

```

1  #include<stdio.h>
2  #include<string.h>
3  #define size 20
4  int i,j,m,n,c[size][size];
5  char x[size],y[size],b[size][size];
6  void print(int i,int j)
7  {
8      if(i==0 || j==0)
9          return;
10
11     if(b[i][j]=='c')
12     {
13         print(i-1,j-1);
14         printf("%c",x[i-1]);
15     }
16
17     else if(b[i][j]=='u')
18         print(i-1,j);
19
20     else
21         print(i,j-1);
22 }
23
24 void longest_common()
25 {
26     m=strlen(x);
27     n=strlen(y);
28     for(i=0;i<=m;i++)
29         c[i][0]=0;
30     for(i=0;i<=n;i++)
31         c[0][i]=0;
32     for(i=1;i<=m;i++)
33         for(j=1;j<=n;j++)
34         {
35             if(x[i-1]==y[j-1])
36             {
37                 c[i][j]=c[i-1][j-1]+1;
38                 b[i][j]='c';
39             }
40             else if(c[i-1][j]>=c[i][j-1])
41             {
42                 c[i][j]=c[i-1][j];
43                 b[i][j]='u';
44             }
45             else
46             {
47                 c[i][j]=c[i][j-1];
48                 b[i][j]='l';
49             }
50         }
51     }
52     for(i=0;i<=m;i++)
53     {
54         for(j=0;j<=n;j++)
55             printf("%5d",c[i][j]);
56         printf("\n\n");
57     }
58
59     if(c[m][n] != 0)
60         printf("Longest common subsequence is of %d length \n",c[m][n]);
61
62     print(m,n);
63 }
64
65 int main()
66 {

```

```
67         printf("\tEnter first string\t");
68         scanf("%s",x);
69         printf("\tEnter second string\t");
70         scanf("%s",y);
71
72     printf("\nLongest common subsequence is :\n ");
73     longest_common();
74
75     return 0;
76
77
78 }
```