main.cpp

```cpp
#include<bits/stdc++.h>
using namespace std;
const int Table_size = 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 * [Table_size];
         for (int i = 0; i< Table_size; i++) {
            t[i] = NULL;
         }
      }
      int hashFunc(int k) {
         return k % Table_size;
      }
      void insert(int k, int v) {
         int h = hashFunc(k);
         while (t[h] != NULL && t[h]->k != k) {
            h = hashFunc(h + 1);
         }
```

main.cpp

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37          while (t[h] != NULL && t[h]->k != k) {
38              h = hashFunc(h + 1);
39          }
40          if (t[h] == NULL)
41              return -1;
42          else
43              return t[h]->v;
44      }
45      void deleteEle(int k) {
46          int h = hashFunc(k);
47          while (t[h] != NULL) {
48              if (t[h]->k == k)
49                  break;
50              h = hashFunc(h + 1);
51          }
52          if (t[h] == NULL) {
53              cout<<"No Element found at key "<<k<<endl;
54              return;
55          } else {
56              delete t[h];
57          }
58          cout<<"Element Deleted"<<endl;
59      }
60      ~HashMapTable() {
61          for (int i = 0; i < Table_size; i++) {
62              if (t[i] != NULL)
63                  delete t[i];
64                  delete[] t;
65          }
66      }
```

main.cpp

```
71      int c;
72      while (1) {
73          cout<<"1.Insert"<<endl;
74          cout<<"2.Search"<<endl;
75          cout<<"3.Delete"<<endl;
76          cout<<"4.Exit"<<endl;
77          cout<<"Enter your choice: ";
78          cin>>c;
79          switch(c) {
80              case 1:
81                  cout<<"Enter element to be inserted: ";
82                  cin>>v;
83                  cout<<"Enter key at which element to be inserted: ";
84                  cin>>k;
85                  hash.insert(k, v);
86              break;
87              case 2:
88                  cout<<"Enter key of the element to be searched: ";
89                  cin>>k;
90                  if (hash.search(k) == -1) {
91                      cout<<"No element found at key "<<k<<endl;
92                      continue;
93                  } else {
94                      cout<<"Element at key "<<k<<" : ";
95                      cout<<hash.search(k)<<endl;
96                  }
97              break;
98              case 3:
99                  cout<<"Enter key of the element to be deleted: ";
```

main.cpp

```
            cin>>v;
            cout<<"Enter key at which element to be inserted: ";
            cin>>k;
            hash.insert(k, v);
         break;
         case 2:
            cout<<"Enter key of the element to be searched: ";
            cin>>k;
            if (hash.search(k) == -1) {
               cout<<"No element found at key "<<k<<endl;
               continue;
            } else {
               cout<<"Element at key "<<k<<" : ";
               cout<<hash.search(k)<<endl;
            }
         break;
         case 3:
            cout<<"Enter key of the element to be deleted: ";
            cin>>k;
            hash.deleteEle(k);
         break;
         case 4:
            exit(1);
         default:
            cout<<"\nEnter correct option\n";
      }
   }
   return 0;
}
```

input

```
1.Insert
2.Search
3.Delete
4.Exit
Enter your choice: 1
Enter element to be inserted: 10
Enter key at which element to be inserted: 2
1.Insert
2.Search
3.Delete
4.Exit
Enter your choice: 2
Enter key of the element to be searched: 2
Element at key 2 : 10
1.Insert
2.Search
3.Delete
4.Exit
Enter your choice: 3
Enter key of the element to be deleted: 2
Element Deleted
1.Insert
2.Search
3.Delete
4.Exit
Enter your choice:
```