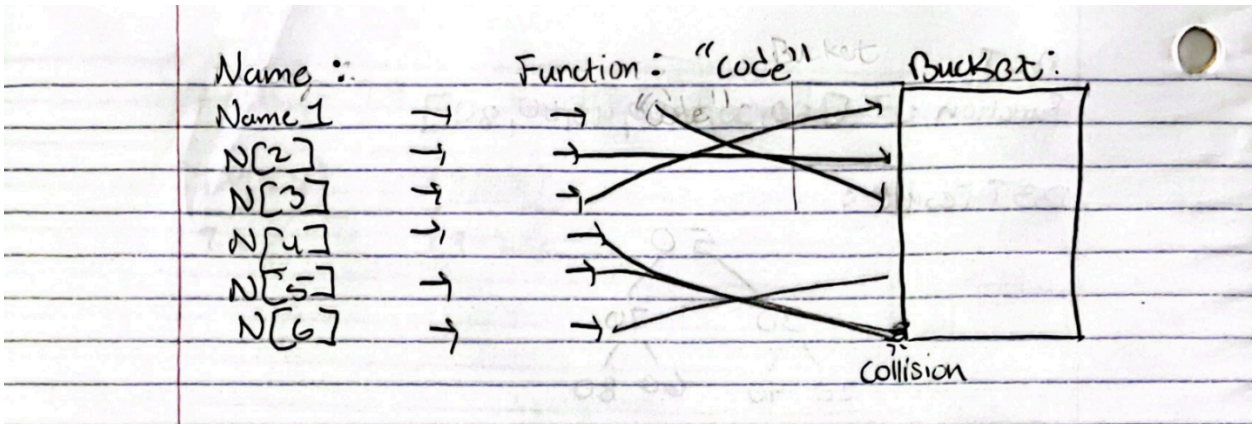
Design:



We will insert names first. From there, it will go through the hash function. This will assign some “key” to it. This key will allow us to store it in a bucket with the same key. Then, we will be able to search for the name!

Simple Hashtable:

We will create a simple hashtable by making our hash function create a “code” that only uses strings. That way, our code will have collisions. We will create a hash function that has a=1, b=2, ….z=26

We will use an array to overwrite our collisions

Functions:

Insert:

Will place the name in the appropriate location based on their “key”

Contains:

Will check to see if that name is already in the hashtable.

Smarter Hashtable:

We will use chaining for our smarter hashtable. We will achieve this by using a vector instead of an array. That way, we can have a container instead of indexes to store our keys.

Tests:

Test hash function

We will test for the insertion and the contains function to see if it works.

Test if the overwrite works