Q1 Instructions

0 Points

To receive full credit on this quiz, you must score at least 50%.

The Github repo for Lecture 16 is at:
https://github.com/ucsd-cse12-sp21/ucsd-cse12-sp21.github.io/tree/master/lectures/lecture-16

Q2 Hash Table

1 Point

Refer to the hash table implementation from lecture 16 and the following hash function:

```
int hash(char key) {
    return (int) key;
}
```

Which of the following sequences of insertions would cause the most collisions for a hash table with four buckets and assuming expandCapacity is not called during the adds?

- ○ add('A', 56); add('B', 5); add('C', 65); add('D', 2);
- ○ add('E', 43); add('F', 7); add('K', 6); add('L', 160);
- ○ add('M', 58); add('Q', 14); add('U', 20); add('W', 37);
- ◉ add('N', 7); add('R', 24); add('V', 92); add('Z', 100);
- ○ add('Z', 91); add('R', 604); add('P', 9); add('L', 5);

Q3 Hash Table

1 Point

Refer to the set function from lecture 16 and the depiction of the hash table just before expandCapacity is called:

```
int hash(String key) {
    return key.length;
}
```

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|         |
|         - {"greetings" : 6}
|         |
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|         |
|         - {"hi" : 5}
|         |
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|         |
|         - {"bye" : 9}
|         |
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|         |
|         - {"happy week 7" : 3}
|         |
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|         |
|         - {"hello" : 2}
|         |
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|         |
|         -
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|         |
|         -
```

| |

After expandCapacity is called, which of the following elements will have a different index in the new array after rehashing?

- [x] {"greetings" : 6}
- [ ] {"hi" : 5}
- [ ] {"bye" : 9}
- [x] {"happy week 7" : 3}
- [ ] {"hello" : 2}