

## 8. C Program for Symbol Table Operations

```
#include <stdio.h>
#include <string.h>
struct Symbol {
    char name[20];
    char type[20];
} table[50];
int n = 0;
void insert() {
    printf("Enter name & type: ");
    scanf("%s %s", table[n].name, table[n].type);
    n++;
}
void search() {
    char s[20];
    printf("Enter name to search: ");
    scanf("%s", s);
    for (int i = 0; i < n; i++)
        if (!strcmp(s, table[i].name)) {
            printf("Found: %s (%s)\n", table[i].name, table[i].type);
            return;
        }
    printf("Not Found\n");
}
void display() {
    printf("\nSymbol Table:\n");
    for (int i = 0; i < n; i++)
        printf("%s\t%s\n", table[i].name, table[i].type);
```

```

}

int main() {
    int ch;
    while (1) {
        printf("\n1.Insert\n2.Search\n3.Display\n4.Exit\nEnter choice: ");
        scanf("%d", &ch);
        if (ch == 1) insert();
        else if (ch == 2) search();
        else if (ch == 3) display();
        else break;
    }
    return 0;
}

```

## Output:

The screenshot displays the Dev-C++ IDE interface. On the left, the code editor shows a C program with a menu system. On the right, the terminal window shows the execution of the program, starting with the menu options and then interacting with the user to perform an insertion operation.

```

C:\Users\Reddy\Downloads\EXP 1 CD.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
Project Classes Debug EXP 1 CD.cpp
1 #include <stdio.h>
2 #include <string.h>
3 struct Symbol {
4     char name[20];
5     char type[20];
6 } table[50];
7 int n = 0;
8 void insert() {
9     printf("Enter name & type: ");
10    scanf("%s %s", table[n].name, table[n].type);
11    n++;
12 }
13 void search() {
14     char s[20];
15 }

C:\Users\Reddy\Downloads\EXP 1 CD.exe
1.Insert
2.Search
3.Display
4.Exit
Enter choice: 1
Enter name & type: x int

1.Insert
2.Search
3.Display
4.Exit
Enter choice: 2
Enter name to search: x
Found: x (int)

1.Insert
2.Search
3.Display
4.Exit
Enter choice: 3

Symbol Table:
x      int

1.Insert
2.Search
3.Display
4.Exit
Enter choice: 4

Process exited after 31.29 seconds with return value 0

```

