Before Class:
• Journal Up

1. Storing/Search Basics
• Seats in Classroom example
• Students - Possible Solutions
• Duke SSN example
• Explain Hash Tables
• Explain Hash Table terms
• Keys are non-negative integers

2. Hash Functions
• Collisions
• Assumption of Simple Uniform Hashing
• Simple hash function assuming uniformity
• Division Method: \( h(k) = k \mod m \)
• Ways of choosing \( m \)
• Mult. Method: \( h(k) = \lfloor m(kA \mod 1) \rfloor \)

3. Collision Resolution
• Chaining Worst-Case
• Chaining Expected-Case
• Open Addressing
• Students - Why?
• Hash Function requirements
• Students - How do we probe?
• Linear Probing
• Quadratic Probing
• Double Hashing

Next Class:
• Skip Lists
• Evaluations (+ Christina’s idea)!