

Design 4

By 1686498

Palindrome
String originalString – stores the original string string reversedString – stores the reversed string bool isPalin – stores whether it is a palindrome or not
Bool isPalindrome – checks if the string is a palindrome string reverseString – reverses the original string

- Stores the original string and the reversed string and whether it is a palindrome
- isPalindrome will check if it is a palindrome and return whether it is or isnt
- reverseString will reverse the original string

Fibonacci
Int calcFib – takes in an input n and returns the nth fibonacci number

- Will take in a number and will return the corresponding fibonacci number

EfficientFibonacci
Int calculated[47] – an array of the 47 integers of fibonacci vector<int> calculated – stores the calculated values of fibonacci
Int calcFib – takes in an input n and returns the nth fibonacci number void storeFib – stores the fibonacci number

- Will store previously calculated values so that fibonacci doesnt need to keep recalculating values
- will do the same as fibonacci and will return the nth fibonacci number

Main:

- will take in a string
- will split up the string into the bit that needs to go though palindrome and the bit that needs to go in the fibonacci
- will return the reversed string, whether it is or isnt a palindrome and the nth fibonacci number
- will return an error if the second part isnt a number

Testing:

Input 1:

apple 6

Output 1:

elppa no 8

Input 2:

appa 20

Output 2:

appa yes 6765

Input 3:

glenelg sa

Output 3:

glenelg yes ERROR

Input 4:

apple 0

Output 4:

elppa no 0

Input 1:

dad 1s2

Output 1:

dad yes ERROR