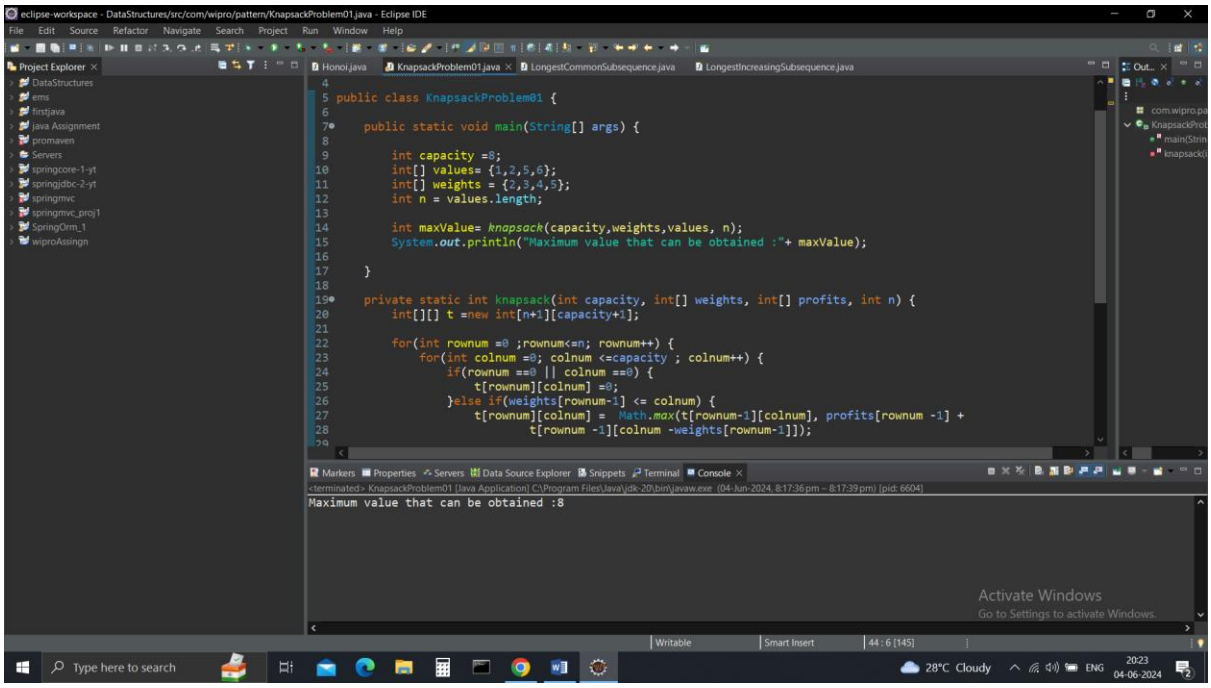
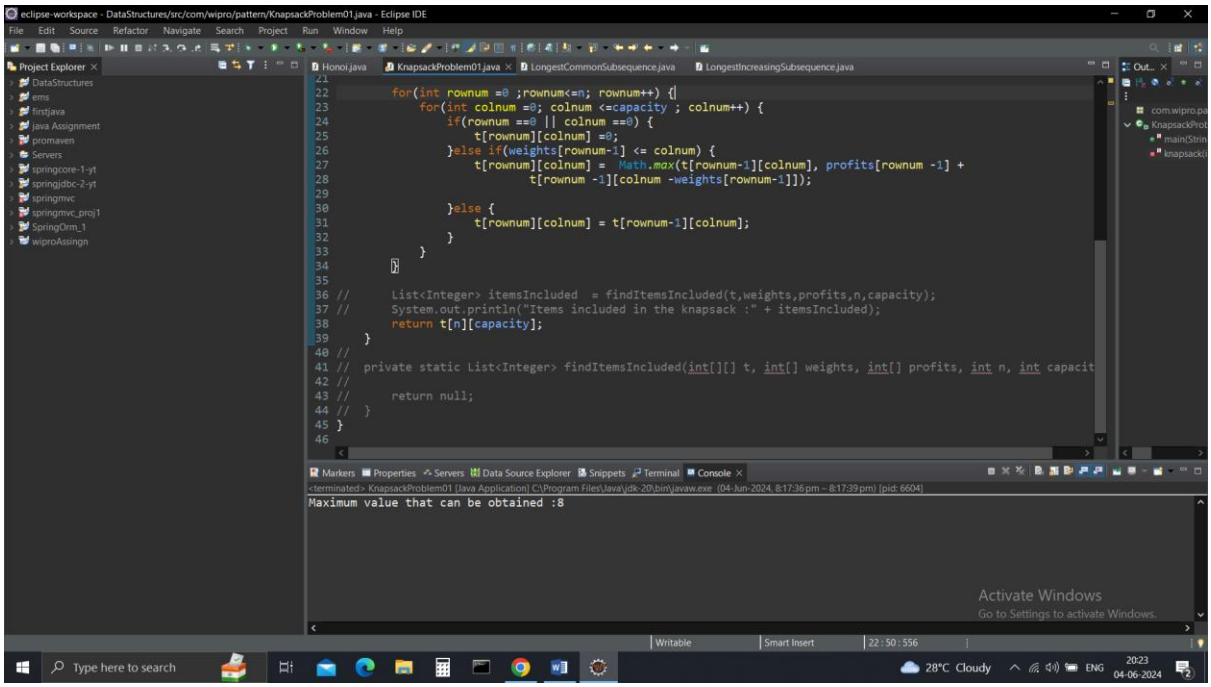
Task 1: Knapsack Problem

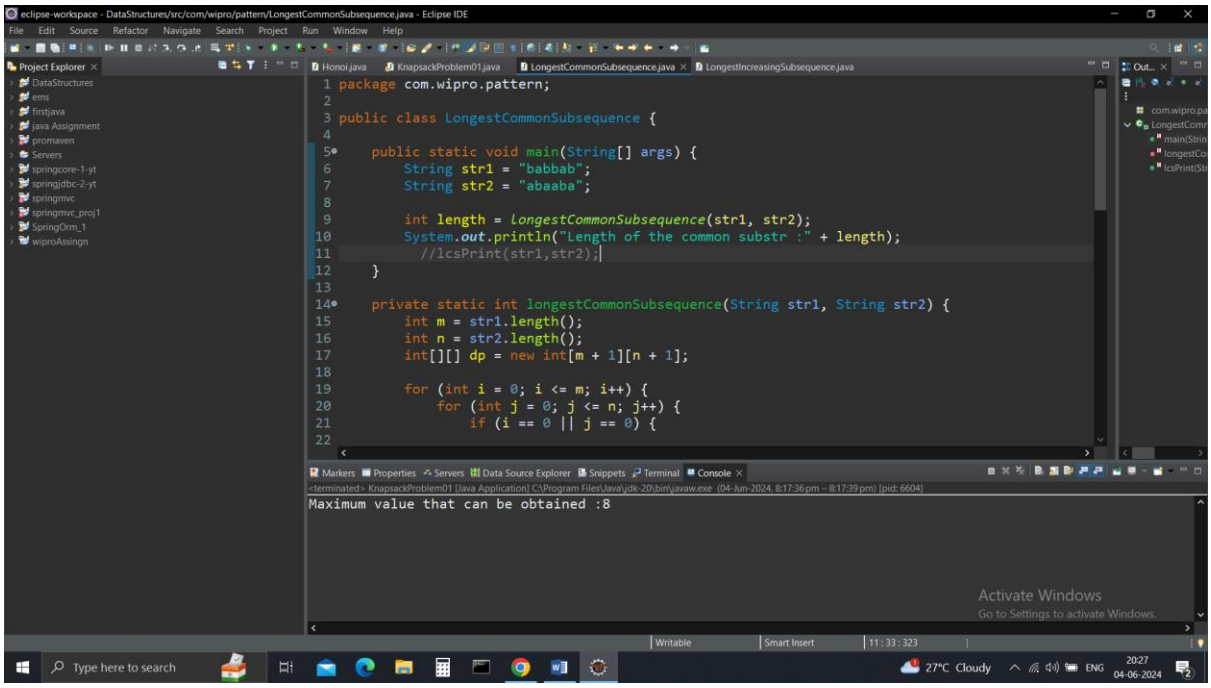
Write a function int Knapsack(int W, int[] weights, int[] values) in C# that determines the maximum value of items that can fit into a a knapsack with a capacity W. The function should handle up to Find the optimal way 100 items. P tems. Find the to fill the ki knapsack with ith the given items to achieve the maximum total value. You must consider that you cannot break items, but have to include them whole.

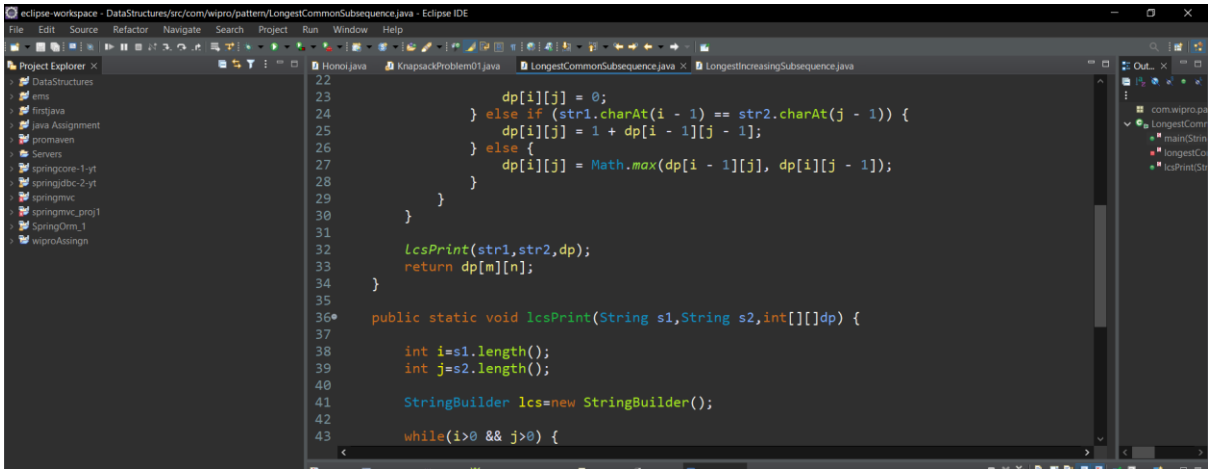


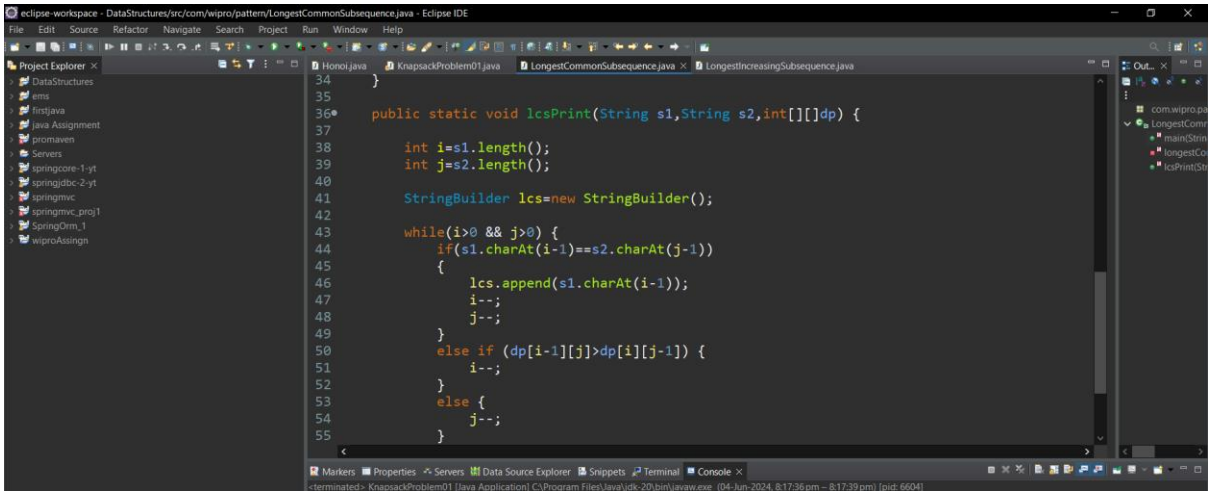


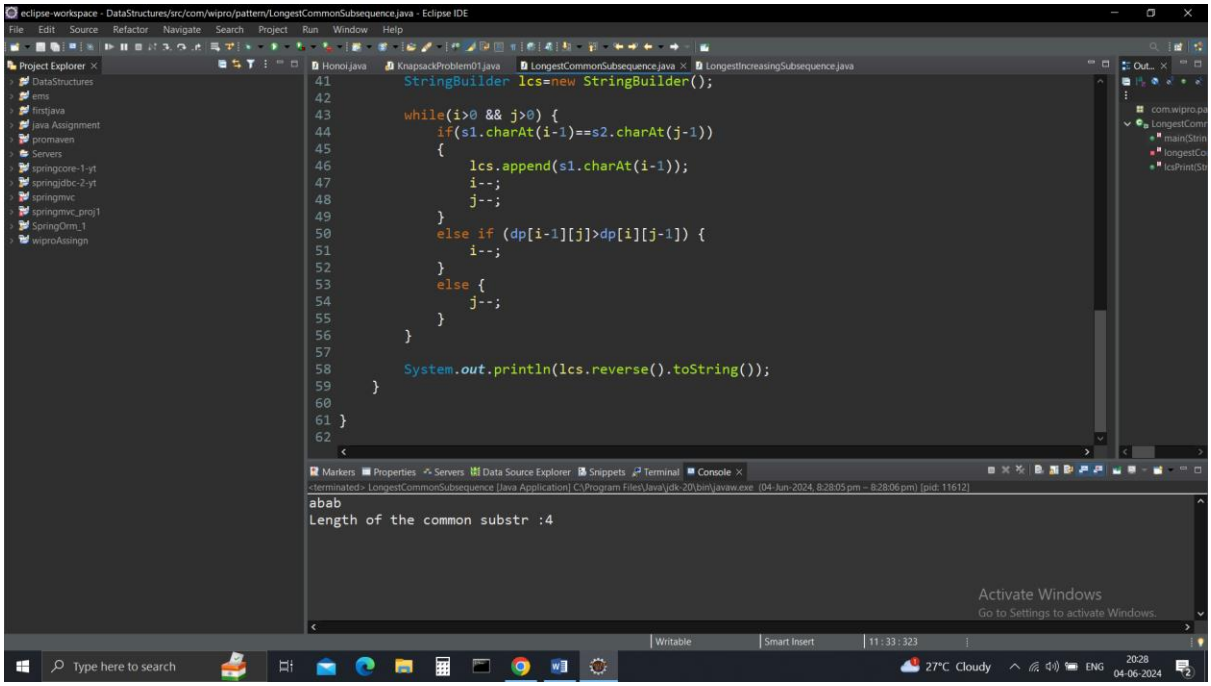
Task 2: Longest Common Subsequence

Implement int LCS(string text1, string text2) to find the length of the longest common subsequence between two strings.






eclipse-workspace - DataStructures/src/com/wipro/pattern/LongestCommonSubsequence.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Project Explorer
DataStructures
ems
firstjava
java Assignment
promaven
Servers
springcore-1-yt
springjdbc-2-yt
springmvc
springmvc_proj1
SpringOrm_1
wiproAssingn
Honoi.java
KnapsackProblem01.java
LongestCommonSubsequence.java
LongestIncreasingSubsequence.java
34 }
35
36 public static void lcsPrint(String s1,String s2,int[][]dp) {
37
38 int i=s1.length();
39 int j=s2.length();
40
41 StringBuilder lcs=new StringBuilder();
42
43 while(i>0 && j>0) {
44 if(s1.charAt(i-1)==s2.charAt(j-1))
45 {
46 lcs.append(s1.charAt(i-1));
47 i--;
48 j--;
49 }
50 else if (dp[i-1][j]>dp[i][j-1]) {
51 i--;
52 }
53 else {
54 j--;
55 }
Markers Properties Servers Data Source Explorer Snippets Terminal Console
<terminated> KnapsackProblem01 [Java Application] C:\Program Files\Java\jdk-20\bin\javaw.exe (04-Jun-2024, 8:17:36 pm – 8:17:39 pm) [pid: 6604]


eclipse-workspace - DataStructures/src/com/wipro/pattern/LongestCommonSubsequence.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Project Explorer
DataStructures
ems
firstjava
java Assignment
promaven
Servers
springcore-1-yt
springjdbc-2-yt
springmvc
springmvc_proj1
SpringOrm_1
wiproAssingn
Honoi.java
KnapsackProblem01.java
LongestCommonSubsequence.java
LongestIncreasingSubsequence.java
41 StringBuilder lcs=new StringBuilder();
42
43 while(i>0 && j>0) {
44 if(s1.charAt(i-1)==s2.charAt(j-1))
45 {
46 lcs.append(s1.charAt(i-1));
47 i--;
48 j--;
49 }
50 else if (dp[i-1][j]>dp[i][j-1]) {
51 i--;
52 }
53 else {
54 j--;
55 }
56 }
57
58 System.out.println(lcs.reverse().toString());
59 }
60
61 }
62
Markers Properties Servers Data Source Explorer Snippets Terminal Console
<terminated> LongestCommonSubsequence [Java Application] C:\Program Files\Java\jdk-20\bin\javaw.exe (04-Jun-2024, 8:28:05 pm – 8:28:06 pm) [pid: 11612]
abab
Length of the common substr :4
Activate Windows
Go to Settings to activate Windows.
Writable
Smart Insert
11 : 33 : 323
Type here to search
27°C Cloudy
ENG
20:28
04-06-2024