CSE 310 Recitation 6

Objectives:

1. Hash table

Rules:

1. Except for diagrams, charts or tables, answers MUST be provided in typed form.
2. For grading purposes, do NOT just submit the answers, instead copy each question, and put your answer under it. Unreadable and unclear answers will be graded with 0 points.
3. Submit your recitation on Canvas as a single PDF file.
4. For each recitation, you have 2 attempts to submit, but we will ONLY grade your last submission! It's your own responsibility to make sure that you submit the correct file! We will not accept any submissions through email.
5. **Equipment defects and technological difficulties cannot become excuses for late submission. No late submissions will be accepted!**

Question

1. [4 pts] Demonstrate what happened when we insert the keys 6, 29, 20, 16, 21, 34, 13, 18, 11 into a hash table with collisions resolved by chaining. Let the table have 9 slots and let the hash function be $h(k) = k \bmod 9$. Draw the resulting hash table.

2. Suppose you are given a universe of elements U = {85, 46, 65, 34, 39, 98, 17} to be inserted into a hash table and number of slots in the table is 5.

(a) [2 pt] What is the load factor?

(b) [4 pts] To resolve collision using chaining method draw the final content of the hash table with hash function $h(k) = k \bmod 5$. How many computations at the most do you think you're required to search for any element in the final hash table.