

```
1  #include<stdio.h>
2  #define MAX 50
3
4  int hash[MAX];
5
6  void init(int m){
7      for(int i=0;i<m;i++){
8          hash[i] = -1;
9      }
10
11  void insert(int key,int m){
12      int index = key%m;
13      while(hash[index] != -1){
14          index = (index+1) % m;
15      }
16      hash[index] = key;
17      printf("key %d inserted at address %d\n",key,index);
18  }
19
20  void display(int m){
21      printf("\n Hash Table Contents: \n");
22      for(int i=0;i<m;i++){
23          if(hash[i] != -1){
24              printf("H[%d] --> %d\n",i,hash[i]);
25          }
26          else
27              printf("H[%d] --> Empty\n",i);
28      }
29  }
30
31  int main(){
32      int n,m,key;
33      printf("Enter number of employee records: ");
34      scanf("%d",&n);
35      printf("Enter size of hash table (m): ");
36      scanf("%d",&m);
37      init(m);
38      printf("Enter %d employee keys (4-digit): \n",n);
39      for(int i=0;i<n;i++){
40          scanf("%d",&key);
41          insert(key,m);
42      }
43      display(m);
44      return 0;
45  }
```

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Enter number of employee records: 4

Enter size of hash table (m): 6

Enter 4 employee keys (4-digit):

1234

key 1234 inserted at address 4

2345

key 2345 inserted at address 5

6547

key 6547 inserted at address 1

8569

key 8569 inserted at address 2

Hash Table Contents:

H[0] --> Empty

H[1] --> 6547

H[2] --> 8569

H[3] --> Empty

H[4] --> 1234

H[5] --> 2345

Process returned 0 (0x0) execution time : 17.496 s

Press any key to continue.