**Steganography Project Design**

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**Project Overview**

Project overview.

**User Interface**

User interface design.

**File I/O**

File I/O design.

**Message Encoding**

Overview

Messages will be encoded into the target image by first extracting the image pixel data into a list of tuples which represent the red, green, and blue (RGB) color values of the image. Next, each character in the user message string will be converted to its 8-bit binary ASCII value. The 8-bit values will then be used to shift the RGB values to be either an even number to represent a binary zero, or an odd number to represent a binary one. Pixels will be read 3 at a time which will allow one 8-bit character to be encoded. The remaining bit of each set will tell the decoder to either continue reading (binary one), or to stop (binary zero).

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| --- | --- | --- |
| **Function** | **Input Parameters** | **Return Value** |
| encode\_secret\_message | list[08b]: user\_input, list: pixel\_data | list: pixel data |
| convert\_message | String: user\_input | list: converted\_message(08b) |
|  |  |  |

**Message Decoding**

Message decoding design.