## Chapter 20 written

**20.1**: 0 to 10

**20.2:** probing table size is 23

**20.3:** deletion is performed in both probing and separate chaining hash tables by using Lazy deletion where there is no physical removal of data from the hash table.

## 20.5:

#### a.

| Index | Input |
|-------|-------|
| 0     | 9679  |
| 1     | 4371  |
| 2     | 1989  |
| 3     | 1323  |
| 4     | 6173  |
| 5     | 4344  |
| 6     |       |
| 7     |       |
| 8     |       |
| 9     | 4199  |

## b.

2

| Index | Input |
|-------|-------|
| 0     | 9679  |
| 1     | 4371  |
|       |       |

| 3                     | 1323                 |
|-----------------------|----------------------|
| 4                     | 6173                 |
| 5                     | 4344                 |
| 6                     |                      |
| 7                     |                      |
| 8                     | 1989                 |
| 9                     | 4199                 |
|                       |                      |
| C.                    |                      |
|                       |                      |
| Index                 | Input                |
| Index<br>0            | Input                |
|                       | Input 4371           |
| 0                     |                      |
| 0                     |                      |
| 0<br>1<br>2           | 4371                 |
| 0<br>1<br>2<br>3      | 4371<br>1323 -> 6173 |
| 0<br>1<br>2<br>3<br>4 | 4371<br>1323 -> 6173 |

4199 -> 9679 -> 1989

8

9

# CS 2420 Fall semester section 01 Ricardo Gonzalez Mendez