

```

#include<stdio.h>
#define MAX 50

int hash[MAX];

void init(int m){
    for(int i=0;i<m;i++){
        hash[i] = -1;
    }
}

void insert(int key,int m){
    int index = key%m;
    while(hash[index] != -1){
        index = (index+1) % m;
    }
    hash[index] = key;
    printf("key %d inserted at address %d\n",key,index);
}

void display(int m){
    printf("\n Hash Table Contents: \n");
    for(int i=0;i<m;i++){
        if(hash[i] != -1){
            printf("H[%d] --> %d\n",i,hash[i]);
        }
        else
            printf("H[%d] --> Empty\n",i);
    }
}

int main(){
    int n,m,key;
    printf("Enter number of employee records: ");
    scanf("%d",&n);
    printf("Enter size of hash table (m): ");
    scanf("%d",&m);
    init(m);
    printf("Enter %d employee keys (4-digit): \n",n);
    for(int i=0;i<n;i++){
        scanf("%d",&key);
        insert(key,m);
    }
    display(m);
    return 0;
}

```



C:\Users\Admin\Documents\1WN24CS151\linearprobing.exe



Enter number of employee records: 3

Enter size of hash table (m): 5

Enter 3 employee keys (4-digit):

0989

key 989 inserted at address 4

9879

key 9879 inserted at address 0

9899

key 9899 inserted at address 1

Hash Table Contents:

H[0] --> 9879

H[1] --> 9899

H[2] --> Empty

H[3] --> Empty

H[4] --> 989

Process returned 0 (0x0) execution time : 36.550 s

Press any key to continue.