USE CASES

Use Case 1: View the total number of incidents in Boston

Description: User views the total number of incidents in last 5 years.
Actor: User
Steps:
Actor action: User views the total number of incidents.
System Response: Incidents for a Boston location are displayed.
Post Condition: System displays all the incidents reported for Boston location.

Count the total number of incidents occured in boston in last 5 years?

```
SELECT count(i.incident_number)

FROM incidents i LEFT JOIN location l

ON i.location = l.street

where i.incident_year between 2018 and 2022;
```

Use Case2: User views top 5 neighborhoods in Boston for highest crime incidents.
Description: User views the top 5 neighborhoods with highest number of incidents.
Actor: User
Precondition:
Steps:
Actor action: User views top 5 locations.
System Response: Incidents for top 5 locations are displayed.
Post Condition: System displays all the incidents reported for user searched criteria.

List the top 5 neighborhoods in Boston with highest crime incidents?

```
SELECT l.neighborhood, count(i.incident_number) as total_incidents

FROM location l RIGHT JOIN incidents i

ON l.street = i.location

RIGHT JOIN incident_type t

ON t.locality = l.street

where i.incident_year = 2022

group by neighborhood

order by count(i.incident_number) desc

limit 5;
```

Use Case3: User views the harassment incidents in Boston.
Description: User views the harassment incidents in Boston along with streets.
Actor: User
Precondition:
Steps:
Actor action: User views the harassment incidents per street.
System Response: Harassment incidents are displayed.
Post Condition: System displays all the incidents reported for user searched criteria.

Count the harassment incidents on Boston streets

```
SELECT l.street, t.offence_type, count(i.incident_number) as total_incidents

FROM location l LEFT JOIN incidents i

ON l.street = i.location

LEFT JOIN incident_type t

ON l.street = t.locality

where t.offence_type = 'Harassment'

group by l.street

order by count(i.incident_number) desc;
```

Use Case4: User views the incidents under district D14 in Boston.
Description: User views the incidents under district D14 in Boston along with cop details.
Actor: User
Precondition:
Steps:
Actor action: User views the incidents for district D14.
System Response: Incidents under D14 are displayed.
Post Condition: System displays all the incidents reported for user searched criteria.

What are incidences that falls under district D14. Also find out the cops in charge?

```
SELECT  c.cop_name, l.street,c.neighborhood, i.incident_number

FROM location l LEFT JOIN incidents i

ON l.street = i.location

LEFT JOIN cops_info c

ON l.neighborhood = c.neighborhood

where c.cop_district = 'D14';
```

Use Case5: User views the incidents for a particular location.
Description: User views the incidents details with respect to street.
Actor: User
Precondition:
Steps:
Actor action: User views the incidents for district Dorchester.
System Response: Incidents happened in Dorchester are displayed.
Post Condition: System displays all the incidents reported for user searched criteria.

What are the most common types on incidents in dorchester?

```
SELECT t.offence_type, l.street, l.neighborhood

FROM incident_type t RIGHT JOIN location l

ON t.locality = l.street

where l.neighborhood = 'Dorchester';
```

Use Case6: User views the details of the year with highest number of incidents.
Description: User views the incidents details with respect to year.
Actor: User
Precondition:
Steps:
Actor action: User views the highest number of incidents for a particular year.
System Response: Which year marked the highest number of incidents are displayed.
Post Condition: System displays all the incidents reported for user searched criteria.

Which year marks the higest number of incidents?

```
SELECT count(i.incident_number) as incident_count, i.incident_year, l.neighborhood, l.street

FROM  incidents i RIGHT JOIN location l

ON i.location = l.street

where i.location = l.street

group by i.incident_year

order by count(incident_number) desc

limit 1;
```

Use Case7: User views the details of the time when most incidents happened.
Description: User views the incidents details with respect to hour.
Actor: User
Precondition:
Steps:
Actor action: User views the highest number of incidents between a particular hour.
System Response: The range of hours marked the highest number of incidents are displayed.

Post Condition: System displays all the incidents reported for user searched criteria.

Between what hours of day most incidents happen?

```
SELECT count(i.incident_number) as incident_count, i.incident_hour, l.neighborhood, l.street

FROM  incidents i RIGHT JOIN location l

ON i.location = l.street

where i.location = l.street

group by i.incident_year

order by count(incident_number) desc

limit 1;
```

Use Case8: User views the number of incidents happened after midnight.
Description: User views the incidents details happened after midnight.
Actor: User
Precondition:
Steps:
Actor action: User views the highest number of incidents after midnight.
System Response: All the incidents happened after midnight are displayed.
Post Condition: System displays all the incidents reported for user searched criteria.

How many incidents happen after midnight night?

```
SELECT count(i.incident_number) as incident_count, i.incident_hour, l.neighborhood, l.street

FROM  incidents i RIGHT JOIN location l

ON i.location = l.street

where i.incident_hour between 1 and 6

group by i.incident_year

order by count(incident_number) ;
```

Use Case9: User views cop details along with location in Boston.
Description: User views the cop details.
Actor: User
Precondition:
Steps:
Actor action: User views the cop details along with streets.
System Response: All the cop details as per location are displayed.
Post Condition: System displays all the incidents reported for user searched criteria.

Name the cops deployed for Dorchester?

```
SELECT l.neighborhood, c.cop_name
FROM cops_info  c RIGHT JOIN location l
ON c.zip_code = l.postal
where c.neighborhood = 'Dorchester';
```