

EXP13

Implement a C program to perform symbol table operations.

INPUT:

```
#include<stdio.h>
#include<stdlib.h>
#include<string.h>
int cnt=0;
struct symtab
{
    char label[20];
    int addr;
}
sy[50];
void insert();
int search(char *);
void display();
void modify();
int main()
{
    int ch,val;
    char lab[10];
    do
    {
        printf("\n1.insert\n2.display\n3.search\n4.modify\n5.exit\n");
        scanf("%d",&ch);
        switch(ch)
        {
            case 1:
                insert();
                break;
            case 2:
                display();
                break;
            case 3:
                printf("enter the label");
                scanf("%s",lab);
                val=search(lab);
                if(val==1)
                    printf("label is found");
```

```

        else
            printf("label is not found");
        break;
    case 4:
        modify();
        break;
    case 5:
        exit(0);
        break;
    }
}while(ch<5);
}
void insert()
{
int val;
    char lab[10];
    int symbol;
    printf("enter the label");
    scanf("%s",lab);
    val=search(lab);
    if(val==1)
        printf("duplicate symbol");
    else
    {
        strcpy(sy[cnt].label,lab);
        printf("enter the address");
        scanf("%d",&sy[cnt].addr);
        cnt++;
    }
}
int search(char *s)
{
    int flag=0,i; for(i=0;i<cnt;i++)
    {
        if(strcmp(sy[i].label,s)==0)
            flag=1;
    }
    return flag;
}
void modify()

```

```

{
    int val,ad,i;
    char lab[10];
    printf("enter the labe:");
    scanf("%s",lab);
    val=search(lab);
    if(val==0)
    printf("no such symbol");
    else
    {
        printf("label is found \n");
        printf("enter the address");
        scanf("%d",&ad);
        for(i=0;i<cnt;i++)
        {
            if(strcmp(sy[i].label,lab)==0)
            sy[i].addr=ad;
        }
    }
}
void display()
{
    int i;
    for(i=0;i<cnt;i++)
    printf("%s\t%d\n",sy[i].label,sy[i].addr);
}

```

OUTPUT:

```
C:\Users\kappappa\Documents\ < + -
1.insert
2.display
3.search
4.modify
5.exit
1
enter the labela
enter the address100

1.insert
2.display
3.search
4.modify
5.exit
2
a      100

1.insert
2.display
3.search
4.modify
5.exit
3;
enter the labellabel is not found
1.insert
2.display
3.search
4.modify
5.exit
3
enter the labela
label is found
1.insert
2.display
3.search
4.modify
5.exit
4
enter the labela
```

83°F Mostly cloudy

Q Search

ENG US 11:44 02-02-2023