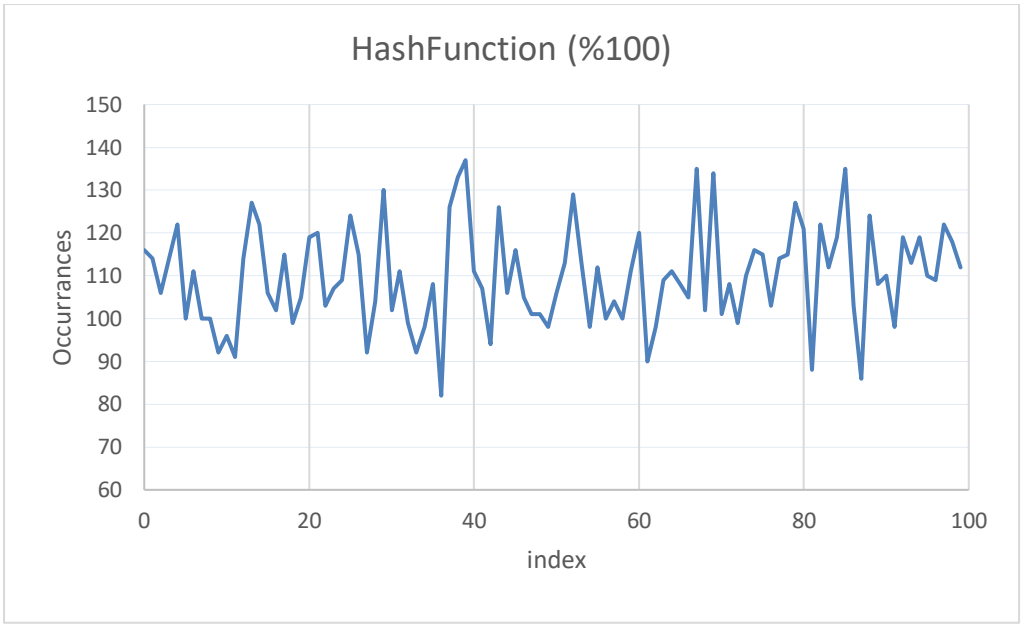
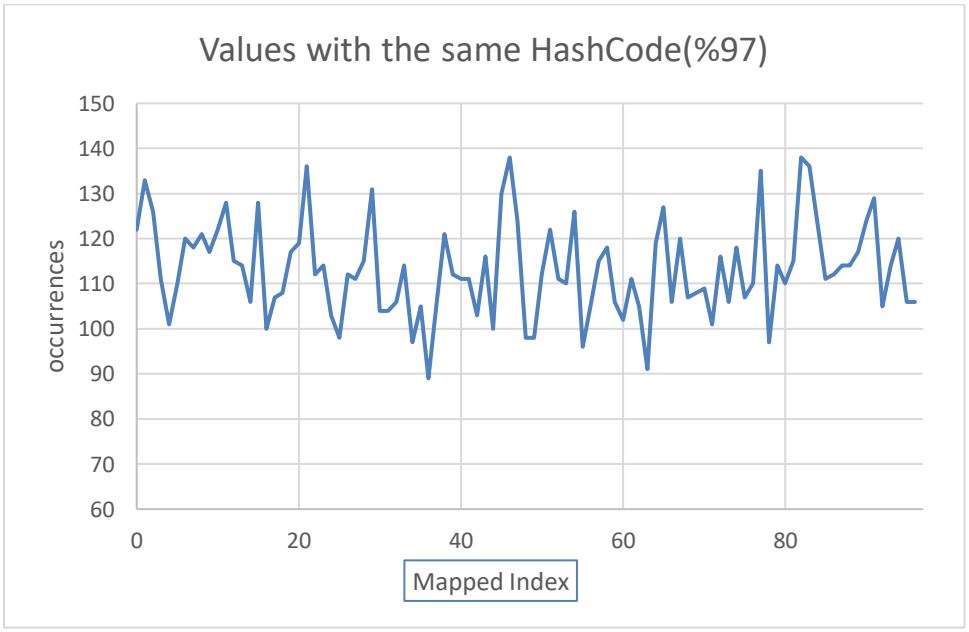
Trying to use Modulo 100 as a hash function on .hashcode() :

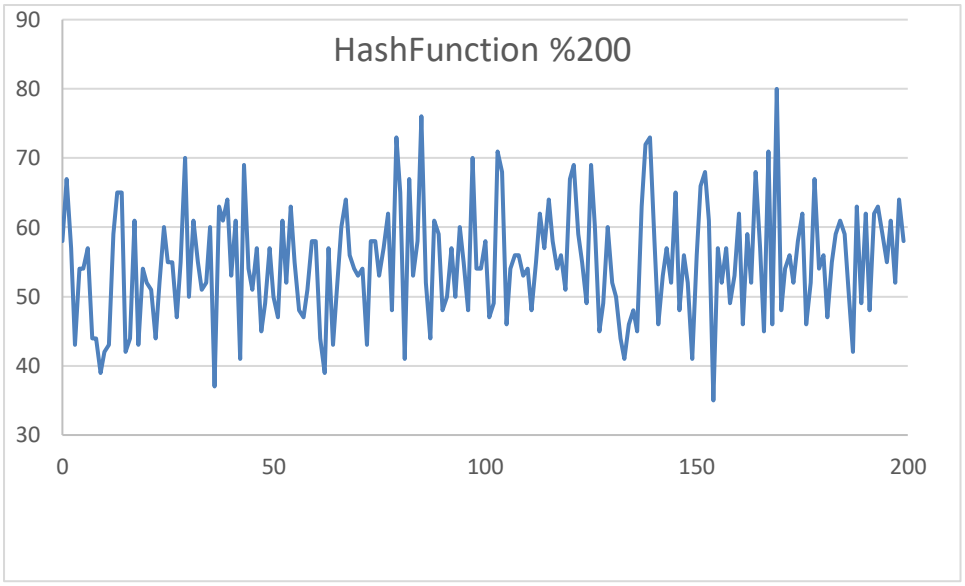



And now comparing it to the closest Prime number, which is 97:

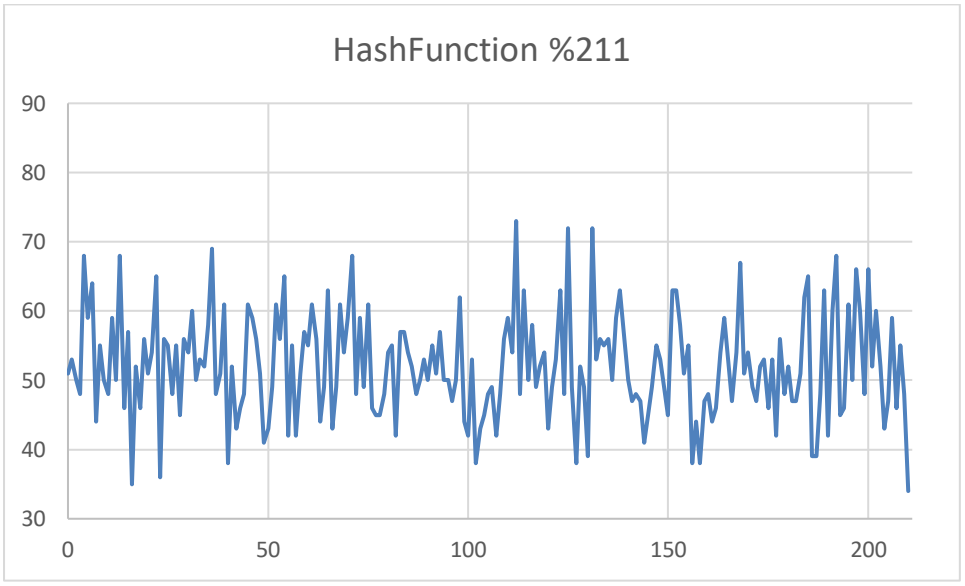



As we can see, both are very evenly distributed, however modulo 100 has higher spikes and lower lows.

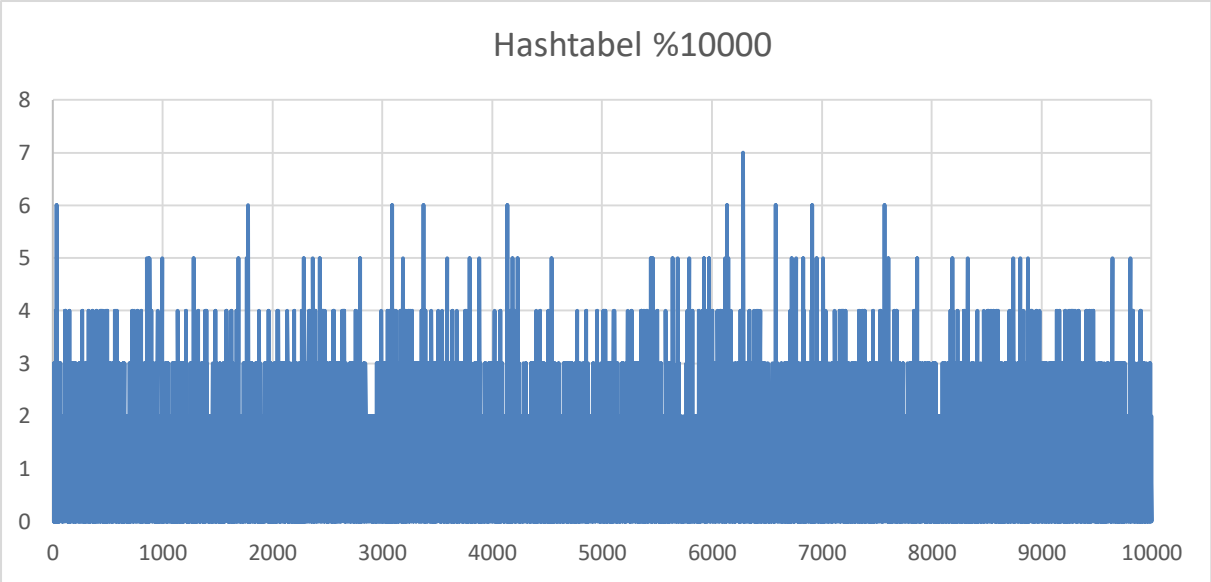
And now using modulo 200



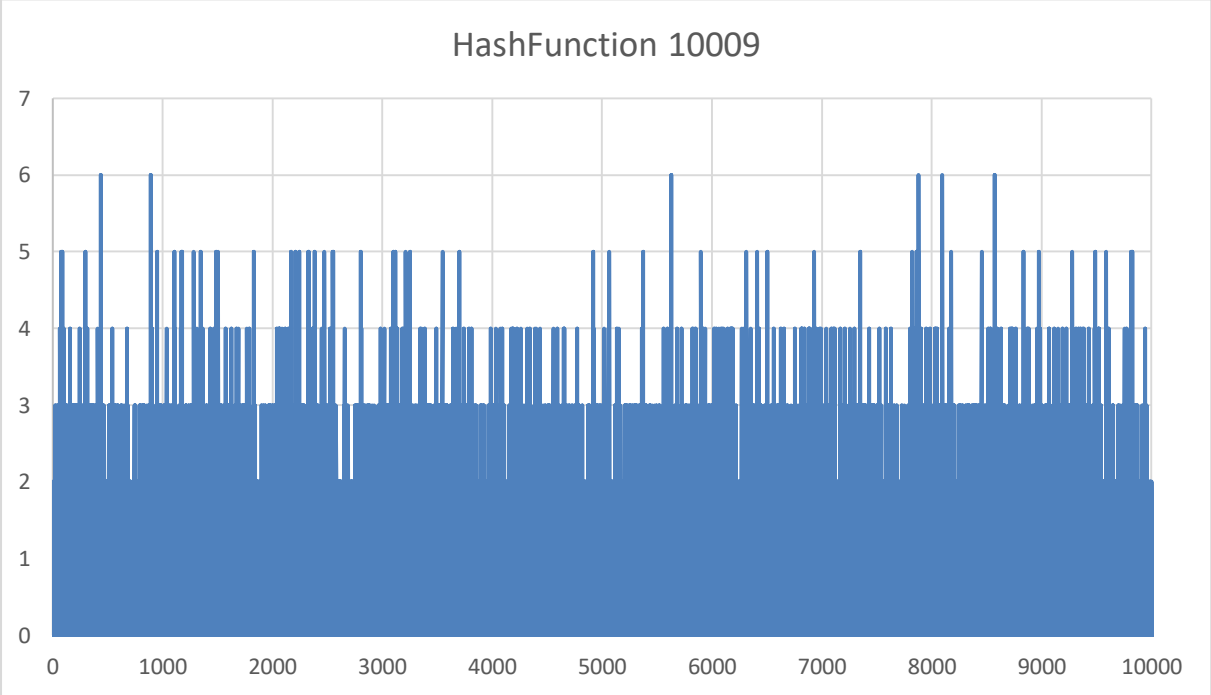

And comparing it to the closest prime number which is 211:




And just for good measure we try to see how evenly it will distribute the hash functions if the hash table is a comparable size to the input. i.e 10’000 and its closest prime, which is 10’009. Here are the results for 10’000:




And the one for 10’009:




As we can see, the even one, has a few indexes with 7 different words mapped to it, while the prime doesn’t go over 6. I.e its best to use prime numbers, even though both are fairly evenly distributed