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# Project Overview

This program sorts a file of palindromes by type.

This project will employ selection sort.

This project employs the PalRoutines library.

**Structure Chart**

# Top Level Functions

Read in a list of palindromes, sort them using selection sort, then print out a list of each palindrome type.

Selection sort MUST be implemented as part of this project.

**Main**

Narrative: read in the list of palindromes, sort them and print a list for each category.

*GetData(palindromes)*

*Sort(palindromes)*

for each palindrome type

 PrintMatchingPalindromes(list, type)

**Function:** GetData

Narrative: Read the data in from a file.

Input: None

Output: A array of strings, and the number of elements in that list.

*OpenFile*

*while there is data in the file and there is room in the array.*

 *add the data to the array*

**Function:** OpenFile

Narrative: Ask the user for a file name, open the corresponding file.

Input: Nothing

Output: An open file strream.

*Get the file name from the user*

*Open the file*

*return the open file stream.*

**Function:** PrintMatching

Narrative:

Input: A Palindrome type and an array of palindromes

Output: none

*Print the header*

*for each palindrome in the array*

 *if the palindrome is of the given type*

 *print the palidrome.*

*Print an empty line*

**Function:** Sort

Narrative: Implement selection sort.

Input: An unsorted array and the size of the array

Output: a sorted array

*for i= each position in the array*

 *smallest = position*

 *for j = each position greater than smallest*

 *if A[smallest] > A[j]*

 *smallest = j*

 *if smallest != I*

 *swap(A[i],A[pos])*