

**GCP terminal local:**

```
mysql> show tables;
+-----+
| Tables_in_new_schema |
+-----+
| courses_table        |
| gened_table          |
| map_table            |
| new_table            |
| user_login_table     |
+-----+
5 rows in set (0.00 sec)

mysql> |
```

**DDL Commands:**

-- User\_Login\_Table

```
CREATE TABLE User_Login_Table (
  NetId VARCHAR(10) PRIMARY KEY,
  email VARCHAR(255),
  password VARCHAR(255)
);
```

-- Courses\_Table

```
CREATE TABLE Courses_Table (
  CRN INT PRIMARY KEY,
  Semester VARCHAR(20),
  Title VARCHAR(255),
  Department VARCHAR(255),
  Credits INT,
  BuildingName VARCHAR(255),
  Time VARCHAR(255),
```

```
Day VARCHAR(255),
Instructor VARCHAR(255),
GenEdID INT,
avgGPA REAL,
Rating INT,
FOREIGN KEY (BuildingName) REFERENCES Map_Table(BuildingName),
FOREIGN KEY (GenEdID) REFERENCES GenEd_Table(GenEdID)
);
```

```
-- GenEd_Table for looking up gened reqs
```

```
CREATE TABLE GenEd_Table (
    GenEdID INT PRIMARY KEY,
    GenEdGroup VARCHAR(255)
);
```

```
-- Map_Table for using with bingMaps API
```

```
CREATE TABLE Map_Table (
    BuildingName VARCHAR(255) PRIMARY KEY,
    Address VARCHAR(255),
    RoomNumber INT,
    Latitudes DECIMAL(9,6),
    Longitudes DECIMAL(9,6)
);
```

**Row COUNT:**

```
mysql> SELECT count(CRN) FROM new_schema.courses_table;
+-----+
| count(CRN) |
+-----+
|         1103 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT COUNT(BuildingName) FROM map_table;
+-----+
| COUNT(BuildingName) |
+-----+
|             1100 |
+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT COUNT(NetId) from user_login_table;
+-----+
| COUNT(NetId) |
+-----+
|             1005 |
+-----+
1 row in set (0.00 sec)
```

#### Advanced Query Results:

```
mysql> EXPLAIN SELECT count(CRN) from courses_table WHERE avgGPA > 3.5 GROUP BY Department;
+-----+
| id | select_type | table      | partitions | type | possible_keys | key  | key_len | ref | rows | filtered | Extra                               |
+-----+
| 1  | SIMPLE      | courses_table | NULL       | ALL  | NULL         | NULL | NULL    | NULL | 1103 | 33.33 | Using where; Using temporary |
+-----+
1 row in set, 1 warning (0.00 sec)
```

```
mysql> SELECT count(CRN) from courses_table WHERE avgGPA > 3.5 GROUP BY Department;
```

count(CRN)
34
20
28
18
28
20
22
32
22
24
21
20
20
19
29
34
31
29
27
16
29
19
22
30
24
9
10
4

```
28 rows in set (0.00 sec)
```