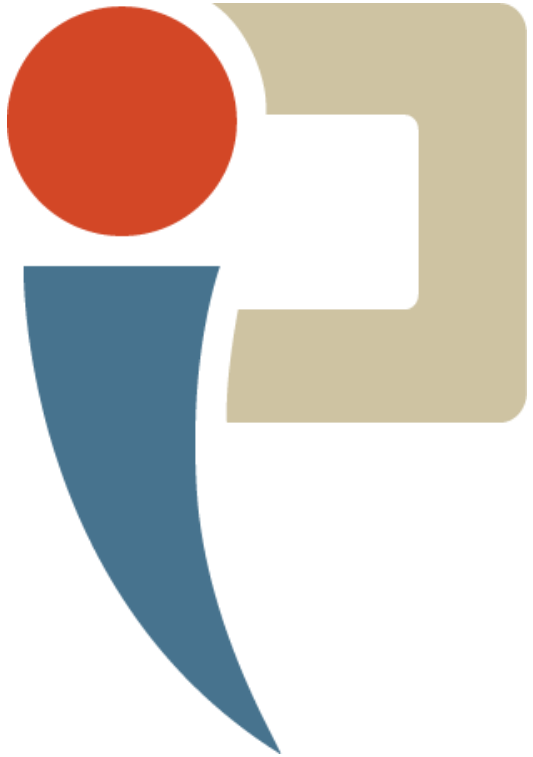
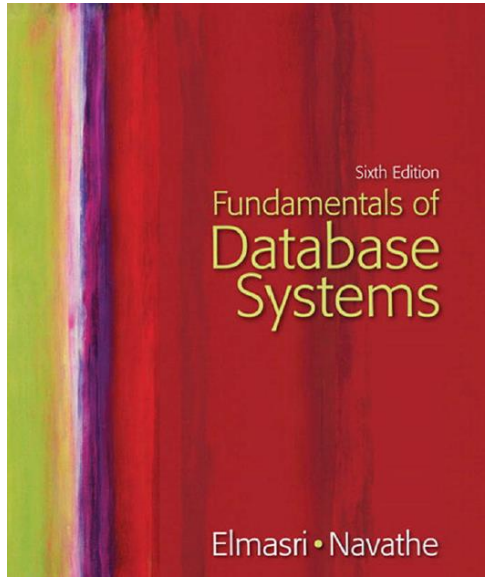


POLUDO INSTITUTE OF TECHNOLOGY & MEDIA

Instructor: Jesse Silva

Where can we find help?

- **Books**
  - Fundamentals of database systems – 6th edition
  - Head First SQL - Lynn Beighley
- **Internet**
  - http://www.w3schools.com/sql/sql_delete.asp
  - http://www.webopedia.com/TERM/U/uppercase.html
  - http://www.sqlcourse.com/delete.html
  - https://technet.microsoft.com/en-us/library/ms188249(v=sql.105).aspx



What will we see here?

- Inserting Data into Tables
  - The INSERT INTO statement
  - Inserting record in tables with auto increment
  - Inserting records in tables with foreign keys
- Updating Data from Tables
- Deleting Data from Tables
- Truncating a table

Inserting records

```
INSERT INTO table_name
VALUES (value1, value2, value3...);
```

```
INSERT INTO table_name (column1, column2, column3...)
VALUES (value1, value2, value3...);
```

Make sure to always insert the values in the columns that does not accept null values!

Inserting records in tables with foreign keys

```
INSERT INTO table_name (column1, column2, column3...)
VALUES (value1, value2, value3...);
```

```
INSERT INTO `student` (`firstName`, `lastName`, `gender`, `email`, `birthDate`, `contactNumber`, `addressID`)
VALUES ('Jesse', 'Teixeira', 'male', 'jessetsilva@gmail.com', '1983-06-08', '6043546150', '530');
```

Make sure that the value being inserted in that column really exists in the parent table

Error Code: 1452. Cannot add or update a child row: a foreign key constraint fails (student`, CONSTRAINT `addressFK` FOREIGN KEY (`addressID`) REFERENCES `address` (`addressID`) ON DELETE NO ACTION ON UPDATE NO ACTION)

Practicing

- Insert yourself as a student in one or more courses.
  - Don’t forget to provide all your information, including your address
    - If needed, create your address first in the address database
    - Take a look at the course table, so you know which one you want
      - In order to enroll, you need to go to the **student_course** table

Updating records:

```
UPDATE table_name
SET column1=value1, column2 = value2 , ..., columnN = valueN, ...
WHERE some_column=some_value;
```

Be aware that if you do not use a ***WHERE*** clause, all the records in the table will e updated, and it can cause serious consequences

```
update student set gender ='male' where gender ='m'
```

Updating records:

When we update a primary key that is referenced in another table as foreign key and configured as ***UPDATE ON CASCADE***, the respective values will be updated in those tables as well.

```
select * from student where firstName like'%jesse%';
```

studentID	firstName	lastName	gender	email	birthDate	contactNumber	addressID
61	Jesse	James	Male	JesseeJames@poludo.ca	1988-05-09	6042216423	202
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

```
update address set addressID = 1022 where addressID = 202;
```

```
1 row(s) affected Rows matched: 1  Changed: 1  Warnings: 0
```

```
select * from student where firstName like'%jesse%';
```

studentID	firstName	lastName	gender	email	birthDate	contactNumber	addressID
61	Jesse	James	Male	JesseeJames@poludo.ca	1988-05-09	6042216423	1022
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

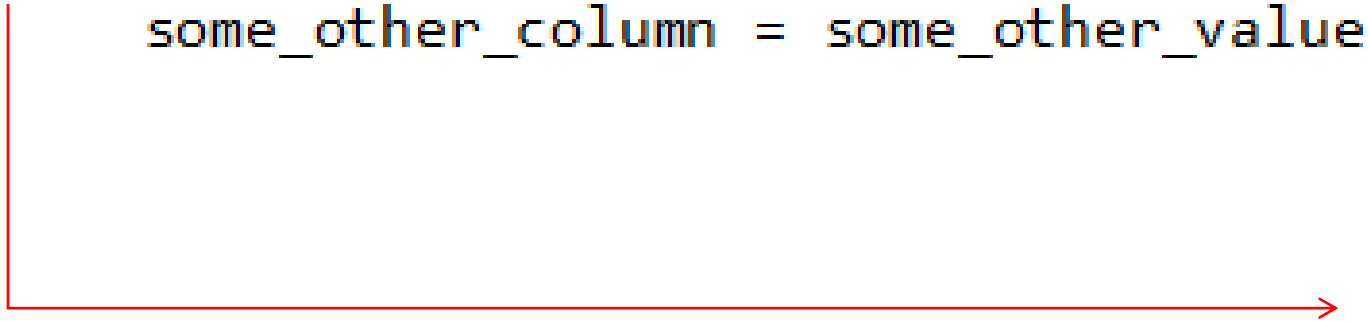
Note that when we ran the update, automatically the student table was also updated, changing the value accordingly from 202 to 1022

Practicing

- Update your information:
  - Change your date of birth and anything else you see fit
  - Change your address to a different place outside Canada

Deleting records:

```
DELETE FROM table_name
WHERE some_column=some_value, … ,
      some_other_column = some_other_value;
```

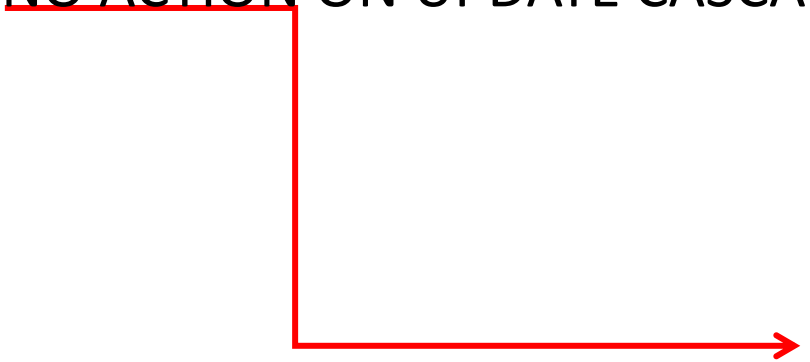


Similarly with the UPDATE statement, the WHERE clause is very important, because if we do not use it all the records in the table will be deleted.

Deleting records:

```
delete from course where courseID = 1;
```

Error Code: 1451. Cannot delete or update a parent row: a foreign key constraint fails (`school_simulation`.`student_course`, CONSTRAINT `courseIDCSFK` FOREIGN KEY (`courseID`) REFERENCES `course` (`courseID`) ON DELETE NO ACTION ON UPDATE CASCADE) 0.110 sec



REMEMBER WHEN WE DECIDED THAT NO ONE WOULD BE ABLE TO DELETE A COURSE IF SOME TABLE HAS IT AS FOREIGN KEY?

Practicing

- Update your information:
  - Remove yourself from at least one of the courses you are enrolled in

Truncating tables

```
truncate table table_name
```

When we truncate our table all the data is removed but all the table's characteristics and constraints remain

CHALLENGE OF THE WEEK

- Update all the students so the emails and genders will be shown in lowercase.

- One of the instructors can't teach at the school for personal reasons. It's your job to remove this instructor from our database and make sure that all his classes will be taken by another Instructor (we are not hiring, so you need to use an existing one).

- Because of new regulations, we need to change our classes' schedules.
  - All the classes that start or finish in November must be rescheduled to start and finish in October.

- Management asked us to always keep the Students and instructor records, even if they are not part of our school anymore so they can have the historical data if needed. It means that we can no longer just delete instructors and students.
  - We need a way to keep the record, but show if a student or instructor is active or inactive in our school
  - Discuss with your instructor a strategy to accomplish this request
    - This exercise will use knowledge we acquired in previous classes