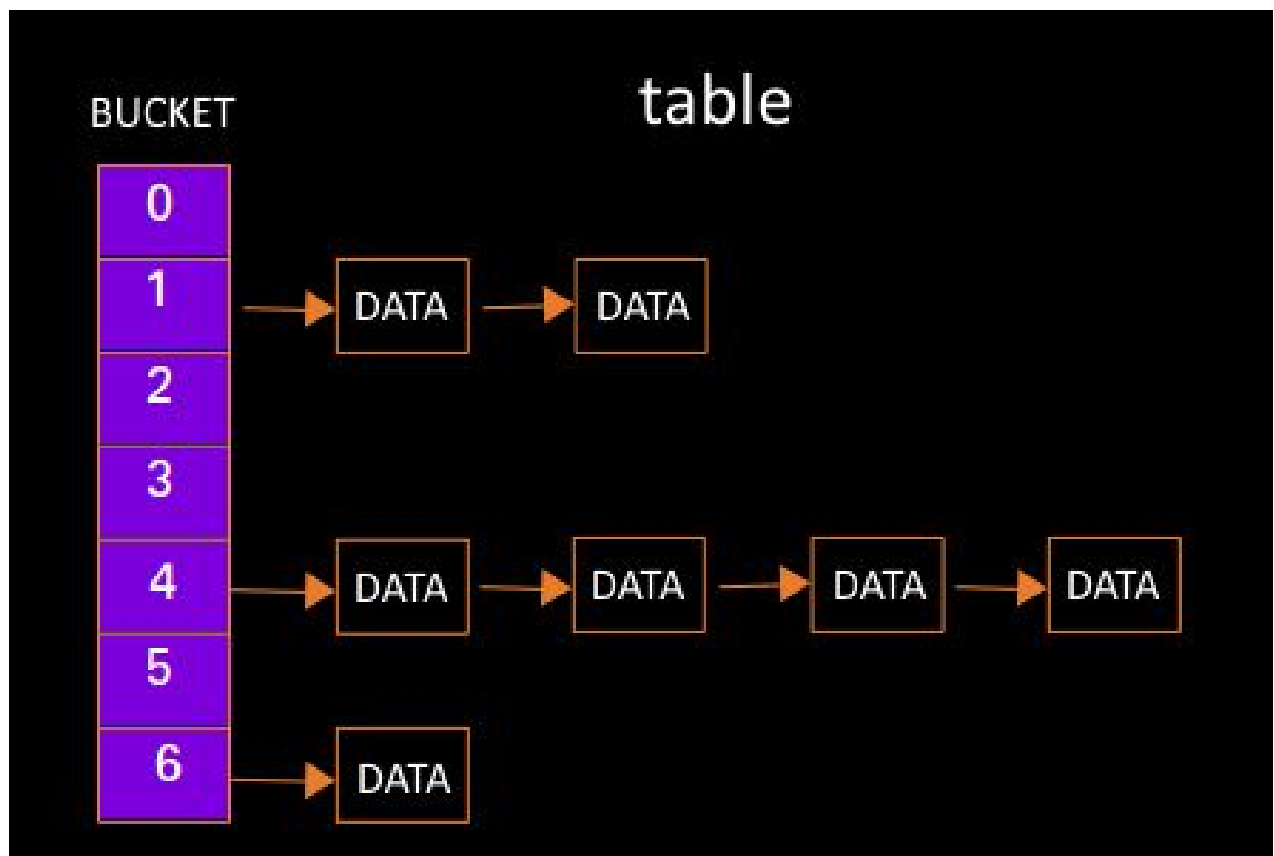


## Data Structures Assignment#4

I have used `std::list` for table and use static arrays for buckets. All functions are Big  $O(n)$ . This program has 5 Hash functions. One of them is a dummy function and it's created to test the `int utilization()` function.

`int (Hash::*hash_template)(student);` used for calling the hash function and the address of the function assigned with the `void switch_hash(int h = 0);` function. This function is also called by the constructor of the class to determine which hash function will be used while hashing. This program also has 2 random functions. `void gen_random(char *s, const int len, bool isnum)` for creating random names and addresses. `T randnum(T min, T max)` random creating random id and GPA. I have included the `<random>` library to get more random numbers because `rand()` is not random enough. It's not a problem for names and addresses but its a problem for unique student ids.



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