Report:

For m = 20000

	Hash1		Hash2	
	Number of collisions	Average probes	Number of collisions	Average probes
Chaining Method	2130	0.261	2144	0.26
Double Hashing	7034	0.43	6253	0.397
Custom Probing	7883	0.412	6011	0.437

For m = 30000

	Hash1		Hash2	
	Number of collisions	Average probes	Number of collisions	Average probes
Chaining Method	1496	0.188	1474	0.158
Double Hashing	3207	0.244	2794	0.247
Custom Probing	3138	0.253	2858	0.214

For m = 50000

	Hash1		Hash2	
	Number of collisions	Average probes	Number of collisions	Average probes
Chaining Method	916	0.106	966	0.099
Double Hashing	1487	0.097	1370	0.126
Custom Probing	1373	0.112	1199	0.12

Hash function 1:

```java
public int hashValue( String key, int tableSize ) {
    int hash = 23;
    char[] chars = key.toCharArray();

    for (char c : chars)
        hash = hash * 31 + c;

    hash = hash < 0 ? hash * -1 : hash;

    return hash % tableSize;
}
```

Hash function 2:

```java
public int hashValue( String key, int tableSize ) {

    int hash = 23;
    char[] chars = key.toCharArray();

    for (char c : chars)
        hash = (key.hashCode() + c) * 31 + 31;

    hash = hash < 0 ? hash * -1 : hash;

    return hash % tableSize;
}
```

Auxiliary hash function:

```java
public static int auxHashGenerator( String key, int
HASH_TABLE_SIZE ) {
    int hash = (key.hashCode() * 3) % HASH_TABLE_SIZE;
    hash = hash < 0 ? hash * -1 : hash;
    return hash;
}
```