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HW: Palindromes: Design Document

Pseudocode

Functions:

```
Void printUsageInfo(string representing name of executable from command line){
        print "Proper format is: " exe name " [-c or -s, optional] [string, as many as desired]"
}

Boolean isPalindrome(input string, boolean flag that considers case-sensitivity when true,
boolean flag that considers space-sensitivity when true){
        temp boolean for return

        if(input string length is less than 2){
                set temp boolean to true
                return temp boolean
        }else{
                if(case sensitive is false){
                        convert all chars in string to lowercase for easy comparison
                }
                if(space sensitive is false){
                        remove all spaces from string for easy comparison
                }

                if(first char in string does not match last char in string){
                        set temp boolean to false
                        return temp boolean
                }else{
                        set temp boolean to isPalindrome(substring of original string with 1st and
last chars taken off, case sensitive boolean, space sensitive boolean)
                }
        }
}
```

Main Function:

```
Int main(int argc, char* argv[]){          //Default main parameter for command line input
        // argc is number of arguments, argv is array that stores arguments
        declarations:
        integer for starting index of strings to process in argv
        boolean for if case sensitivity is on
        boolean for if space sensitivity is on

        if(there are not enough arguments){
                throw an error, ask user to try again, call printUsageInfo
        }
        // argv[0] is the name of the exe, argv[1] is the first userset arg

        if(first user arg starts with "-"){
                if(first user arg contains 'c' or 'C'){
                        set boolean for case sensitive to true
                }
                if(first user arg contains 's' or 'S'){
                        set boolean for space sensitive to true
                }
                set integer for starting index to  argument after the "-" argument
        }

        for loop(increment from starting index to end of argv by 1){
                initialize temp boolean to isPalindrome(current element, case sensitive boolean,
space considering boolean)

                if(string is palindrome){
                        print [string] "is a palindrome"
                }else{
                        print [string] "is not a palindrome"
                }
        }

}
```