StegoCrypt

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PROBLEM STATEMENT :

In large corporations, maintaining secrecy is crucial, but traditional cryptographic methods can raise suspicion among attackers. There is a need for a secure yet inconspicuous way to transmit sensitive information without alerting unintended users. **StegoCrypt** addresses this challenge by utilizing steganography to embed secret data within multimedia files (images), ensuring covert and secure communication

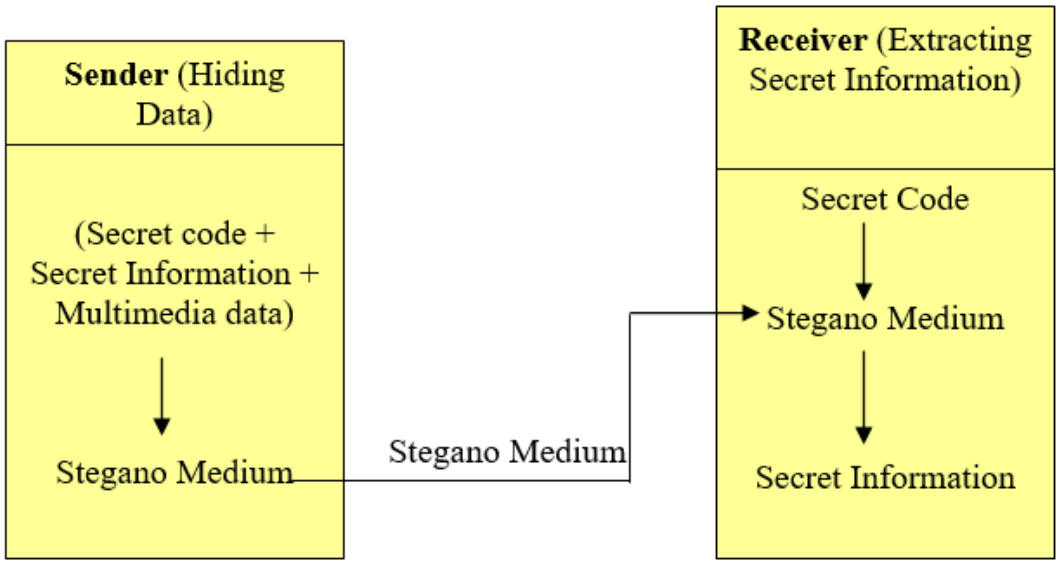
Solution:

StegoCrypt provides a secure and inconspicuous method for transmitting sensitive information using steganography. Instead of relying solely on cryptography, which may attract unwanted attention, **StegoCrypt** embeds secret data within multimedia files (images), making it indistinguishable from regular media. This approach ensures that confidential information can be transmitted safely without raising suspicion, offering an effective solution for secure corporate communication.

Tech Stack for StegoCrypt:

1. **Programming Language:** Java (Core Java for logic implementation)
2. **GUI Frameworks:**
    - **JavaFX** – For modern and interactive user interface
    - **Swing & AWT** – For additional GUI components and legacy support
3. **Steganography Algorithm:** LSB (Least Significant Bit) or DCT (Discrete Cosine Transform) for image-based data hiding
4. **File Handling:** Java I/O for reading/writing multimedia and secret data
5. **Image Processing:** Java ImageIO for handling image files

ARCHITECTURE OF THE SYSTEM



DETAILED DESIGN

Algorithm:

Making Stegano Medium:

Step 1: Start the process

Step 2: Enter the Secret Information

Step 3: Enter the User Code

Step 4: Load a multimedia data, here it is an Image

Step 5: Creation of Secret Code by using user code + secret information

Step 6: Hiding secret information with its security into the multimedia data

Step 7: A message box showing the secret key will appear

Step 8: Stop the process

Extracting secret information from Steganography medium:

Step 1: Start the process

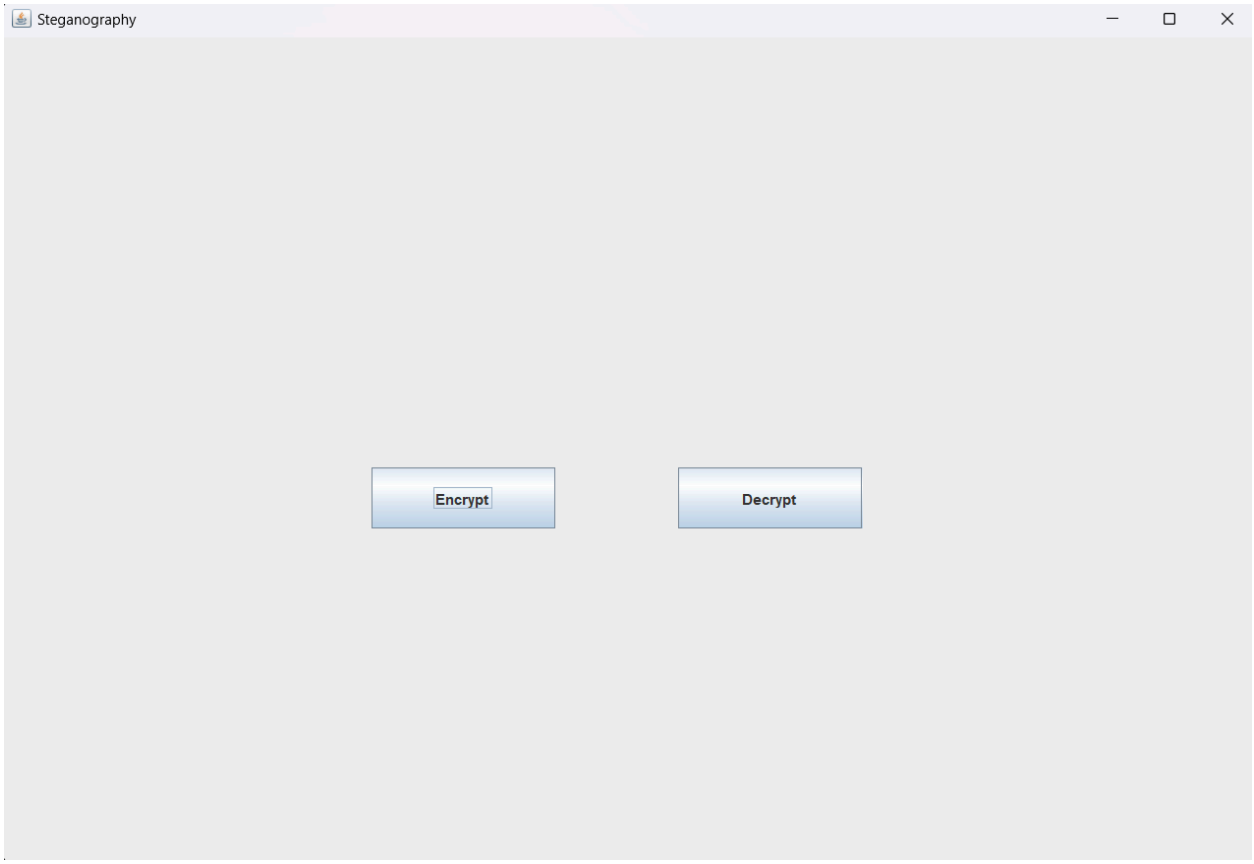
Step 2: Enter the Secret Code

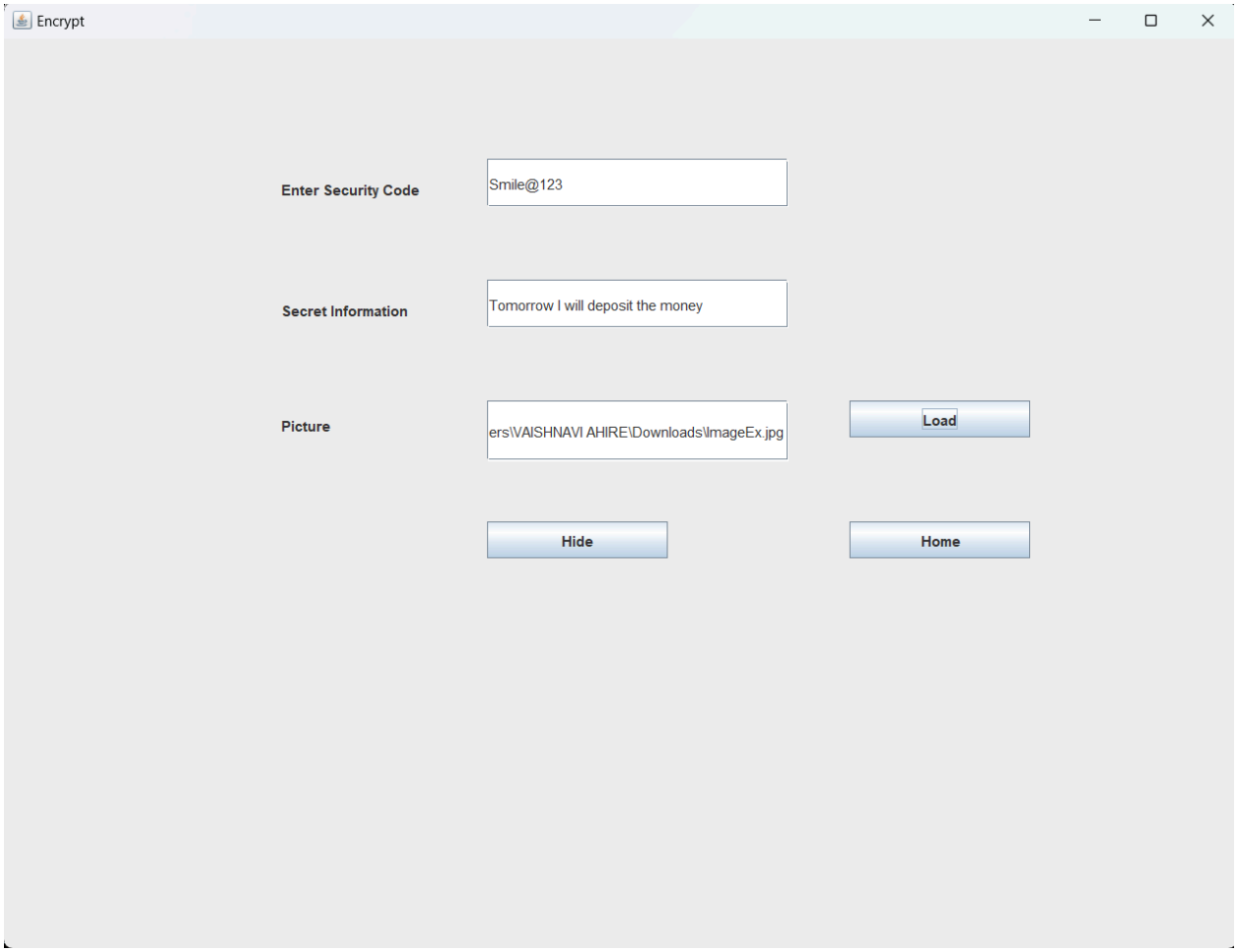
Step 3: Enter the Stegano Medium

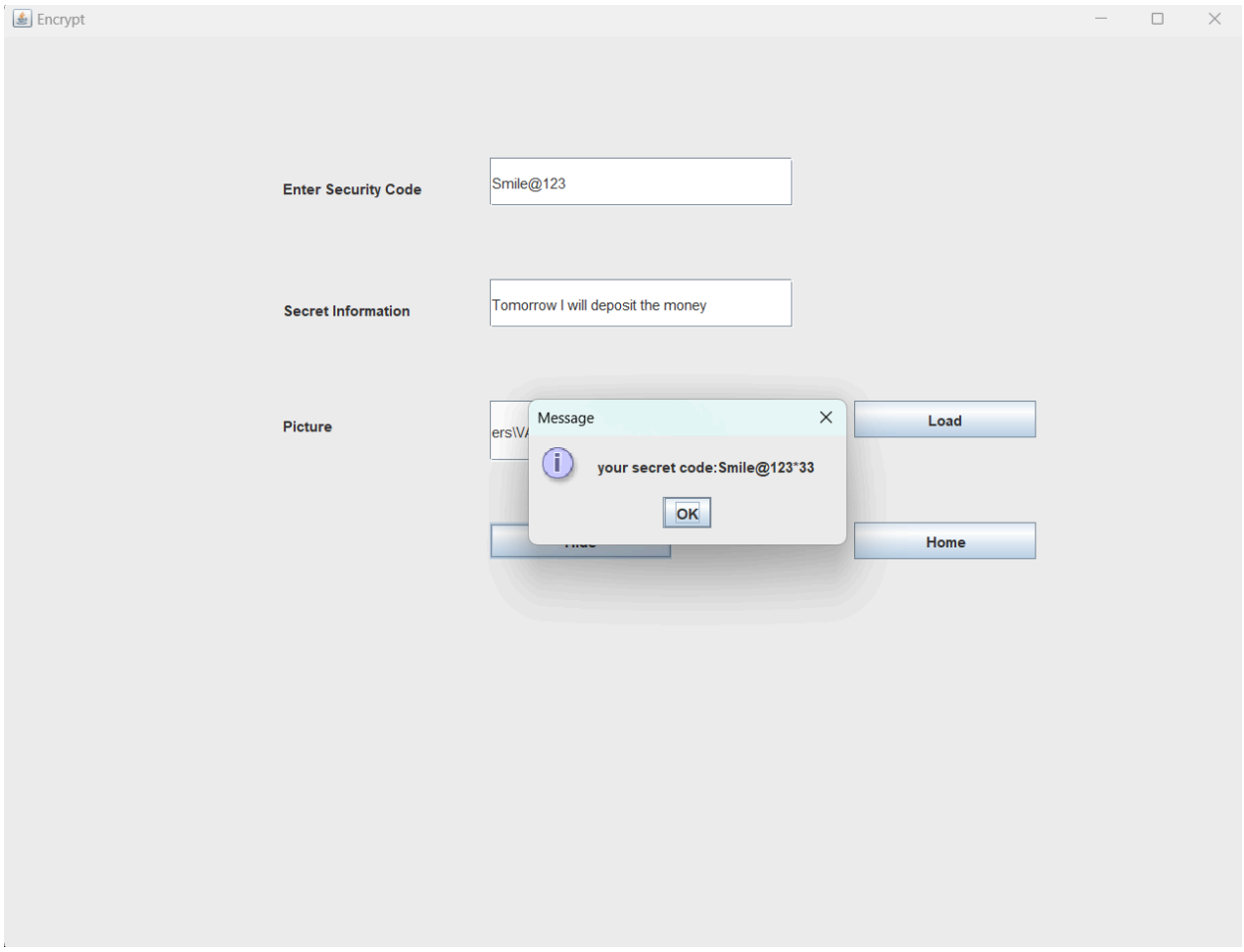
Step 4: Extract secret information from stegano medium by using secret code.

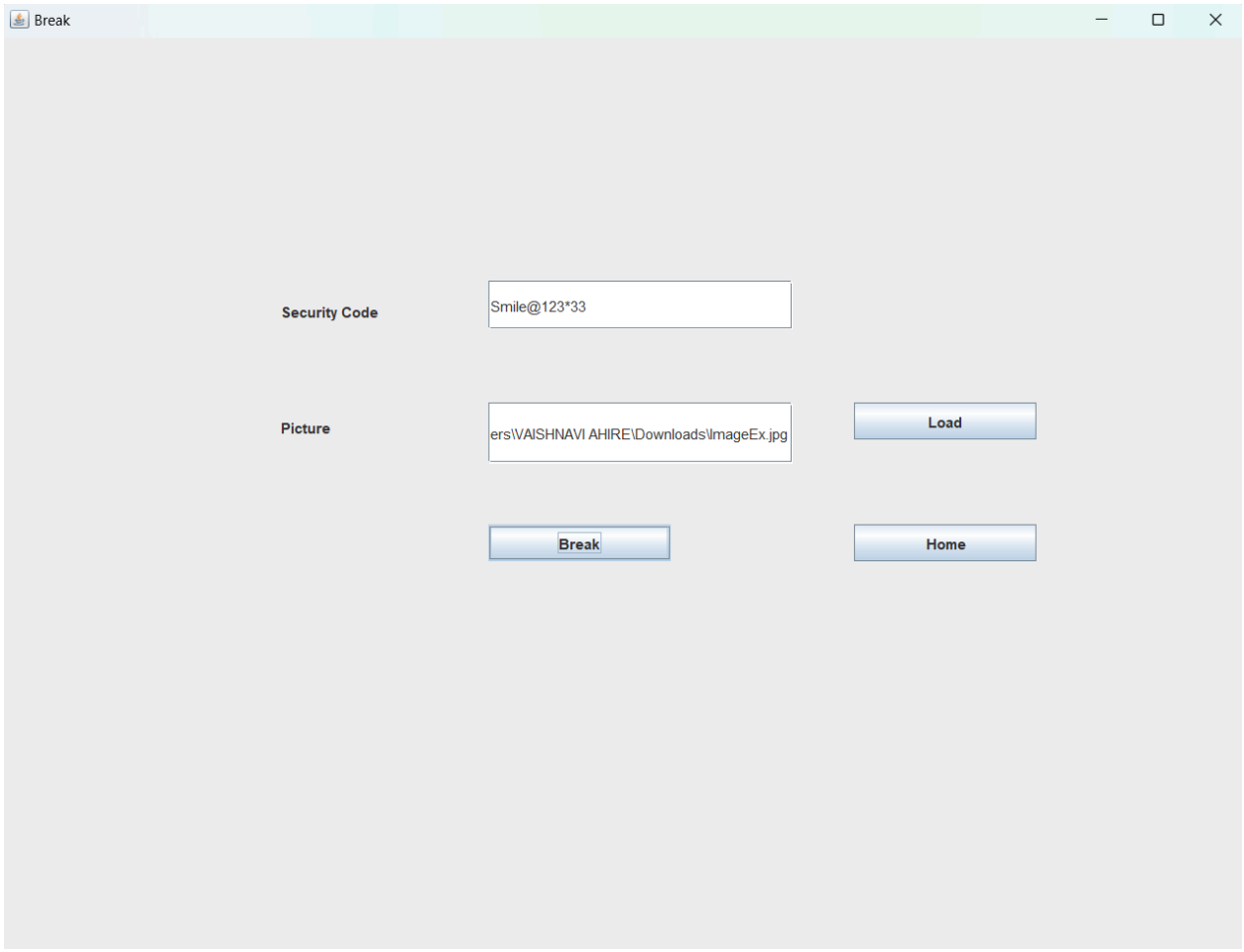
Step 5: Stop the Process

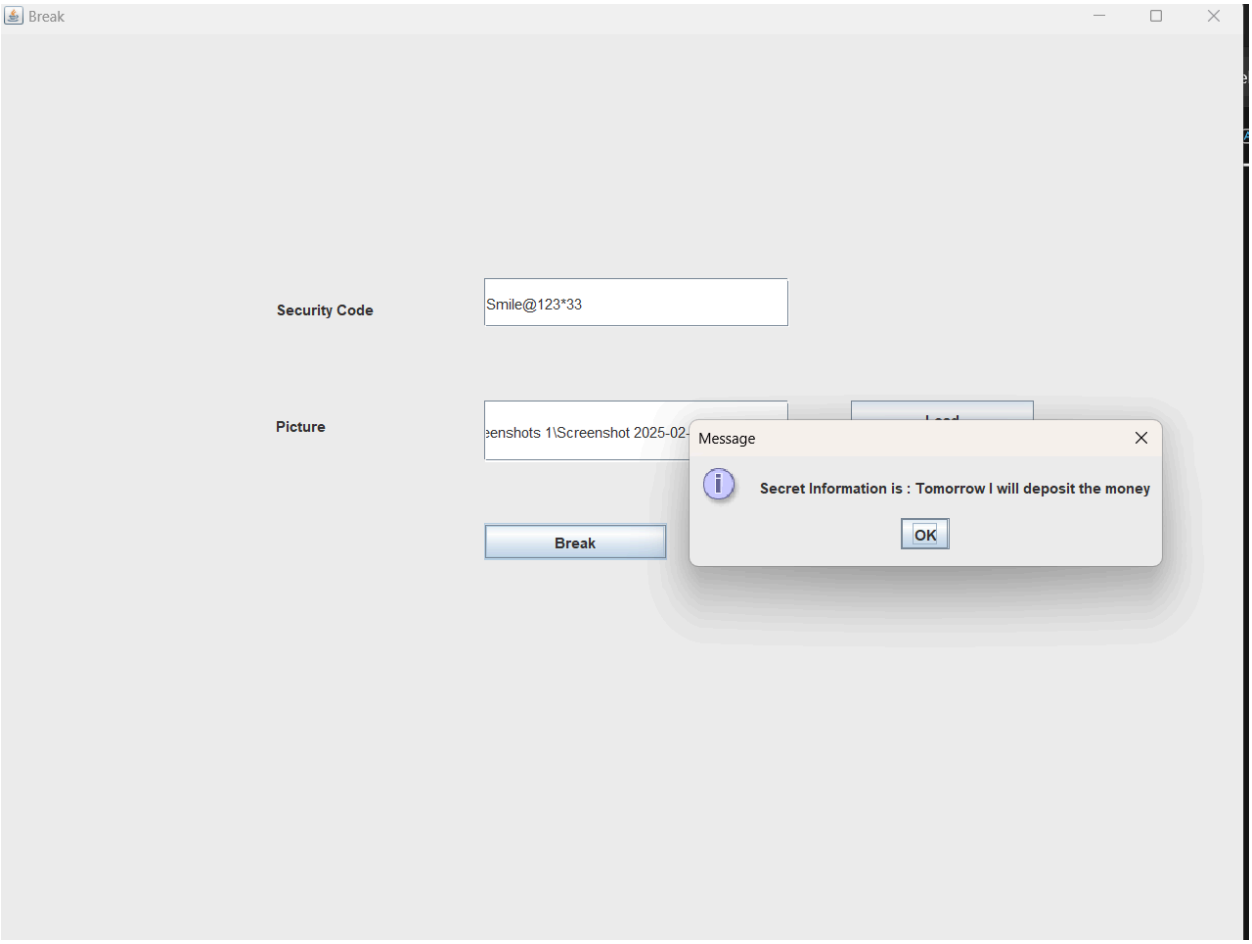
RESULTS




Encrypt
Enter Security Code
Smile@123
Secret Information
Tomorrow I will deposit the money
Picture
ers\VAISHNAVI AHIRE\Downloads\ImageEx.jpg
Load
Hide
Home


Encrypt
Enter Security Code
Smile@123
Secret Information
Tomorrow I will deposit the money
Picture
Load
Message
your secret code:Smile@123*33
OK
Home


Break
Security Code
Smile@123*33
Picture
ers\VAISHNAVI AHIRE\Downloads\ImageEx.jpg
Load
Break
Home



CONCLUSION

This project provides a GUI, a user friendlier system, where secret information can easily be hided with in a picture file. It attains all java futures. It is platform independent so that it can be used in any OS. Thus secret information can be transferred to the intended user without giving any suspicion to the unintended user.