**EXPERIMENT**–**14**

**AIM**– To find the LCS (Longest Common Subsequence) by using dynamic programming.

**CODE**–

public class LCS{

int lcs( char[] X, char[] Y, int m, int n ) {

if (m == 0 || n == 0)

return 0;

if (X[m-1] == Y[n-1])

return 1 + lcs(X, Y, m-1, n-1);

else

return max(lcs(X, Y, m, n-1), lcs(X, Y, m-1, n));

}

int max(int a, int b){

return (a > b)? a : b;

}

public static void main(String[] args){

LCS lcs = new LCS();

String s1 = "AGGTABSADLKS";

String s2 = "GXTXAYBGFJKA";

char[] X=s1.toCharArray();

char[] Y=s2.toCharArray();

int m = X.length;

int n = Y.length;

System.out.println("Length of LCS is" + " " +

lcs.lcs( X, Y, m, n ) );

}

}

**OUTPUT** –

