Lab 1 Write-up

Explanation of the Algorithm

The algorithm for finding the hidden message with a picture (retreiveFromImage()) is as follows. First a width and height is found for the image to generate the amount of primes that are in the image by pixel. Those pixels were stored in a dynamic array of pixels that contained information such as color, x and y coordinates, and a binary representation of that pixel. The binary representations were decoded to a decimal value that corresponded with an ASCII value. The ASCII value was stored into a string to reveal the message.

List of People that have helped

Daniel Nipper for helping me understand the basic concept of PrimeIterator and its overloaded methods.

Bastien Auxer for helping in the understanding of decrypting an image.

Time Estements

|  |  |  |  |
| --- | --- | --- | --- |
| Width | Height | Length of Message | Completion Time |
| 128 | 128 | 54 | .101s |
| 256 | 256 | 54 | .107s |
| 512 | 512 | 54 | .443s |

The Message

WE THE PEOPLE OF THE UNITED STATES OF AMERICA IN ORDER TO FORM A MORE PERFECT UNION, ESTABLISH JUSTICE, INSURE DOMESTIC TRANQUILITY, PROVIDE FOR THE COMMON DEFENSE, PROMOTE THE GENERAL WELFARE, AND SECURE THE BLESSINGS OF LIBERTY TO OURSELVES AND OUR POSTERITY, DO ORDAIN AND ESTABLISH THIS CONSITITUTION FOR THE UNITED STATES OF AMERICA.