Math 2013 - Introduction to Discrete Mathematics

Project #1 - 2005.09.02

Due Date - 2005.10.14

The Concept:

Imagine you have found a contest where if you can solve the following puzzle, you will be entered into a drawing to win a pair of front row tickets to a concert. Being a '*nerd*' to the highest degree, you determine that it would be easier to write a program to solve the puzzle, instead of trying to figure it out by hand!

The Puzzle:

You are given a collection of letters. Out of these letters, you must reconstruct the names of songs from the band for which you are trying to win tickets to go see. You must use all of the letters in the collection, many of which appear more than once, once and only once. (The song titles come from official releases only and spaces do not count as a letter, so remove them from the titles of the songs...)

The Approach:

Since we have a collection of letters, we can take all of the unique letters and call that our alphabet. As an example, if there are 12 letters used, then the total number of letters in U would be 12, even if there were 200 letters in the collection total.

Once you have all the alphabet, you decide to scour the internet to find all the song titles by the artist in question. Of course, some of those song titles will contain letters and other characters which are not in your alphabet. You can disregard those. The rest you must include.

It is now up to you to try to design a program or algorithm which will solve the problem!

The Contest:

You have been long awaiting the release of Tool's new album, due out this fall. Coinciding with the release of the album will be a mini-tour. Tickets will sell out in less than 30 seconds at each of the few small venue shows scheduled. You have one hope, and that is to win the contest and hope not too many others get the correct answer, making your chances of winning the drawing even higher!

The Collection:

jimmy, pushit, third eye, intolerance, undertow, swamp song, disgustipated, no quarter, triad, lateralus