

# INTRO TO DATABASES

## EECS 116

### Assignment 7

### Relational Design, Indexing & Transactions

Aaron Zhong - 67737879 - alzhong@uci.edu

Tina Li - 92928656 - tinal7@uci.edu

Andy Le - 70829342 - andyl8@uci.edu

ICS Department  
Donald Bren School of Information and Computer Science  
University of California, Irvine

March 11, 2016

## Contents

<b>1 Answers</b>	<b>2</b>
1.1 Problem 2 . . . . .	2
1.1.1 Problem 2.1 . . . . .	2
1.1.2 Problem 2.2 . . . . .	2
1.1.3 Problem 2.3 . . . . .	2

# 1 Answers

## 1.1 Problem 2

### 1.1.1 Problem 2.1

```
SELECT CITY, COUNT(*)
      FROM user
     GROUP by city;
```

### 1.1.2 Problem 2.2

```
CREATE INDEX city_index ON user(city);
```

We chose to use city as the index because that is the condition we are looking for and grouping by. This directly increases our speedup. If we were to use any other attributes such as bid, name, zip, or state, those indexes would not result in a speedup if having a condition looking for the city.

### 1.1.3 Problem 2.3

	Execution Time
Before creating an index (A)	347.601 sec
After creating an index (B)	3.058 sec
Time difference (A-B)	344.543 sec