

Ques 8 WAP to implement functions of Dictionary using Hashing.

```
const int TS = 200;
```

```
class HashTableEntry {
```

```
public:
```

```
int k; int v;
```

```
HashTableEntry(int k, int v)
```

```
{ this->k = k;
```

```
this->v = v; }
```

```
};
```

```
class HashMapTable {
```

```
private:
```

```
HashTableEntry **t;
```

```
public:
```

```
HashMapTable() {
```

```
t = new HashTableEntry * [TS];
```

```
for (i = 0; i < TS; i++)
```

```
t[i] = NULL;
```

```
}
```

```
int HashFunc(int k) { return k % TS; }
```

```
void Insert(int k, int v)
```

```
{
```

```
int h = HashFunc(k);
```

```
while (t[h] != NULL && t[h]->k != k)
```

```
h = HashFunc(h+1);
```



```
if (t[h] != NULL)
```

```
delete t[h];
```

```
t[h] = new HashTableEntry(k, v);
```

```
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 Remove(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 found at key" << k << endl;
```

```
return;
```



```
}  
else { delete t[h]; }  
cout << "Element Deleted" << endl;  
}
```

```
~HashMapTable()  
{
```

```
for (i=0; i<TS; i++)  
{
```

```
if (t[i] != NULL)
```

```
delete t[i];
```

```
delete[] t;
```

```
}
```

```
}
```

```
};
```