CS214 – Lab6 (Week8):
On Dynamic Programming

Objective:
- To develop working knowledge of the concepts learned from Lectures 6.X
- To appreciate algorithm design with Dynamic Programming
- To develop algorithmic thinking in programming simple algorithms

Activities:

1. Below is an adjacency matrix for a graph, where ∞ means "no edge".

	1	2	3	4
1	0	2	∞	5
2	3	0	∞	∞
3	∞	8	0	4
4	2	6	7	0

   a. Draw the graph represented by the given matrix above
   b. Give the adjacency list that represents the graph.
   c. Compare the adjacency matrix and adjacency list.
   d. Use a dynamic programming approach to compute the shortest paths for the graph.

2. Compute $\begin{pmatrix} 6 \\ 3 \end{pmatrix}$ using a dynamic programming approach.