Neil Bhavsar Pa4 Readme

For the fully associative cache, my data structure is simply an array that is the size of the number of lines required. Within this array I loop through to find a hit or a miss and then using the FIFO method I replace the first one and input the new one at the end.

However, I use a hash table for both direct and set associative caches. Where the key is the given set for a specific memory address and it is divided by the size of the hash table, and that remainder would be the index. Within the hash table there is a 2D array that uses the FIFO method of replacement when needed, while searching for the tag.

Cache A gives a better hit ratio because having the tag be at the front you will have more similarities between tags; but when you pull the tag from the middle there can be a lot more variation in the tag, thus causing more misses.