Algorithmics	Student information	Date	Number of session
	UO:269546	04-04-21	5
	Surname: Fernández Arias		
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Activity 1. Validation Results

Example 1: For GCCCTAGCG and GCGCAATG

```
<terminated> LCSTest [Java Application] C:\Program Files\Java\jre1.8.0_241\bin\javaw.exe (6 abr. 2021 23:34:52)
DYNAMIC PROGRAMMING:
String1: *GCCCTAGCG
String2: *GCGCAATG
Initializing table...
Filling table...
Print table...
          *          *          G          C          C          C          T          A          G          C          G
          *    0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)
          G    0( 0, 0)   1( 0, 0)   1( 1, 1)   1( 2, 1)   1( 3, 1)   1( 4, 1)   1( 5, 1)   1( 6, 0)   1( 7, 1)   1( 8, 0)
          C    0( 0, 0)   1( 1, 1)   2( 1, 1)   2( 2, 1)   2( 3, 1)   2( 4, 2)   2( 5, 2)   2( 6, 2)   2( 7, 1)   2( 8, 2)
          G    0( 0, 0)   1( 0, 2)   2( 2, 2)   2( 3, 2)   2( 4, 2)   2( 5, 2)   2( 6, 2)   3( 6, 2)   3( 7, 3)   3( 8, 2)
          C    0( 0, 0)   1( 1, 3)   2( 1, 3)   3( 2, 3)   3( 3, 3)   3( 4, 4)   3( 5, 4)   3( 7, 3)   4( 7, 3)   4( 8, 4)
          A    0( 0, 0)   1( 1, 4)   2( 2, 4)   3( 3, 4)   3( 4, 4)   3( 5, 4)   4( 5, 4)   4( 6, 5)   4( 8, 4)   4( 9, 4)
          A    0( 0, 0)   1( 1, 5)   2( 2, 5)   3( 3, 5)   3( 4, 5)   3( 5, 5)   4( 5, 5)   4( 7, 5)   4( 8, 5)   4( 9, 5)
          T    0( 0, 0)   1( 1, 6)   2( 2, 6)   3( 3, 6)   3( 4, 6)   4( 4, 6)   4( 6, 6)   4( 7, 6)   4( 8, 6)   4( 9, 6)
          G    0( 0, 0)   1( 0, 7)   2( 2, 7)   3( 3, 7)   3( 4, 7)   4( 5, 7)   4( 6, 7)   5( 6, 7)   5( 7, 8)   5( 8, 7)
Finding longest subsequence...
GCAGC
Printing longest subsequence...


/****************/

RECURSIVE:
Finding longest subsequence...
CCTG
Program terminated.
```

Example 2:GCATGCAT and GAATTCAG

```
DYNAMIC PROGRAMMING:
String1: *GCATGCAT
String2: *GAATTCAG
Initializing table...
Filling table...
Print table...
          *          *          G          C          A          T          G          C          A          T
          *    0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)   0( 0, 0)
          G    0( 0, 0)   1( 0, 0)   1( 1, 1)   1( 2, 1)   1( 3, 1)   1( 4, 0)   1( 5, 1)   1( 6, 1)   1( 7, 1)
          A    0( 0, 0)   1( 1, 1)   1( 2, 1)   2( 2, 1)   2( 3, 2)   2( 4, 2)   2( 5, 2)   2( 6, 1)   2( 7, 2)
          A    0( 0, 0)   1( 1, 2)   1( 2, 2)   2( 2, 2)   2( 4, 2)   2( 5, 2)   2( 6, 2)   3( 6, 2)   3( 7, 3)
          T    0( 0, 0)   1( 1, 3)   1( 2, 3)   2( 3, 3)   3( 3, 3)   3( 4, 4)   3( 5, 4)   3( 7, 3)   4( 7, 3)
          T    0( 0, 0)   1( 1, 4)   1( 2, 4)   2( 3, 4)   3( 3, 4)   3( 5, 4)   3( 6, 4)   3( 7, 4)   4( 7, 4)
          C    0( 0, 0)   1( 1, 5)   2( 1, 5)   2( 3, 5)   3( 4, 5)   3( 5, 5)   4( 5, 5)   4( 6, 6)   4( 8, 5)
          A    0( 0, 0)   1( 1, 6)   2( 2, 6)   3( 2, 6)   3( 4, 6)   3( 5, 6)   4( 6, 6)   5( 6, 6)   5( 7, 7)
          G    0( 0, 0)   1( 0, 7)   2( 2, 7)   3( 3, 7)   3( 4, 7)   4( 4, 7)   4( 6, 7)   5( 7, 7)   5( 8, 7)
Finding longest subsequence...
GATCA
Printing longest subsequence...


/****************/

RECURSIVE:
Finding longest subsequence...
ATCA
Program terminated.
```

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Activity 2.Experimental time measurements.

n	t_dynamic
100	0,9
200	2,6
400	6,3
800	19,5
1600	106,1
3200	658,3

n	t_recursive
2	0
4	0,1
6	0,2
8	0,5
10	1,5
12	6,9
14	21,6
16	138,9
18	1212,7
20	4067,2