

Report on Hash Table

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Hash Function and Auxiliary Hash Function:

Hash1(String s):

```
public int hash1(String s){
    int hash=0;
    for (int i = 0; i < s.length(); i++) {
        hash=(s.charAt(i)+abs(hash*655))%n;
    }
    return hash;
}
```

Hash2(String s):

```
public int hash2(String s){
    int hash=1;
    for (int i = 0; i < s.length(); i++) {
        hash=abs(hash*33+s.charAt(i))%n;
    }
    return hash;
}
```

auxHash(String s):

```
public int auxhash1(String s){
    int hash=0;
    for (int i = 0; i < s.length(); i++) {
        hash+=(s.charAt(i))%n;
    }
    return hash;
}
```

Generated word: 10000

Successful search:1000

Table size=10007

	Hash1		Hash2	
	Number of collisions	Average probes	Number of collisions	Average probes
Chaining method	3763	0.501	3704	.502
Double hashing	57552	4.518	60087	6.574
Custom probing	37656341	3482.436	37065928	3662.562