

# Hands-on SQL lab

CS460: Introduction to Database Systems

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Office Hours: Monday 13:30 – 14:30, Thursday 16:30 – 17:30

# Today: Hands-on SQL(MySQL)

- Connecting to the MySQL database
- Running selection queries
- Running join queries
- Inserting data
- Deleting data

# Connecting to the database

- Open Terminal(macOS, Linux)
- Download PuTTY <https://www.putty.org>
- Connect to csa1 via ssh:
  - ssh *your\_BU\_name*@csa1.bu.edu
  - Enter your BU Kerberos password
- Connect to the MySQL database by typing the following command:
  - mysql -u cs460lab2 -p -h cs-db.bu.edu -D cs460
  - Enter password: a4Gn4KjWb4ydZzEf
  - Type the command: 'use cs460'

# Tasks

List all students:

```
SELECT* FROM student;
```

List all classes:

```
SELECT* FROM class;
```

List all students who are older than 20 years old:

```
SELECT * FROM student WHERE age > 20 ;
```

List the 'Snum' of all students that are enrolled in  
'Database Systems':

```
SELECT snum FROM enrolled  
WHERE cname = 'Database Systems';
```



List all freshmen

```
SELECT * FROM student WHERE standing = 'FR';
```

List the names of all students:

```
SELECT sname FROM student;
```

List the names of all freshmen:

```
SELECT sname FROM student  
WHERE standing = 'FR';
```

List the 'Snum' of all students that are enrolled in  
'Database Systems':

```
SELECT snum FROM enrolled  
WHERE cname = 'Database Systems';
```

List all student names that are enrolled in 'Database Systems'

```
SELECT sname FROM student
WHERE snum IN
  (SELECT snum FROM enrolled
   WHERE cname = 'Database Systems');
```

List all courses in which 'Luis Hernandez' is enrolled

```
SELECT cname FROM enrolled
WHERE snum IN
  (SELECT snum FROM student
   WHERE sname = 'Luis Hernandez');
```

List the 'name' and 'deptid' of the Professor that teaches 'Data Structures'

```
SELECT fname, deptid FROM faculty, class
WHERE faculty.fid = class.fid
AND
class.name = 'Data Structures';
```

Insert your info into the Students table,  
use your BUID as Snum

```
INSERT INTO student
```

```
  (snum, sname, major, standing, age)
```

```
  VALUES
```

```
    (1234, 'Your_name', 'CS', 'SR', 22);
```



Insert yourself into Enrolled table for any course

```
INSERT INTO enrolled  
  (snum, cname)  
  VALUES (1234, 'Patent Law');
```

Delete your entry from the Student table

```
DELETE FROM student WHERE snum = 'Your id';
```