Prof. Hicham Elmongui

CS223

March 30, 2014

Hashing Techniques

This report is on assignment 2 which objective is Learning and analysing Hashing Techniques, As required This report is going to compare between 6 different techniques used to implement Hash Table in terms of:

- Average number of collisions
- Memory Used

The Techniques used to implement The Hash Table:

- Separate Chaining
- Bucketing
- Linear Probing
- Quadratic Probing
- Pseudo Random Probing
- Double Hashing

Average Number Of Collisions	
Separate Chaining	316 collision per 643 element (49%)
Bucketing	194 collision per 644 element (30%)
Linear Probing	0 collision per 617 element (0%)
Quadratic Probing	0 collision per 623 element (0%)
Pseudo Random Hashing	14 collision per 643 element (2%)
Double Hashing	8 collision per 609 element (1.3%)

Memory Usage	
Separate Chaining	954 slot per 643 element
Bucketing	1280 slot per 644 element
Linear Probing	1353 slot per 617 element
Quadratic Probing	1280 slot per 623 element
Pseudo Random Hashing	1280 slot per 643 element
Double Hashing	1024 slot per 609 element