 's3://s3-for-hw9/venue\_pipe.txt'

IAM\_ROLE 'arn:aws:iam::637423453534:role/for-reds-s3'

DELIMITER '|';

SELECT \* FROM demoaws.s3red.venue;

Amazon Redshift | us-east-2 | Upload objects - S3 bucket s3 | venue\_pipe.txt - Object in S3 | for-reds-s3 | IAM | Global

aws Services Search [Alt+S]

Select database **Info**  
To view schemas, select a database.  
demowaws

Select schema **Info**  
To view tables, select a schema.  
public

Filter tables < 1 >

No resources  
No resources to display

Query 1

```
134: FROM 's3://s3-for-hw9/ellusersa_pipe.txt';
135: IAM_ROLE 'arn:aws:iam::63742345334:role/for-reds-s3'
136: DELIMITER '|';
137:
138: SELECT * FROM demowaws.s3red.users;
139:
140: COPY demowaws.s3red.venue
141: FROM 's3://s3-for-hw9/venue_pipe.txt';
142: IAM_ROLE 'arn:aws:iam::63742345334:role/for-reds-s3'
143: DELIMITER '|';
144:
145: SELECT * FROM demowaws.s3red.users;
146:
```

Run Save Schedule Clear Send feedback

Query results Table details

Query 8021

Completed, started on April 19, 2024 at 17:59:52  
ELAPSED TIME: 00 m 32 s

Amazon Redshift | us-east-2 | Upload objects - S3 bucket s3 | venue\_pipe.txt - Object in S3 | for-reds-s3 | IAM | Global

aws Services Search [Alt+S]

No resources  
No resources to display

Query 1

```
143: DELIMITER '|';
144:
145: SELECT * FROM demowaws.s3red.venues;
146:
```

Run Save Schedule Clear Send feedback

Query results Table details

Query 8057

Completed, started on April 19, 2024 at 18:00:35  
ELAPSED TIME: 00 m 08 s

Rows returned (202)

Search rows Export ▾

venueid	venuename	venuecity	venuestate	venueseats
1	Toyota Park	Bridgeview	IL	0
2	Columbus Crew Stadium	Columbus	OH	0
3	RFK Stadium	Washington	DC	0
4	CommunityAmerica Ballpark	Kansas City	KS	0
5	Gillette Stadium	Foxborough	MA	68756
6	New York Giants Stadium	East Rutherford	NJ	80242
7	BMO Field	Toronto	ON	0
8	The Home Depot Center	Carson	CA	0

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6. Write a query in the Redshift query editor to find the top 3 sellers in **San Diego, New York, Boston, and San Jose** based on the number of tickets sold in 2008. (Use Window functions)

```
SELECT venuecity, sellerid, total_tickets_sold
FROM (
    SELECT v.venuecity,
           s.sellerid,
           SUM(s.qtysold) AS total_tickets_sold,
           ROW_NUMBER() OVER (PARTITION BY v.venuecity ORDER BY SUM(s.qtysold) DESC)
    AS row_num
  FROM demoaws.s3red.sales s
  JOIN demoaws.s3red.event e ON s.eventid = e.eventid
  JOIN demoaws.s3red.venue v ON e.venueid = v.venueid
  WHERE EXTRACT(YEAR FROM s.saletime) = 2008
  GROUP BY v.venuecity, s.sellerid
) ranked_sellers
WHERE row_num <= 3
AND venuecity IN ('San Diego', 'New York City', 'Boston', 'San Jose');
```

Amazon Redshift | us-east-2

us-east-2.console.aws.amazon.com/redshiftv2/home?region=us-east-2#query-editor?cluster=redshift-hw9

aws Services Search [Alt+S]

Resources Info Status Connected database demoaws user awsuser Change connection

Select database Info To view schemas, select a database. demoaws

Select schema Info To view tables, select a schema. public

Filter tables < 1 >

No resources No resources to display

Query 1

```
166: SELECT v.venuecity, sellerid, total_tickets_sold
167: FROM (
168:     SELECT v.venuecity,
169:         s.sellerid,
170:         SUM(s.qtysold) AS total_tickets_sold,
171:         ROW_NUMBER() OVER (PARTITION BY v.venuecity ORDER BY SUM(s.qtysold) DESC) AS row_num
172:     FROM demoaws.a3red.sales s
173:     JOIN demoaws.a3red.event e ON s.eventid = e.eventid
174:     JOIN demoaws.a3red.venue v ON e.venueid = v.venueid
175:     WHERE EXTRACT(YEAR FROM s.saletime) = 2008
176:     GROUP BY v.venuecity, s.sellerid
177:     ranked_sellers
178: WHERE venuecity IN ('San Diego', 'New York City', 'Boston', 'San Jose')
179: AND row_num <= 3;
```

Run Save Schedule Clear Send feedback

Query results Table details

Query 23138

Completed, started on April 20, 2024 at 10:51:49  
ELAPSED TIME: 00 m 02 s

Execution Data Visualize

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Amazon Redshift | us-east-2

us-east-2.console.aws.amazon.com/redshiftv2/home?region=us-east-2#query-editor?cluster=redshift-hw9

aws Services Search [Alt+S]

Rows returned (12)

ELAPSED TIME: 00 m 02 s

venuecity	sellerid	total_tickets_sold
Boston	21339	17
Boston	21967	17
Boston	49714	15
San Diego	34923	13
San Diego	22670	12
San Diego	28525	11
New York City	43237	27
New York City	39548	25
New York City	26419	25
San Jose	9344	17

Export < 1 2 > @ CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Amazon Redshift | us-east-2

us-east-2.console.aws.amazon.com/redshiftv2/home?region=us-east-2#query-editor?cluster=redshift-hw9

Services Search [Alt+S]

ELAPSED TIME: 00 m 02 s

Rows returned (12)

Search rows Export ▾

venuecity	sellerid	total_tickets_sold
San Jose	40216	13
San Jose	38931	12

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7. Write a query in the Redshift query editor to see events with the lowest sales.

**Lowest price paid:**

SELECT

```
e.eventid,  
e.eventname,  
SUM(s.pricepaid) AS total_sales
```

FROM

```
demoaws.s3red.sales s
```

JOIN

```
demoaws.s3red.event e ON s.eventid = e.eventid
```

GROUP BY

```
e.eventid, e.eventname
```

ORDER BY

```
total_sales ASC;
```

The screenshot shows the AWS Redshift Query Editor interface. The query has been successfully run and completed. The results table displays 852 rows, with the first few rows shown below:

eventid	eventname	total_sales
1	Event 1	100
2	Event 2	200
3	Event 3	300
4	Event 4	400
5	Event 5	500
6	Event 6	600
7	Event 7	700
8	Event 8	800
9	Event 9	900
10	Event 10	1000

The screenshot shows the AWS Redshift Query Editor interface. On the left, there's a sidebar with tables: qsysold, pricepaid, commission, saletime, users, and venue. The venue table is currently selected. The main area displays a table with columns: eventid, eventname, and total\_sales. The data is ordered by total\_sales in descending order. A search bar at the top says "Search rows". The bottom of the screen shows navigation links for CloudShell, Feedback, and legal information.

eventid	eventname	total_sales
3662	A Midsummer Night's Dream	21
5754	Nofx	39
8016	Widespread Panic	40
4565	Chromeo	40
1756	Phantom of the Opera	58
525	South Pacific	71
1069	Legally Blonde	74
7819	Medeski Martin and Wood	82
4139	Charlie Daniels Band	84
2606	The Caretaker	84

**100 Lowest price paid:**

SELECT

e.eventid,

e.eventname,

SUM(s.pricepaid) AS total\_sales

FROM

demoaws.s3red.sales s

JOIN

demoaws.s3red.event e ON s.eventid = e.eventid

GROUP BY

e.eventid, e.eventname

ORDER BY

total\_sales ASC

LIMIT 100;

us-east-2.console.aws.amazon.com/redshiftv2/home?region=us-east-2#query-editor?cluster=redshift-hw9

aws Services Search [Alt+S]

Select database **Info**  
To view schemas, select a database.  
**demoaws**

Select schema **Info**  
To view tables, select a schema.  
**s3red**

Filter tables < 1 >

▶ category  
▶ date  
▶ event  
▶ listing  
▼ sales  
salesid  
listid  
sellerid  
buyerid  
eventid  
dated  
dateid  
qtysold  
pricepaid  
commission  
saletime

Query 1

```
176 SELECT
177     e.eventid,
178     e.eventname,
179     SUM(s.pricepaid) AS total_sales
180     FROM
181         demoaws.s3red.sales s
182     JOIN
183         demoaws.s3red.event e ON s.eventid = e.eventid
184     GROUP BY
185         e.eventid, e.eventname
186     ORDER BY
187         total_sales ASC
188     LIMIT 100;
```

Run Save Schedule Clear Send feedback

Query results | Table details

Query 408100

Completed, started on April 22, 2024 at 21:09:42  
ELAPSED TIME: 00 m 13 s

Rows returned (100)

Execution Data Visualize Export

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us-east-2.console.aws.amazon.com/redshiftv2/home?region=us-east-2#query-editor?cluster=redshift-hw9

aws Services Search [Alt+S]

▶ listing  
▼ sales  
salesid  
listid  
sellerid  
buyerid  
eventid  
dated  
dateid  
qtysold  
pricepaid  
commission  
saletime

▶ users  
▶ venue

Query results | Table details

Query 408286

Completed, started on April 22, 2024 at 21:19:56  
ELAPSED TIME: 00 m 02 s

Rows returned (100)

eventid	eventname	total_sales
3662	A Midsummer Night's Dream	21
5754	Nofx	39
8016	Widespread Panic	40
4565	Chromeo	40
1756	Phantom of the Opera	58
525	South Pacific	71
1069	Legally Blonde	74
7819	Medeski Martin and Wood	82

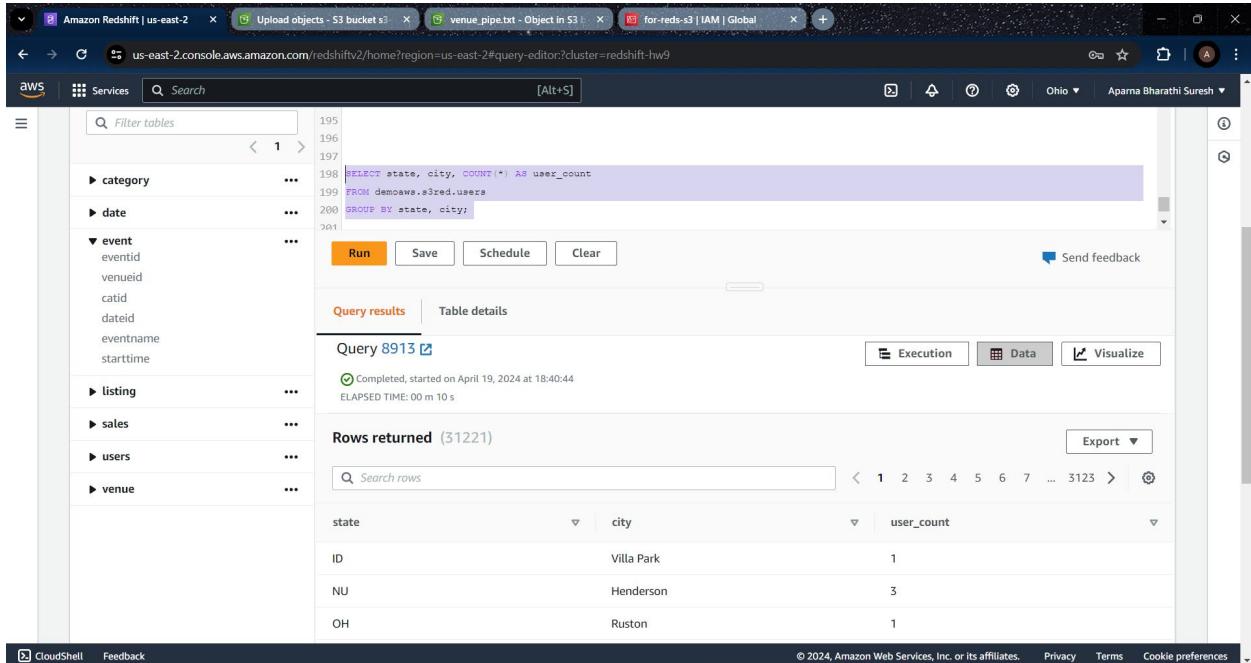
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8. Write a query in the Redshift query editor to count the number of users in each state and city combination.

```
SELECT state, city, COUNT(*) AS user_count
```

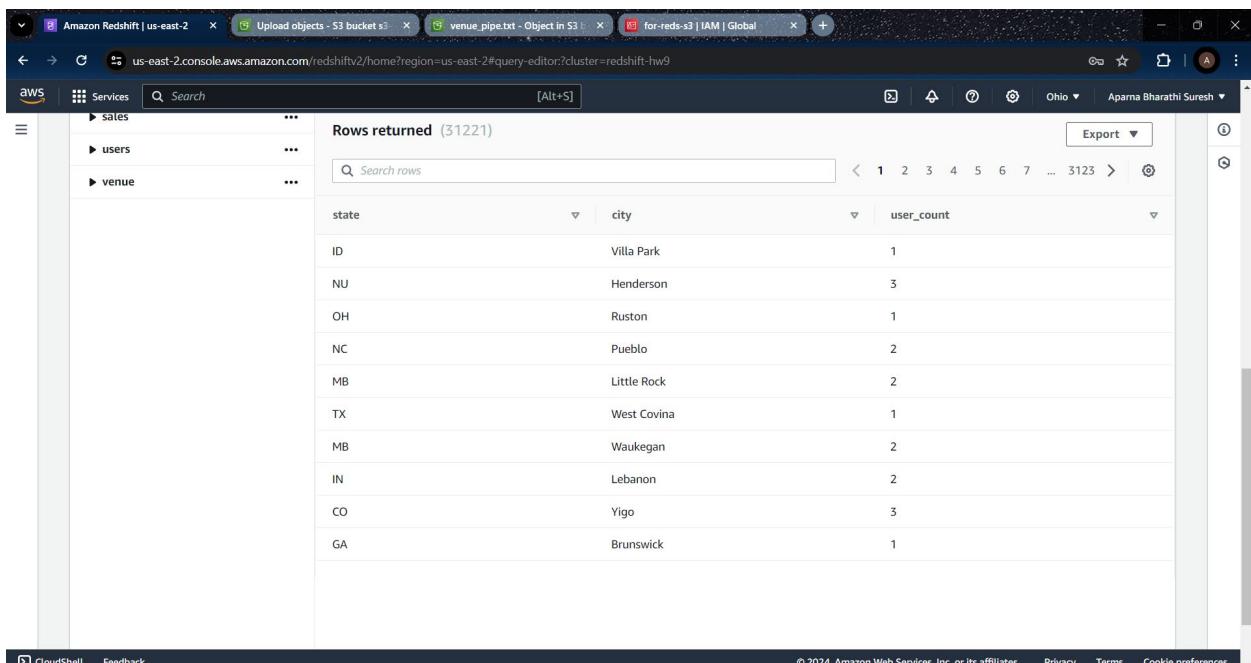
```
FROM demoaws.s3red.users
```

```
GROUP BY state, city;
```



The screenshot shows the AWS Redshift Query Editor interface. The query has been run and completed successfully. The results table displays the count of users grouped by state and city.

state	city	user_count
ID	Villa Park	1
NU	Henderson	3
OH	Ruston	1



The screenshot shows the AWS Redshift Query Editor interface. The query has been run and completed successfully. The results table displays the count of users grouped by state and city, showing more states than in the previous screenshot.

state	city	user_count
ID	Villa Park	1
NU	Henderson	3
OH	Ruston	1
NC	Pueblo	2
MB	Little Rock	2
TX	West Covina	1
MB	Waukegan	2
IN	Lebanon	2
CO	Yigo	3
GA	Brunswick	1