

Steps to use the desktop app -

- Run `pip3 install -r requirements.txt`
- Once every library is installed Run `python3 steaganography_main.py`
- Now the app will be open you can select available options and then select the image and write the message based on the type.
- After this press Generate Image

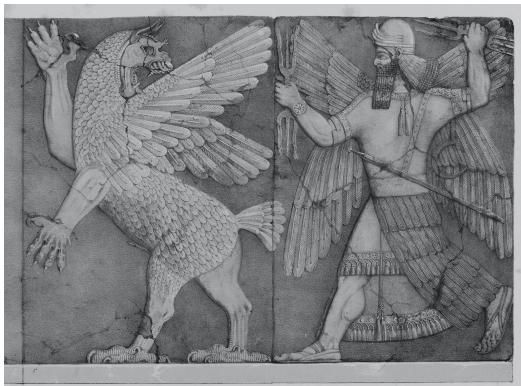
Tech stack and libraries used -

- PyQt5
- Python3
- NumPy
- Cv2
- Pillow
- piexif

Input/Output:

DCT_encode:

msg= "hello_world"



DCT decrypt:



Decrypt function output:

```
fugitive@Fugitive:/mnt/g/SEM5/Project/SIP$ python Project.py  
babylon.png  
hello_world
```

LSB_Encode:

msg="very_secret_message"



LSB Decrypt:



Decrypt function output:

```
fugitiv3@Fugitive:/mnt/g/SEM5/Project/SIP$ python Project.py
Secret: very_secret_message
```

Image_hide:



Image hide decrypt:



Decrypt function output:



Metadata_encode:

msg="yo_world"



Metadata decrypt:



Decrypt function output:

```
SECRET VERY_SECRET_MESSAGE
fugitiv3@Fugitive:/mnt/g/SEMS5/Project/SIP$ python Project.py
yo_world
```

LSB_Video Encrypt:

msg="hello_world"

https://drive.google.com/file/d/1SNn7LVHYYVICdwDFM2-y7HupB2Z_bL7m/view?usp=sharing

LSB_VIDEO Decrypt:

https://drive.google.com/file/d/1n64LWtyY-yhn5-By1sxL1J_aM69LwlxJ/view?usp=sharing

```
fugitive3@Fugitive:/mnt/g/SEMS/Project/SIP$ python video_project.py
1.Hide a message in video
2.Reveal the secret from the video

Any other value to exit

Enter your choice :1
Enter the name of video file with extension:input_video.mp4
Enter the message :hello_world
[INFO] temp directory is created
[INFO] frame ./temp/0.png holds he
[INFO] frame ./temp/1.png holds ll
[INFO] frame ./temp/2.png holds o_
[INFO] frame ./temp/3.png holds wo
[INFO] frame ./temp/4.png holds rl
[INFO] frame ./temp/5.png holds d
The message is stored in the Embedded_Video.mp4 file
[INFO] temp files are cleaned up
1.Hide a message in video
2.Reveal the secret from the video

Any other value to exit

Enter your choice :3
```

Decrypt function output:

```
fugitive3@Fugitive:/mnt/g/SEMS/Project/SIP$ python video_project.py
1.Hide a message in video
2.Reveal the secret from the video

Any other value to exit

Enter your choice :2
Enter the name of video with extension :Embedded_Video.mp4
[INFO] temp directory is created
hello_world
[INFO] temp files are cleaned up
1.Hide a message in video
2.Reveal the secret from the video

Any other value to exit

Enter your choice :3
fugitive3@Fugitive:/mnt/g/SEMS/Project/SIP$
```