25/11/2020
Wednesday

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1BM18CS019

Lab - 8

Hashing

Implementing Dictionary

```
const int TS = 300;
class HashTable
{
    public:
        int k;
        int v;
        HashTable (int k, int v)
        {
            this->k = k;
            this->v = v;
        }
};
class Hashmap
{
    private:
        HashTable **t;
    public:
        Hashmap ()
        {
            t = new Hashtable * [TS];
            for (int i=0; i<TS; i++)
            {
                t[i] = NULL;
            }
        } int HashFunc (int k){ return k % TS;
        Void insert (int k, int v)
        {
            int ha = HashFunc (k);
            while (t[ha] != NULL && t[ha]->k != k)
            {
                ha = HashFunc (ha + 1);
            }
            if (t[ha] != NULL)
                delete t[ha];
            t[ha] = new HashTable (k,v);
        }
```

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```
int searchkey(int k)
{
    int h = HashFunc(k);
    while (t[h] != NULL && t[h]->k != k)
    {
        h = HashFunc(h+1);
    }
    if (t[h]==NULL)
        return -1;
    else
        return t[h]->v;
}
void delete(int k)
{
    int h = HashFunc(k);
    while (t[h] != NULL)
    {
        if (t[h]->k == k)
            break;
        h = HashFunc(h+1);
    }
    if (t[h] == NULL)
    {
        cout << " No element at key " << k;
        return;
    }
    else
        delete t[h];
    }
    cout << " Element deleted.";
}
```