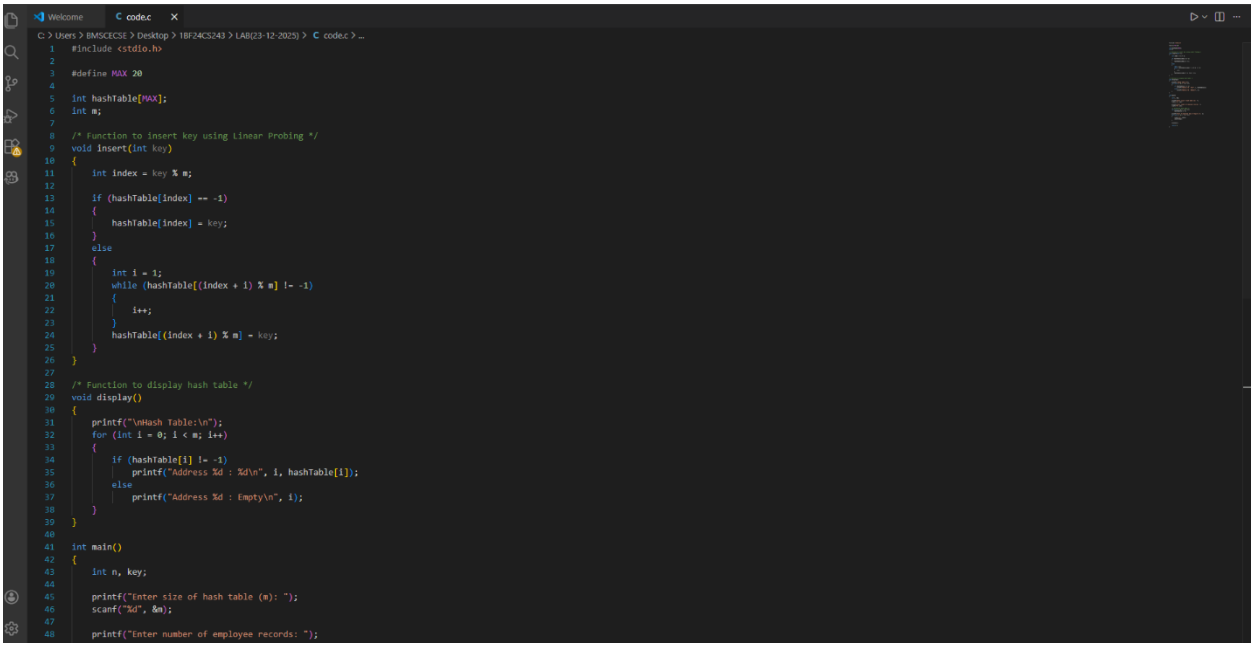
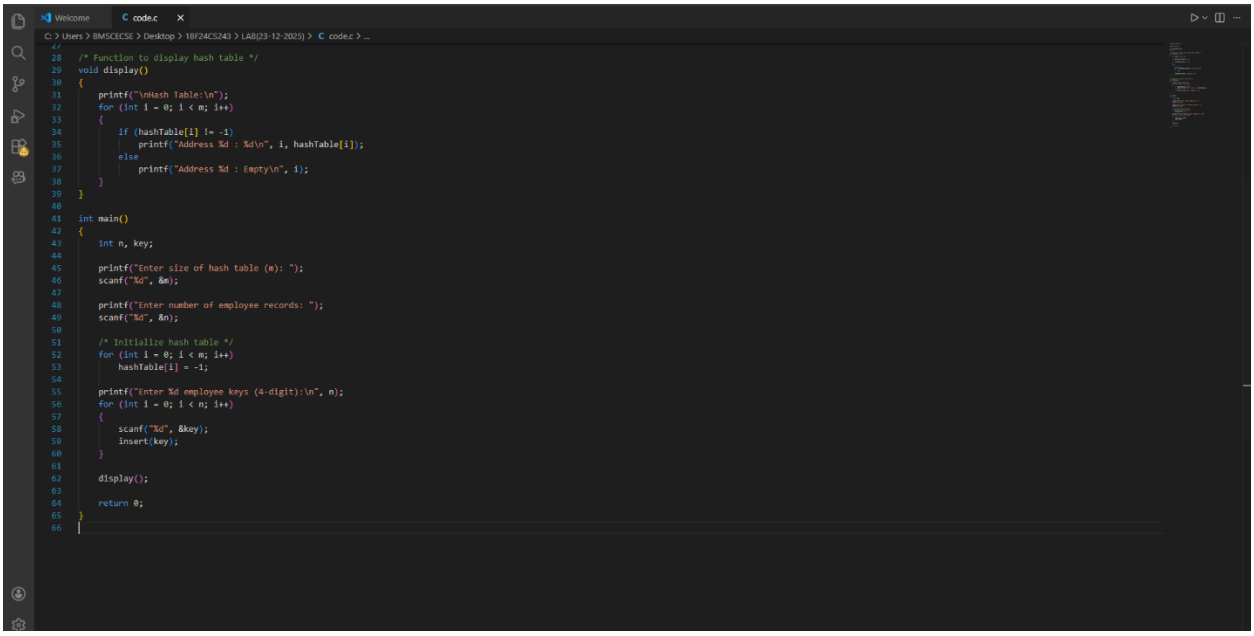
LAB(23-12-2025)

INPUT:

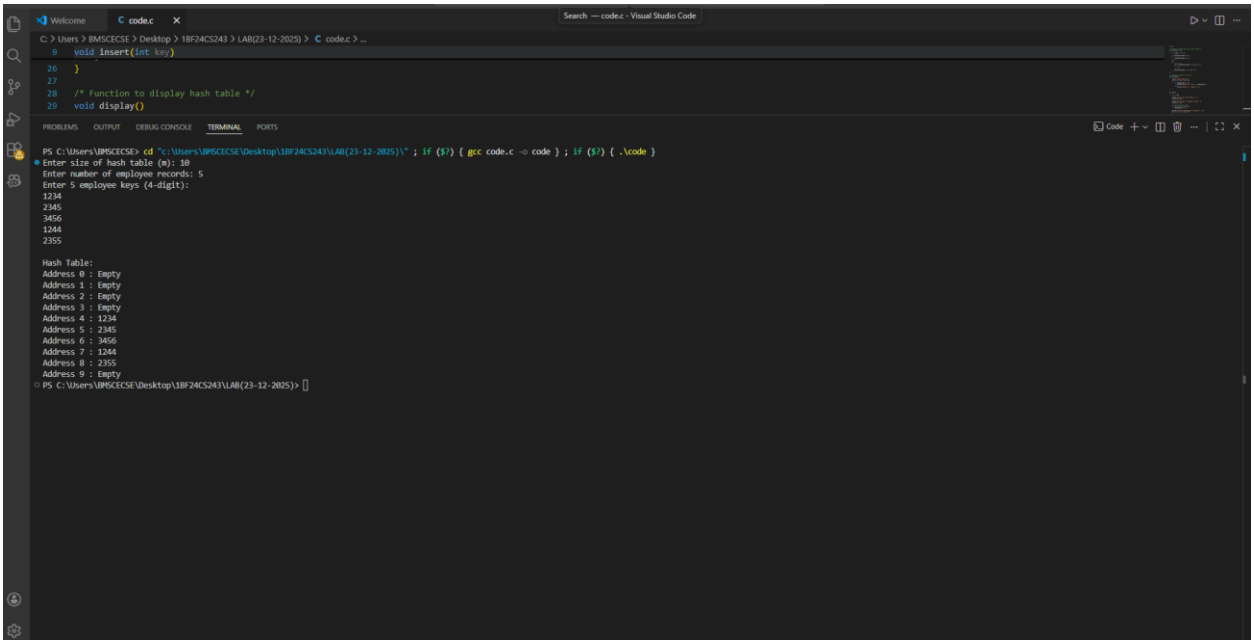


```c
#include <stdio.h>

#define MAX 20

int hashTable[MAX];
int m;

/* Function to insert key using Linear Probing */
void insert(int key)
{
    int index = key % m;

    if (hashTable[index] == -1)
    {
        hashTable[index] = key;
    }
    else
    {
        int i = 1;
        while (hashTable[(index + i) % m] != -1)
        {
            i++;
        }
        hashTable[(index + i) % m] = key;
    }
}

/* Function to display hash table */
void display()
{
    printf("\nHash Table:\n");
    for (int i = 0; i < m; i++)
    {
        if (hashTable[i] != -1)
            printf("Address %d : %d\n", i, hashTable[i]);
        else
            printf("Address %d : Empty\n", i);
    }
}

int main()
{
    int n, key;

    printf("Enter size of hash table (m): ");
    scanf("%d", &m);

    printf("Enter number of employee records: ");
```



```c
/* Function to display hash table */
void display()
{
    printf("\nHash Table:\n");
    for (int i = 0; i < m; i++)
    {
        if (hashTable[i] != -1)
            printf("Address %d : %d\n", i, hashTable[i]);
        else
            printf("Address %d : Empty\n", i);
    }
}

int main()
{
    int n, key;

    printf("Enter size of hash table (m): ");
    scanf("%d", &m);

    printf("Enter number of employee records: ");
    scanf("%d", &n);

    /* Initialize hash table */
    for (int i = 0; i < m; i++)
        hashTable[i] = -1;

    printf("Enter %d employee keys (4-digit):\n", n);
    for (int i = 0; i < n; i++)
    {
        scanf("%d", &key);
        insert(key);
    }

    display();

    return 0;
}
```

OUTPUT:


Welcome
code.c
Search — code.c - Visual Studio Code
C: > Users > BMSCECSE > Desktop > 1BF24CS243 > LAB(23-12-2025) > C code.c > ...
9 void insert(int key)
26 }
27
28 /* Function to display hash table */
29 void display()
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
Code
PS C:\Users\BMSCECSE> cd "c:\Users\BMSCECSE\Desktop\1BF24CS243\LAB(23-12-2025)\" ; if ($?) { gcc code.c -o code } ; if ($?) { .\code }
Enter size of hash table (m): 10
Enter number of employee records: 5
Enter 5 employee keys (4-digit):
1234
2345
3456
1244
2355
Hash Table:
Address 0 : Empty
Address 1 : Empty
Address 2 : Empty
Address 3 : Empty
Address 4 : 1234
Address 5 : 2345
Address 6 : 3456
Address 7 : 1244
Address 8 : 2355
Address 9 : Empty
PS C:\Users\BMSCECSE\Desktop\1BF24CS243\LAB(23-12-2025)>