



An-Najah National University

Faculty of Engineering

Computer Engineering Department

Information and network security

HW1

Student's name:

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Introduction:

- Give a brief introduction to steganography and its uses.
- The significance of concealing information in pictures.
- The project's goal is to develop a web application that conceals confidential information inside an RGB picture.

Requirements:

- According to the problem definition, the functional requirements are:
 - Open an RGB picture.
 - Enter a secret text to conceal.
 - LSB count selection options (1, 2, or 3).
 - Images can be cleared, exported, revealed, and hidden using these buttons.
- needs that are not functional (e.g., performance, usability).

Implementation:

- An outline of the code's primary parts:
 - HTML Structure: An explanation of the input elements and layout.
 - An overview of the interface's styling is provided by CSS Styles.
 - JavaScript Features: Describe important functions and their interactions, such as `loadImage`, `embedTextInImage`, and `retrieveTextFromImage`.

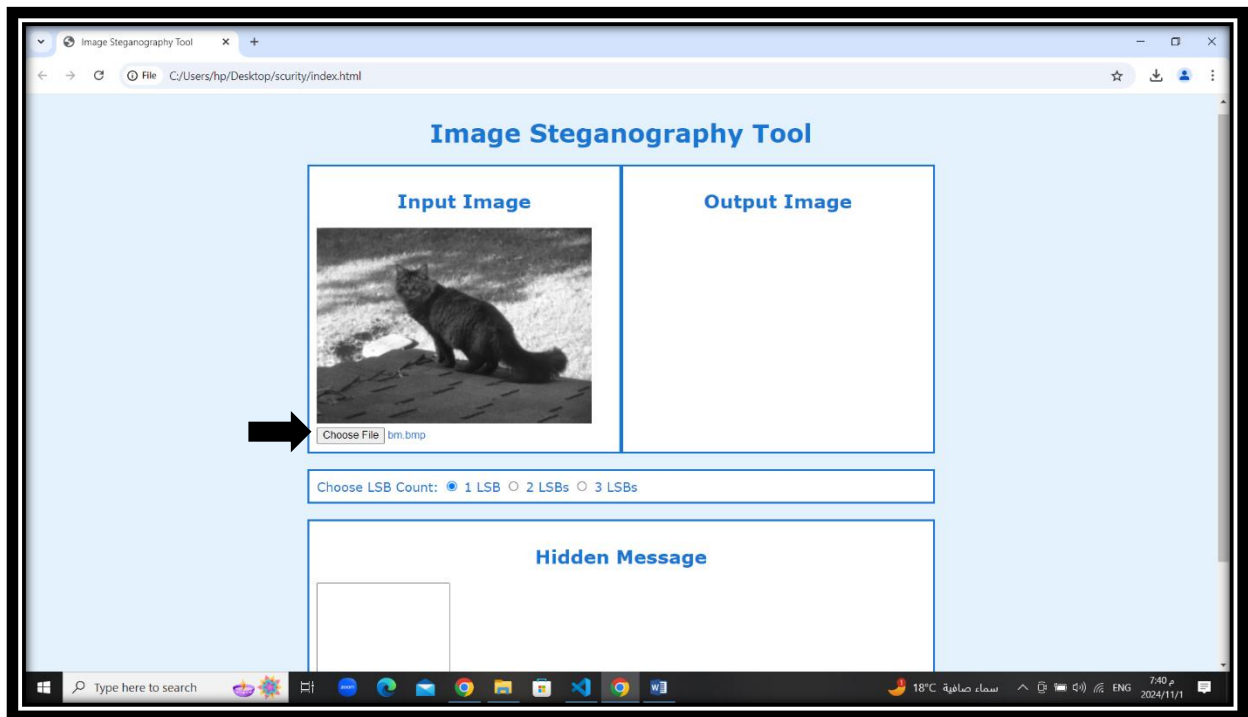
Use code snippets to draw attention to key areas of your implementation.

Testing:

- Load an image and hide a message.
- Change the LSB count and observe differences in the output.
- Reveal the hidden message and verify correctness.
- Attempt to export the modified image.
- Clear the application state and ensure all fields reset properly.
- Observations and results from your testing process, including any issues encountered.

Results:

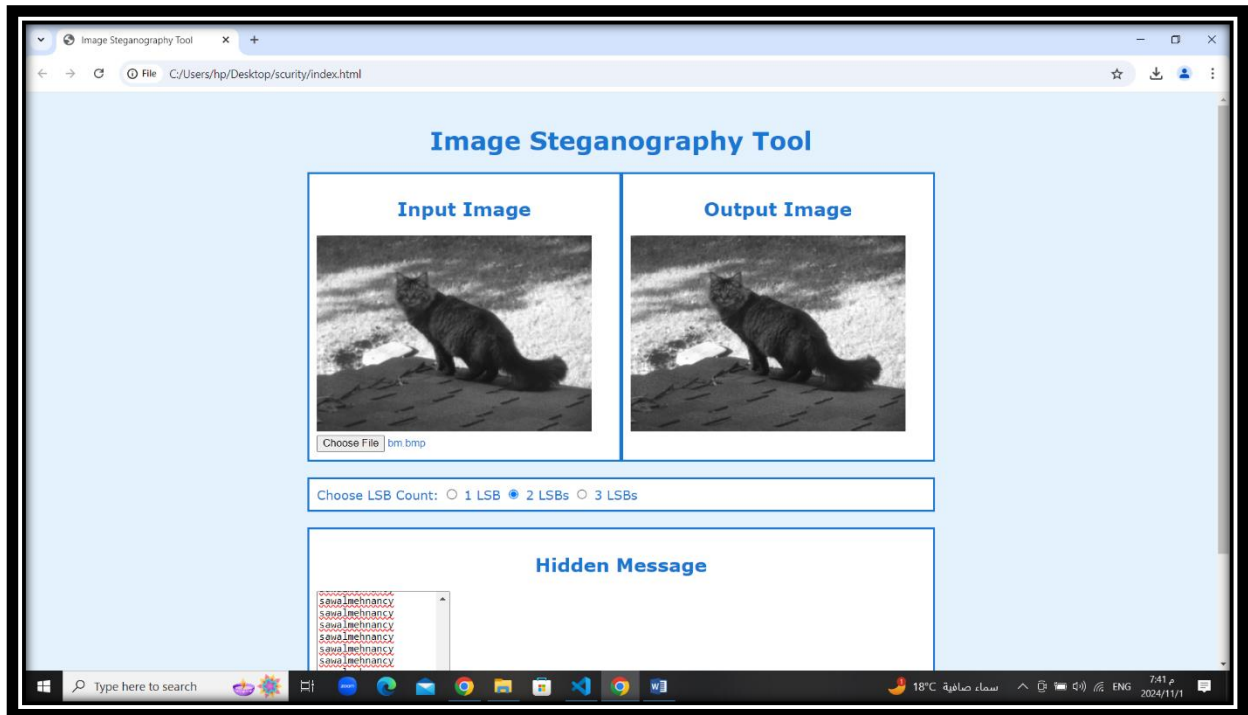
- Original image loaded.



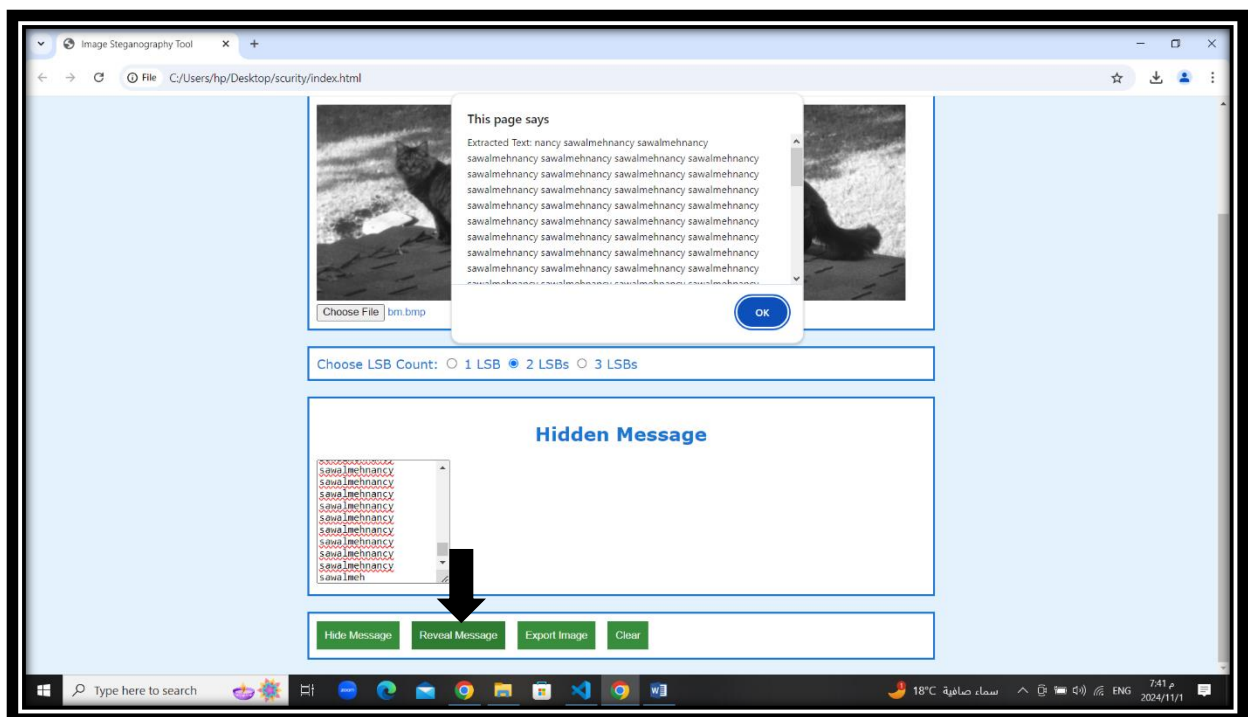
- Hidden message entered.



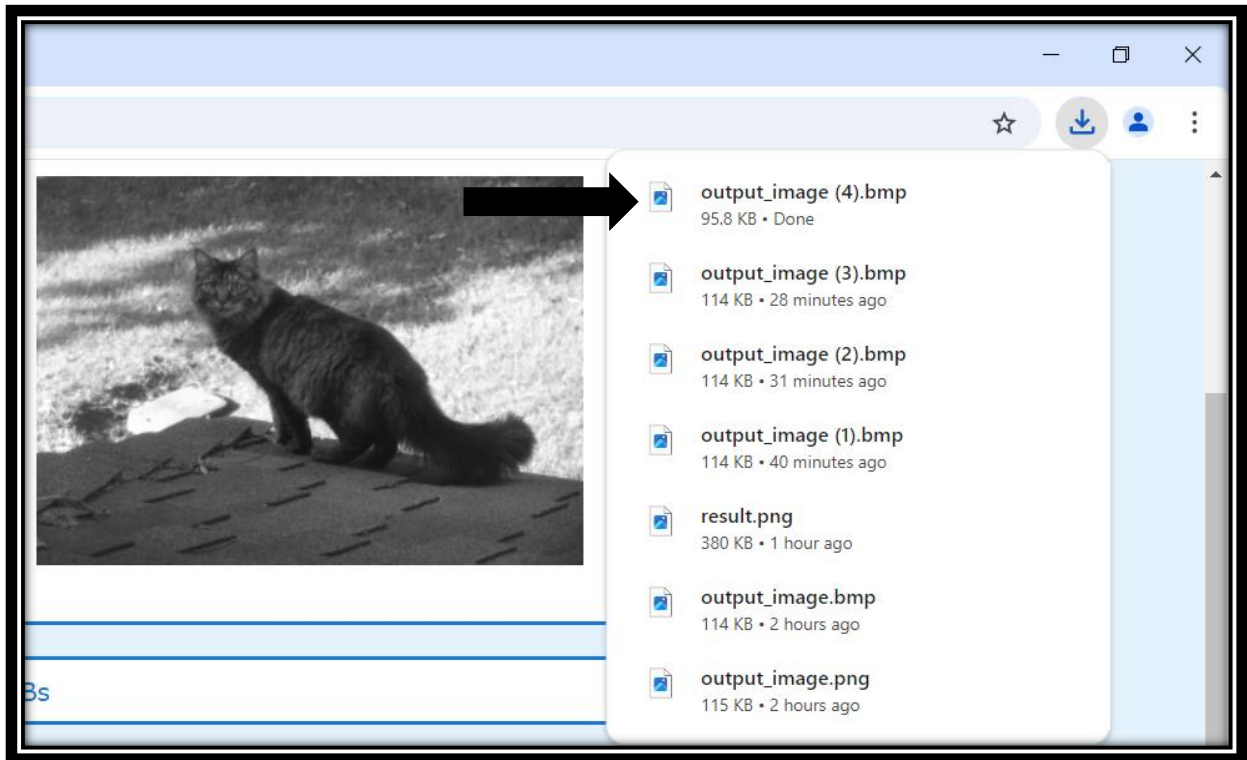
- Resulting image after hiding the message(When the button is pressed Hide Message).



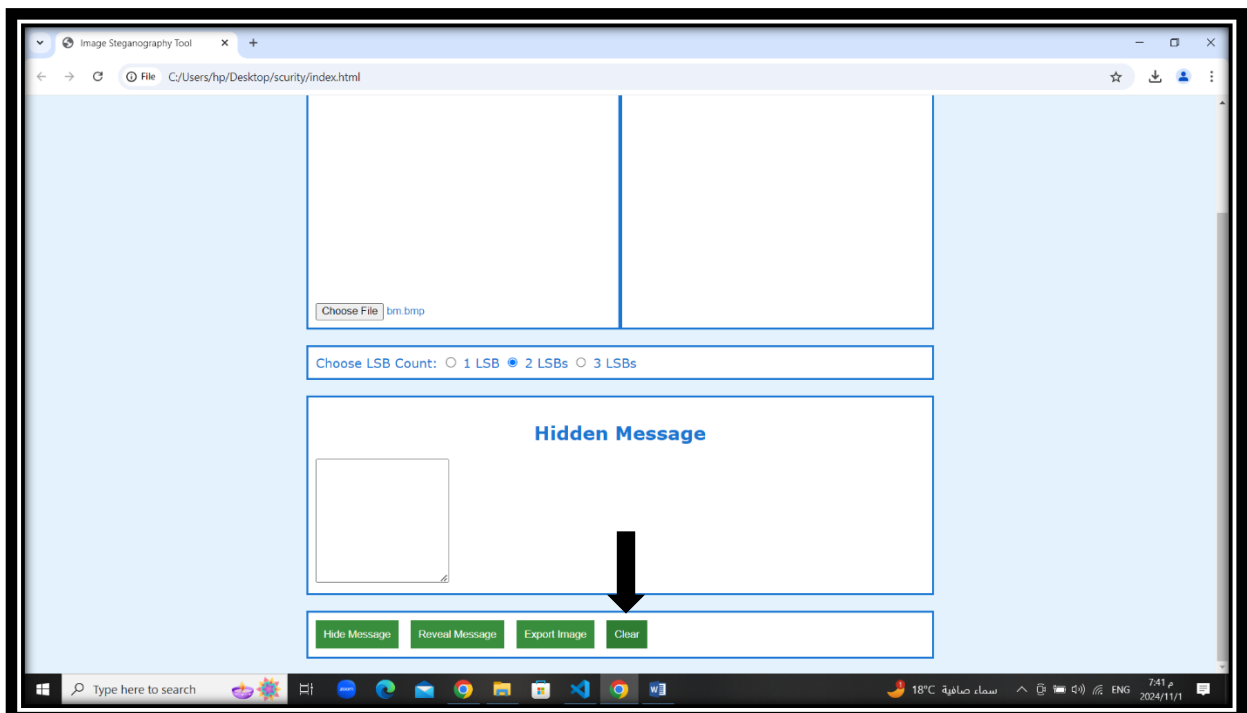
- Text extracted from the image (When the button is pressed Reveal Message).



- When you press the button(**Export Image**) it downloads the image with the extension(**bmp**).



- When the button(**Clear**) is pressed, all text fields are cleaned.



Conclusion:

- An overview of the lessons you took away from the project.
- Prospective enhancements or possible future projects.
- Uses of your tool in practical situations.