Exp. No. 11

Implement a C program to perform symbol table operations.

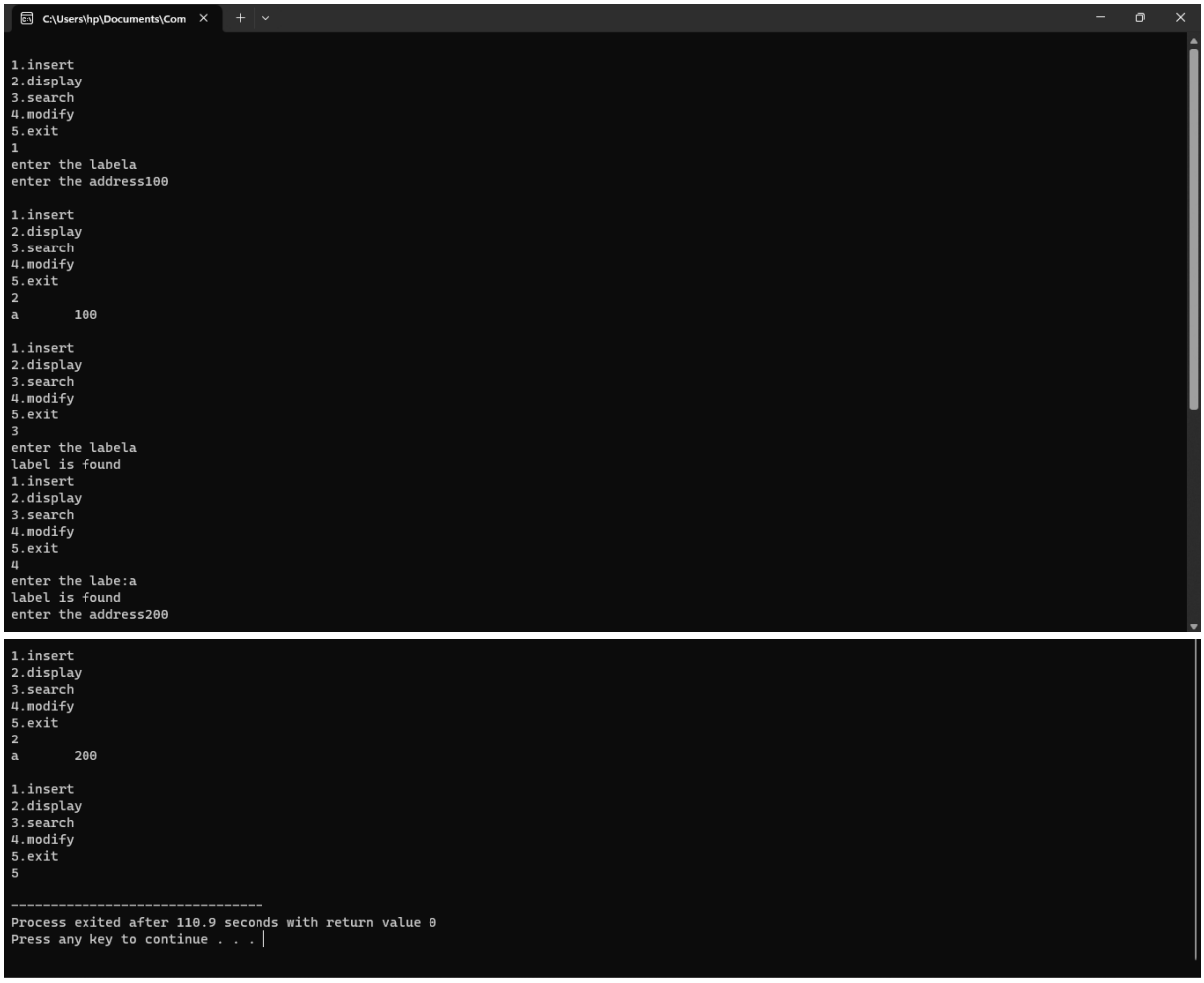
Program:

```
#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\hp\Documents\Com
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 labela
label is found
1.insert
2.display
3.search
4.modify
5.exit
4
enter the labe:a
label is found
enter the address200
1.insert
2.display
3.search
4.modify
5.exit
2
a 200
1.insert
2.display
3.search
4.modify
5.exit
5
Process exited after 110.9 seconds with return value 0
Press any key to continue . . .