**Quiz5**

**Full name:**

**CSU ID:**

**Undergraduate/graduate:**

**Question 1 (3 points)** Longest common subsequence (LCS)

Please complete the code for LCS(i, j) for three possible conditions.

LCS(i, j)

{

If \*\*\*\*\*\*\*\*:

return 0

else if A[i] = B[j]: //first letters match

return \*\*\*\*\*\*\*\*\*\*\*

else: //no match

return \*\*\*\*\*\*\*\*\*\*\*

}

**Question 2** **(5 points)** For the following multistage graph, use dynamic programming to find the shortest path from 1 to 9. Write down all the steps, complete the table, and give the shortest path.

Diagram

Description automatically generated

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| V | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| cost |  |  |  |  |  |  |  |  |  |
| d |  |  |  |  |  |  |  |  |  |