**LSB-Based Image Steganography Application**

This project implements a **Least Significant Bit (LSB) steganography technique** for securely hiding and extracting text messages in image files. Users can upload an image (BMP or PNG), enter a message to hide, and download an embedded image with the message securely encrypted. The application ensures message confidentiality by using **AES-based encryption via the cryptography library** before embedding the message.

Key features:

1. **Message Embedding**: Encrypts a user-provided message and embeds it into the least significant bits of the image pixels.
2. **Message Extraction**: Extracts the hidden message from the uploaded image and decrypts it to reveal the original text.
3. **User-Friendly Interface**: A streamlined, interactive web application built using **Streamlit**, allowing users to seamlessly encode and decode messages.

This tool demonstrates a practical application of steganography for secure communication, combining cryptography and image processing to ensure both confidentiality and concealment.