

ABHINAV U

S5CSE

ROLL NO:05

```
#include<stdio.h>
```

```
#include<string.h>
```

```
struct table
```

```
{
```

```
    char symbol[50];
```

```
    char type[50];
```

```
    char scope[50];
```

```
};
```

```
struct table syb[50];
```

```
int n = 0;
```

```
void insert()
```

```
{
```

```
    char symbol[50],type[50],scope[50];
```

```
    int i;
```

```
    printf("\nEnter name of symbol: ");
```

```
    scanf("%s",symbol);
```

```
    printf("\nEnter type: ");
```

```
    scanf("%s",type);
```

```
    printf("\nEnter scope: ");
```

```
    scanf("%s",scope);
```

```
    for(i=0;i<n;i++)
```

```

{
    if(strcmp(syb[i].symbol,symbol)==0)
    {
        printf("\nSymbol Name already in use!!");
        goto skip1;
    }
}

strcpy(syb[n].symbol,symbol);
strcpy(syb[n].type,type);
strcpy(syb[n].scope,scope);
n++;
skip1:
    printf(" ");
}

```

```

void delete()
{
    int i,pos;
    char search[50];
    printf("\nEnter name of symbol to delete: ");
    scanf("%s",search);
    for(i=0;i<n;i++)
    {
        if(strcmp(syb[i].symbol,search)==0)
        {
            pos = i;
            break;

```

```

        }
    }
    for(i=pos;i<n-1;i++)
    {
        strcpy(syb[i].symbol,syb[i+1].symbol);
        strcpy(syb[i].type,syb[i+1].type);
        strcpy(syb[i].scope,syb[i+1].scope);
    }
    n--;
}

```

```

void modify()

```

```

{
    int i,j,ch;
    char search[50],new[50];
    char c;
    printf("\nEnter name of symbol to modify: ");
    scanf("%s",search);
    for(i=0;i<n;i++)
    {
        if(strcmp(syb[i].symbol,search)==0)
        {
            do
            {
                printf("Choose what to modify:\n");
                printf("\n1.Symbol Name\n2.Type\n3.Scope\n");
                scanf("%d",&ch);
            }
        }
    }
}

```

```

if(ch == 1)
{
    printf("\nEnter new symbol name: ");
    scanf("%s",new);
    for(j=0;j<n;j++)
    {
        if(strcmp(syb[j].symbol,new)==0)
        {
            printf("\nSymbol Name already in use!!");
            goto skip2;
        }
    }
    strcpy(syb[i].symbol,new);
}
else if(ch == 2)
{
    printf("\nEnter new type: ");
    scanf("%s",new);
    strcpy(syb[i].type,new);
}
else if(ch == 3)
{
    printf("\nEnter new scope: ");
    scanf("%s",new);
    strcpy(syb[i].scope,new);
}
else

```

```

        {
            printf("\nChoose a valid option!!");
        }

        skip2:

        printf("\nDo you want to continue modification (Y/N)? ");

        scanf("%s",&c);

    }

    while(c == 'Y' || c == 'y');

}

}

```

void display()

```

{
    int i;

    printf("\n***** Symbol Table *****\n");

    printf("\nSymbol\t\tType\t\tScope");

    for(i=0;i<n;i++)
    {
        printf("\n%s\t\t%s\t\t%s",syb[i].symbol,syb[i].type,syb[i].scope);

    }

    printf("\n");
}

```

void main()

```

{

    int ch;

```

```
char c;

do
{
    printf("\nEnter your choice");

    printf("\n1.INSERT\n2.DELETE\n3.MODIFY\n4.DISPLAY\n");

    scanf("%d",&ch);

    switch(ch)
    {
        case 1:
            insert();
            break;

        case 2:
            delete();
            break;

        case 3:
            modify();
            break;

        case 4:
            display();
            break;

        default:
            printf("\nEnter valid option!!");
    }

    printf("\nDo you want to continue (Y/N)? ");

    scanf("%s",&c);
}

while(c == 'Y' || c == 'y');
```

}

output

```
"D:\study software\test\disk\bin\Debug\disk.exe"
Enter your choice
1.INSERT
2.DELETE
3.MODIFY
4.DISPLAY
1
Enter name of symbol: abcd
Enter type: varchar
Enter scope: local
Do you want to continue (Y/N)? y
Enter your choice
1.INSERT
2.DELETE
3.MODIFY
4.DISPLAY
1
Enter name of symbol: efgh
Enter type: varchar
Enter scope: global
Do you want to continue (Y/N)? y
Enter your choice
1.INSERT
2.DELETE
3.MODIFY
4.DISPLAY
4
***** Symbol Table *****
Symbol      Type      Scope
abcd        varchar   local
efgh        varchar   global
Do you want to continue (Y/N)? y
Enter your choice
1.INSERT
2.DELETE
3.MODIFY
3
Enter name of symbol to delete: abcd
Do you want to continue (Y/N)? y
Enter your choice
1.INSERT
2.DELETE
3.MODIFY
4.DISPLAY
3
Enter name of symbol to modify: efgh
Choose what to modify:
1.Symbol Name
2.Type
3.Scope
3
Enter new scope: local
Do you want to continue modification (Y/N)? y
Choose what to modify:
1.Symbol Name
2.Type
3.Scope
2
Enter new type: varchar
Do you want to continue modification (Y/N)? n
Do you want to continue (Y/N)? y
Enter your choice
1.INSERT
2.DELETE
3.MODIFY
4.DISPLAY
4
***** Symbol Table *****
Symbol      Type      Scope
efgh        varchar   local
Do you want to continue (Y/N)?
```