Offline-07

Hashing and HashTable

(CSE-208)

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Report on various table size:

Hash Table Size Input	Collision Resolution Method	Hash#1 (polynomial roll hash)		Hash#2 (power hash)	
		# of Collisions	Average Probes	# of Collisions	Average Probes
5000	Chaining Method	2864	1.273	2849	1.271
	Double Hashing	5641	1.361	5547	1.33
	Custom Probing	5672	1.381	5653	1.367
10000	Chaining Method	2625	1.273	2617	1.271
	Double Hashing	5144	1.345	5024	1.364
	Custom Probing	4950	1.367	5012	1.362
20000	Chaining Method	2173	1.239	2132	1.206
	Double Hashing	3936	1.354	3782	1.354
	Custom Probing	3954	1.433	3874	1.403

Auxiliury hash function:(Using the hash value by subtracting some number from previous prime)

```
ul auxHashFunc(string s)

{
    ul hash_value = 0;
    for (int i = 0; i < s.size(); i++)
    {
        hash_value += int(s[i]);
    }
    hash_value = primebefore - (hash_value % primebefore);
    return hash_value;}
```