## Code:

```
#include<stdio.h>
#include<string.h>
int i,j,m,n,c[20][20];
char x[20], y[20], b[20][20];
void print(int i,int j)
                if(i==0 || j==0)
                                return;
                if(b[i][j]=='c')
                                 print(i-1,j-1);
                                printf("%c",x[i-1]);
                else if(b[i][j]=='u')
                                print(i-1,j);
                else
                                print(i,j-1);
void lcs()
                m=strlen(x);
                n=strlen(y);
                for(i=0;i<=m;i++)
                                c[i][0]=0;
                for(i=0;i<=n;i++)
                                c[0][i]=0;
                //c, u and l denotes cross, upward and downward directions
respectively
                for(i=1;i<=m;i++)
                                 for(j=1;j<=n;j++)
                                                 if(x[i-1]==y[j-1])
                                                                 c[i][j]=c[i-1][j-1]+1;
                                                                 b[i][j]='c';
                                                 else if(c[i-1][j]>=c[i][j-1])
                                                                 c[i][j]=c[i-1][j];
                                                                 b[i][j]='u';
                                                 else
                                                                 c[i][j]=c[i][j-1];
                                                                 b[i][j]='l';
int main()
```

```
printf("Enter 1st sequence:");
                                                                                         scanf("%s",x);
                                                                                         printf("Enter 2nd sequence:");
                                                                                         scanf("%s",y);
                                                                                         printf("\nThe Longest Common Subsequence is ");
                                                                                        lcs();
                                                                                         print(m,n);
return 0;
 📕 longest common subsequence.c - Code::Blocks 20.03
  \begin{picture}(2000) \put(0.000) \put
                                                                                                                                                                                                                                                                                                                                     ~ Q 4 0 b
   t Start here \times floyd warshall.c \times Bellman-Ford Algorithm attempt 2.c \times Bellman-Ford Algorithm.c \times N - Queen Algorithm.c \times N - Queen atl2.c \times Sum of Subset.c \times Graph colouring Algo.c \times longest common subsequence.
                                 #inclu  "C:\User\OneDrive\Desktop\C C++\longest common subsequence.exe"
                                 int i, Enter 1st sequence:TATA
char x Enter 2nd sequence:BATA
                                 void p.The Longest Common Subsequence is ATA
Process returned θ (θxθ) execution time : 15.745 s
Press any key to continue.
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                                 void l
   Logs & others

    Code::Blocks 

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```

Ø .	X = BDCABA Y = ABCBBAB
	O A B C B A B O O O O O O O O B O O I I I I I I D O O I I I I 2 2 2 C O O I 2 2 2 2 2
	A 0 1 1 2 2 3 3 3 4 A A C LCS len -4
10.4	LCS = BDAB
	[0.01.1.1] adamatas
POCO X4	PRO 5G