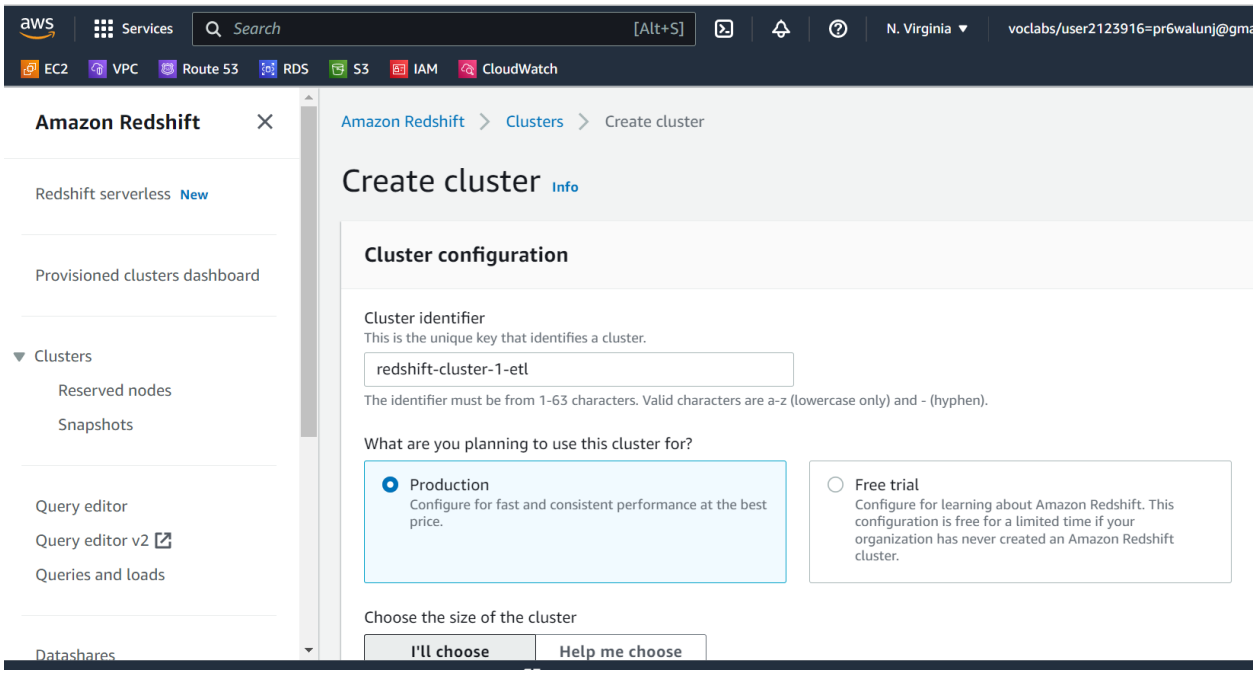
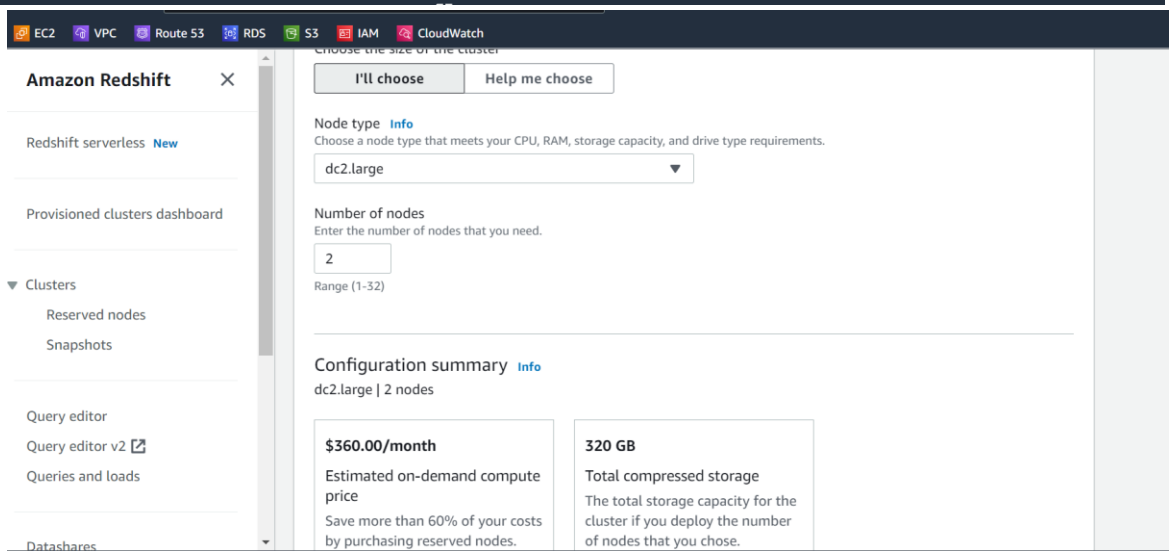
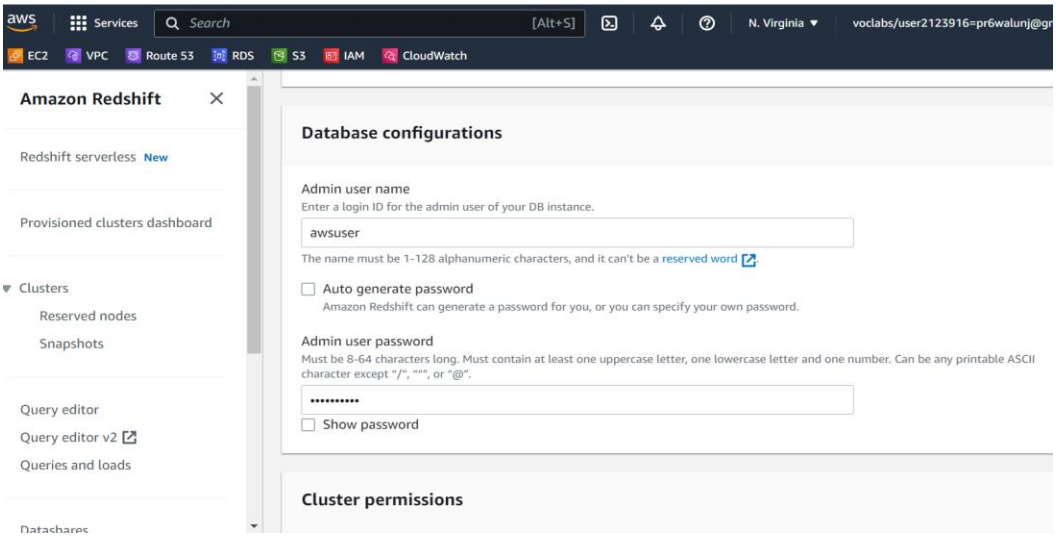
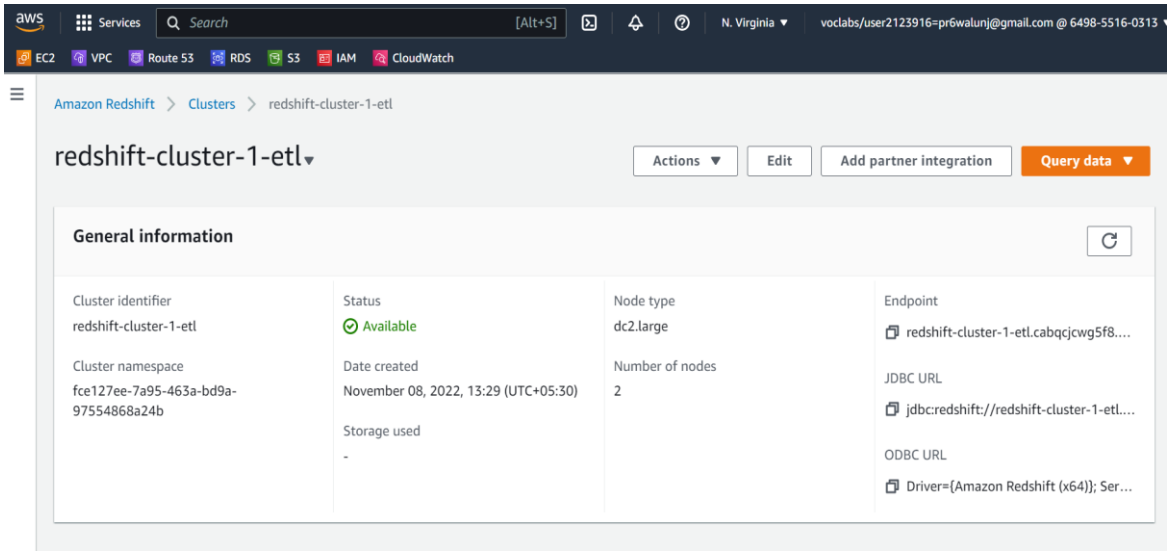
Creation of a Redshift Cluster

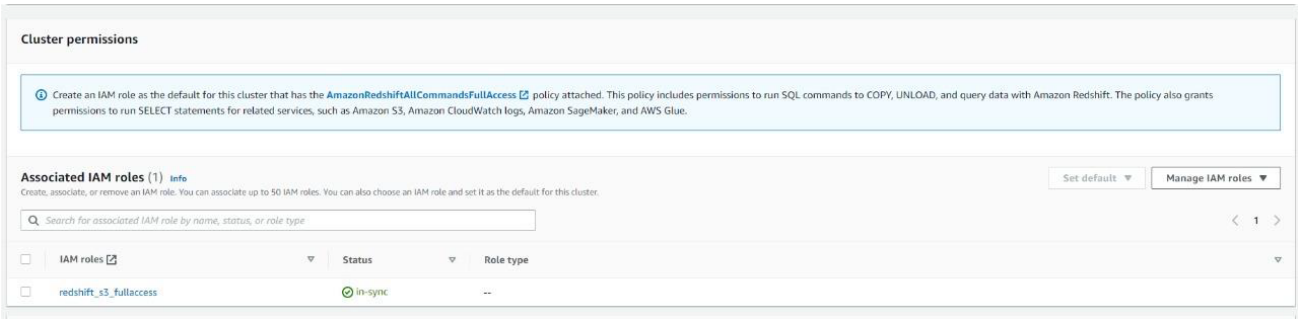
Screenshots of the configuration of the Redshift cluster that you have created:







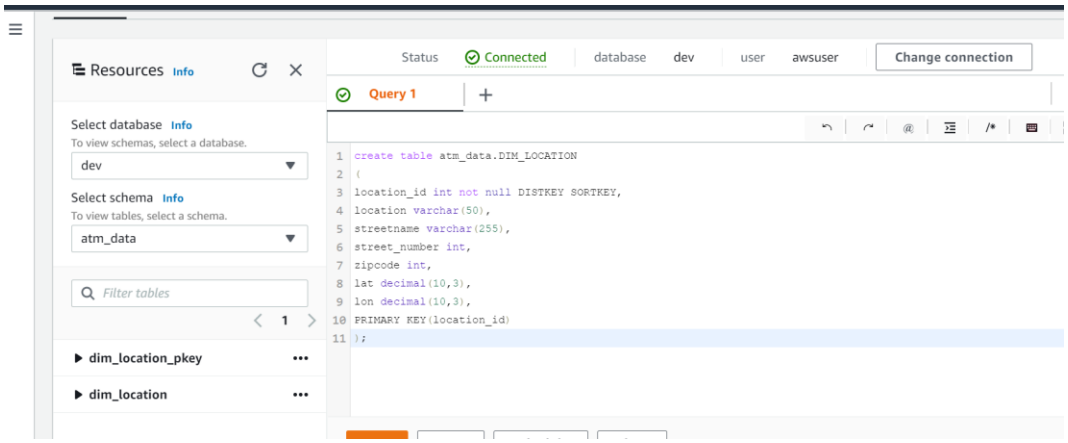




Setting up a database in the Redshift cluster and running queries to create the dimension and fact tables

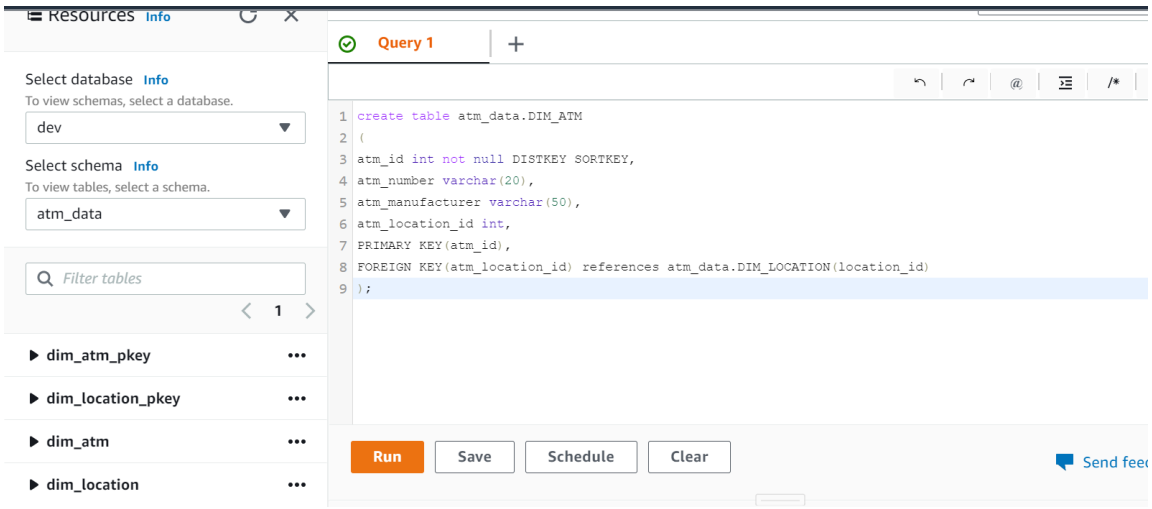
Queries to create the various dimension and fact tables with appropriate primary and foreign keys:

```
create table atm_data.DIM_LOCATION
(
    location_id int not null DISTKEY SORTKEY,
    location varchar(50),
    streetname varchar(255),
    street_number int,
    zipcode int,
    lat decimal(10,3),
    lon decimal(10,3),
    PRIMARY KEY(location_id)
);
```



2.]

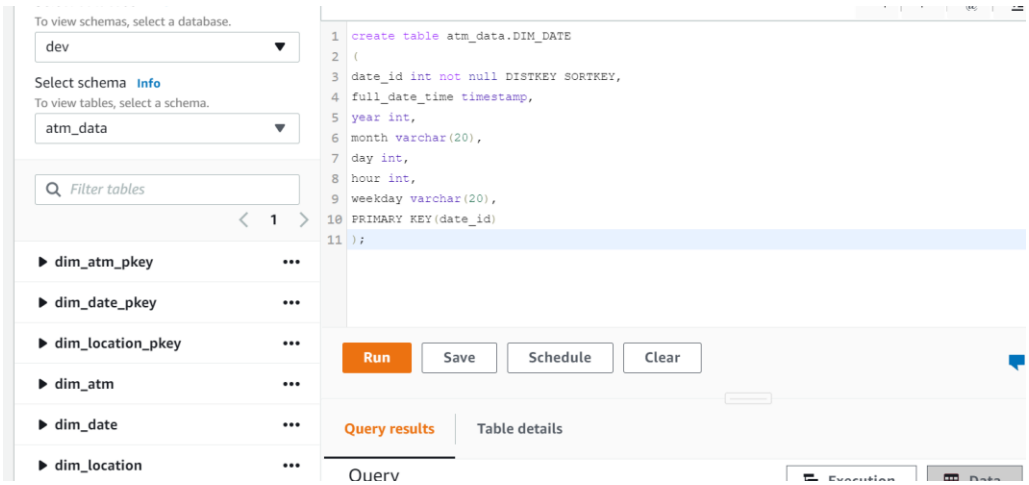
```
create table atm_data.DIM_ATM
(
  atm_id int not null DISTKEY SORTKEY,
  atm_number varchar(20),
  atm_manufacturer varchar(50),
  atm_location_id int,
  PRIMARY KEY(atm_id),
  FOREIGN KEY(atm_location_id) references atm_data.DIM_LOCATION(location_id)
```



);

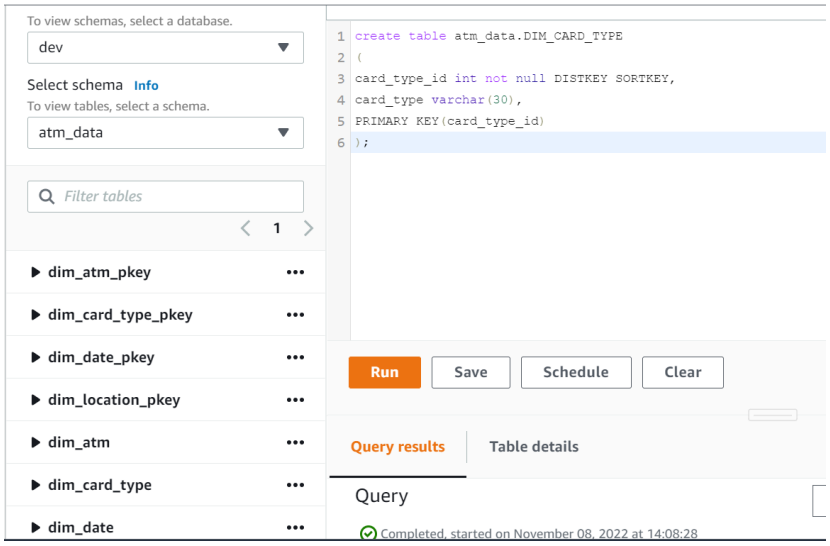
3.]

```
create table atm_data.DIM_DATE
(
  date_id int not null DISTKEY SORTKEY,
  full_date_time timestamp,
  year int,
  month varchar(20),
  day int,
  hour int,
  weekday varchar(20),
  PRIMARY KEY(date_id)
);
```



4.]

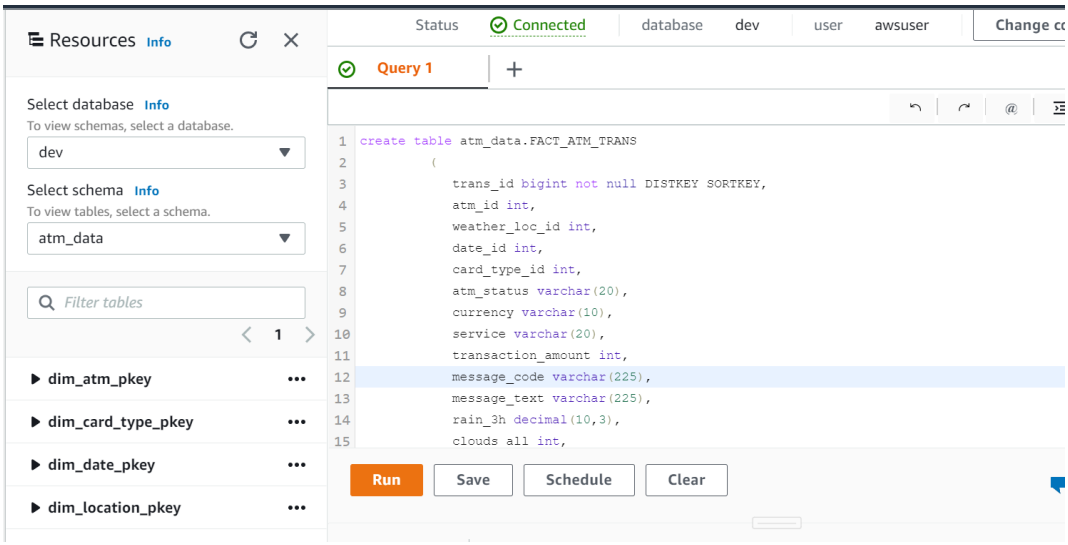
```
create table atm_data.DIM_CARD_TYPE
(
  card_type_id int not null DISTKEY SORTKEY,
  card_type varchar(30),
  PRIMARY KEY(card_type_id)
);
```



5.]

```
create table atm_data.FACT_ATM_TRANS
(
  trans_id bigint not null DISTKEY SORTKEY,
  atm_id int,
  weather_loc_id int,
  date_id int,
  card_type_id int,
  atm_status varchar(20),
  currency varchar(10),
  service varchar(20),
  transaction_amount int,
  message_code varchar(225),
  message_text varchar(225),
  rain_3h decimal(10,3),
  clouds_all int,
  weather_id int,
  weather_main varchar(50),
  weather_description varchar(255),
  PRIMARY KEY(trans_id),
  FOREIGN KEY(weather_loc_id) references atm_data.DIM_LOCATION(location_id),
  FOREIGN KEY(atm_id) references atm_data.DIM_ATM(atm_id),
```

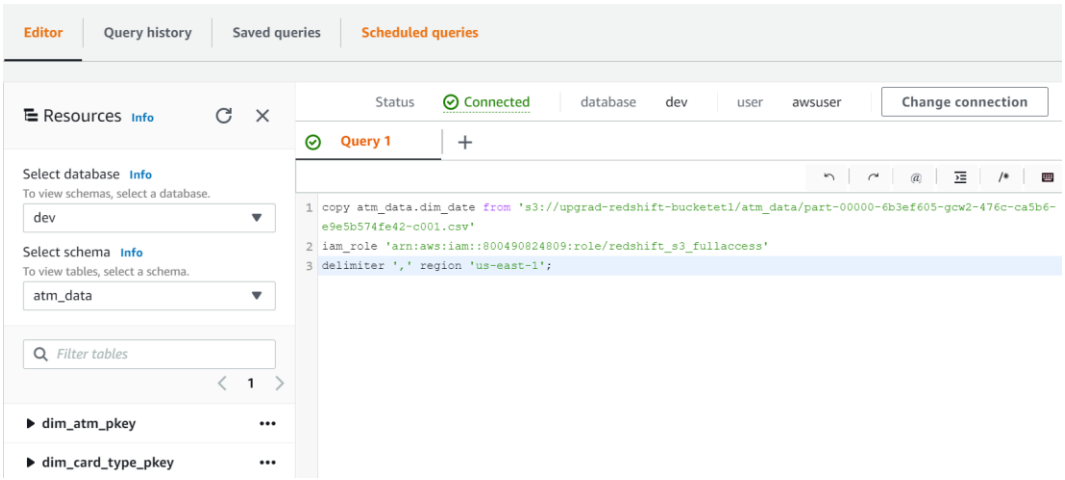
FOREIGN KEY(date_id) references atm_data.DIM_DATE(date_id),
FOREIGN KEY(card_type_id) references atm_data.DIM_CARD_TYPE(card_type_id)
);



Loading data into a Redshift cluster from Amazon S3 bucket

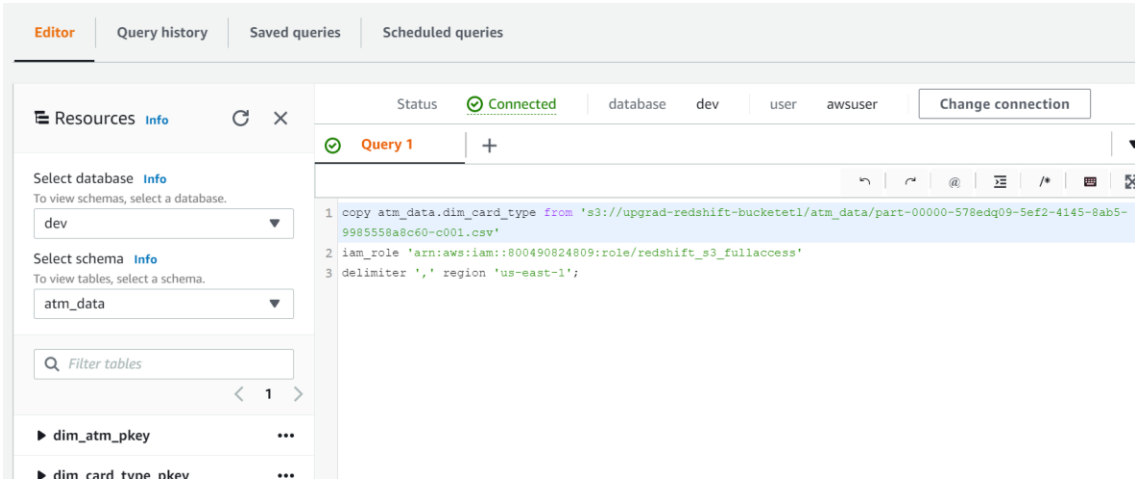
Queries to copy the data from S3 buckets to the Redshift cluster in the appropriate tables

copy atm_data.dim_date from 's3://upgrad-redshift-bucketetl/atm_data/part-00000-6b3ef605-gcw2-476c-ca5b6-e9e5b574fe42-c001.csv'
iam_role 'arn:aws:iam::800490824809:role/redshift_s3_fullaccess'
delimiter ',' region 'us-east-1';



Copy the data to dim_card_type table

copy atm_data.dim_card_type from 's3://upgrad-redshift-bucketetl/atm_data/part-00000-578edq09-5ef2-4145-8ab5-9985558a8c60-c001.csv'
iam_role 'arn:aws:iam::800490824809:role/redshift_s3_fullaccess'
delimiter ',' region 'us-east-1';



Copy the data to fact_atm_trans table

copy atm_data.fact_atm_trans from ' s3://etlprojectbysimran/fact_atm_trans/part-00000-t78vd50q62b742-41fs-8ab5-9981658a8c60-c001.csv'
iam_role 'arn:aws:iam::800490824809:role/redshift_s3_fullaccess'
delimiter ',' region 'us-east-1';