**This is a documentation on how we created a MYSQL Relational Database using AWS.**

**Step 1:** Create an instance of MYSQL Relational Database. We chose 2 CPU, 4GB RAM and 5GB storage.

**Step 2: Connection:**

import mysql.connector

cnx = mysql.connector.connect(user='safetypin', password='safetypin', host='[safetypin.crvain32myq9.us](http://safetypin.crvain32myq9.us/)-[east-1.rds.amazonaws.com](http://east-1.rds.amazonaws.com/)', database='safety pin’)

cursor = cnx.cursor()

cursor.execute("show tables”)

for table\_name in cursor:

   print table\_name

cnx.close()

**Step 3: SQL queries to upload data in tables using the schema we developed for safetypin.**

**IDE used- MYSQL workbench**

use safetypin;

create table city (City\_ID int not NULL, City\_Name VARCHAR(20), PRIMARY KEY(City\_ID));

LOAD DATA LOCAL INFILE ‘path\_to\_file/city.csv' INTO TABLE city FIELDS TERMINATED BY ',';

select \* from city;

create table date (Date\_ID int not NULL, Day\_of\_Week VARCHAR(15) , Month VARCHAR(15),Day int ,Year int ,PRIMARY KEY(Date\_ID));

LOAD DATA LOCAL INFILE ‘path\_to\_file /all\_date\_table.csv' INTO TABLE date FIELDS TERMINATED BY ',';

select \* from date;

create table location (Location\_ID int not NULL, Latitude double, Longitude double , PRIMARY KEY(Location\_ID));

LOAD DATA LOCAL INFILE 'path\_to\_file /all\_location\_table.csv' INTO TABLE location FIELDS TERMINATED BY ',';

select \* from location;

create table offense (Offense\_ID int not NULL, Offense VARCHAR(25), PRIMARY KEY(Offense\_ID));

LOAD DATA LOCAL INFILE 'path\_to\_file /all\_offense\_table.csv' INTO TABLE offense FIELDS TERMINATED BY ',';

select \* from offense;

create table time (Time\_ID int not NULL, Hour int, Minute int, PRIMARY KEY(Time\_ID));

LOAD DATA LOCAL INFILE 'path\_to\_file /all\_time\_table.csv' INTO TABLE time FIELDS TERMINATED BY ',';

Select \* from time;

create table fact (Fact\_ID int not NULL, City\_ID int not NULL ,

Time\_ID int not NULL,

Date\_ID int not NULL,

Offense\_ID int not NULL, Location\_ID int not NULL ,PRIMARY KEY(Fact\_ID));

LOAD DATA LOCAL INFILE 'path\_to\_files/all\_fact\_table.csv' INTO TABLE fact FIELDS TERMINATED BY ',';

Select \* from fact;

ALTER TABLE fact ADD FOREIGN KEY (Time\_ID) REFERENCES time(Time\_ID);

ALTER TABLE fact ADD FOREIGN KEY(Date\_ID) REFERENCES date(Date\_ID);

ALTER TABLE fact ADD FOREIGN KEY (City\_ID) REFERENCES city(City\_ID);

ALTER TABLE fact ADD FOREIGN KEY(Offense\_ID) REFERENCES offense(Offense\_ID);

ALTER TABLE fact ADD FOREIGN KEY(Location\_ID) REFERENCES location(Location\_ID);

**Step 4: Test query**

Select \* from fact join date on fact.Date\_ID = date.Date\_ID where Day\_of\_Week='Thursday';

