TDD Training Exercise

Calculate Transitive Dependencies

Overview

Practise ***RED, GREEN, REFACTOR!*** at https://cyber-dojo.org, in your choice of language.

Complete each step in order. Make progress in very small steps.

The goal is to practice TDD, more than it is to solve the problem. Don't rush ahead and solve the problem and forget to test.

Don't add new code, unless you have a failing test that makes you.

Always refactor on a passing test, and run the tests after each small change, to verify your changes.

The Exercise

This is a good exercise for trying to identify simple examples in your test cases. Try to identify very simple tests that allow you to construct your solution step-by-step, and test at the end that you get the result based on the example specified here.

Transitive Dependencies

A transitive dependency is an indirect dependency. If A depends on B and B depends on C, A has a transitive dependency on C, because it depends on B.

Create a program that allows you to specify a series of dependencies and then reports the transitive dependencies given a starting point.

Given the following dependencies:

A	B	C
B	C	E
C	G	
D	A	F
E	F	
F	H	

Here is the list of transitive dependencies:

A	B C E F G H
B	C E F G H
C	G
D	A B C E F G H
F	H

Transitive Dependencies - If A depends on B and B depends on C, then A depends on C. Transitive Dependencies include all of the dependencies that result from such a flattening of a hierarchy.