CSCI 361: Exercise # 13

Your Name: _____

Due: Tuesday, Nov 11, in class

Assigned reading for this lecture:

- Sipser Third Edition 7.1 & 7.2 (Measuring Complexity and The Class P)
- Big O and small O definitions are a review of CS256 and will not be covered in lecture.
- Read the background on polynomial-time TMs for problems such as PATH and CONNECTED presented in the book: **this material is a review of CS 256** but do pay attention to how the input and output of the algorithms are stated for Turing Machines.

Read the Proof of Theorem 7.16 on Page 290 which we will discuss in next class.

Questions:

1. What is the dynamic programming subproblem? That is, what is stored in *table(i, j)?*

2. What is the base case of the dynamic program?

3. How is the subproblem *table(i, j)* computed based on the solutions to the smaller subproblems?