

Algorithm:

Example data: 1848762

Example table size: 100

(First 3 digits * second 3 digits) % size of table

Eg:

$184 * 876 \% 100 = 84.$

Order:

This algorithm is of order $(n*x)$ where n is the size of the table, and x is the amount of data to be processed.

Testing:

The tables were generated with random data numbers produced by a separate program, generating 300 data values between 0 and 3000000.

Interpretation:

As the size of the table increased, the amount of collisions decreased relatively linearly.

With a table of size 100, there were an average of 221 collisions.

With a table of size 200, there were an average of 167 collisions.

With a table of size 250, there were an average of 152 collisions

An example of some data outputs are included in the zip file along with this report.