

**/\* C Program to implement SYMBOL TABLE \*/**

```
#include<stdio.h>
#include<conio.h>
#include<malloc.h>
#include<string.h>
#define null 0
int size = 0;
void insert ();
void display ();
int search(char lab[]);
struct symbtab
{
char label[10];
char info[10];
struct symbtab *next;
};
struct symbtab *first, *last;
void main ()
{
int op;
int y;
char la[10];
do
{
printf ("0.INSERT\n");
printf ("1.DISPLAY\n");
printf ("\nEnter your option: ");
scanf ("%d", &op);
switch (op){
case 0:
insert ();
break;
case 1:
display ();
break;
}
}
while (op < 2);
```

```
getch ();  
}
```

```
void insert () {  
    int n;  
    char l[10];  
    printf ("Enter the Identifier: \n");  
    scanf ("%s", l);  
    n = search (l);  
    if (n == 1)  
        printf("The label is already in the symbol table. Duplicate cant be inserted\n");  
    else{  
        struct symtab *p;  
        p = malloc (sizeof (struct symtab));  
        strcpy (p->label, l);  
        printf ("Enter the info:\n ");  
        scanf ("%s", &p->info);  
        p->next = null;  
        if (size == 0){  
            first = p;  
            last = p;  
        }  
        else{  
            last->next = p;  
            last = p;  
        }  
        size++;  
    }  
}  
  
void display (){  
    int i;  
    struct symtab *p;  
    p = first;  
    printf ("Id\t\t\tInfo\n");  
    for (i = 0; i < size; i++){  
        printf ("%s\t\t\t%s\n", p->label, p->info);  
        p = p->next;  
    }  
}  
  
int search (char lab[]){  
    int i, flag = 0;  
    struct symtab *p;  
    p = first;  
    for (i = 0; i < size; i++){  
        if (strcmp (p->label, lab) == 0)  
            flag = 1;  
        p = p->next;  
    }  
}
```

```
return flag;  
}
```