7s

```python
from google.colab import files
uploaded = files.upload()
from PIL import Image
import numpy as np

# Load image
image = Image.open("1000035008.jpg")
pixels = np.array(image)

# Encryption key
key = 50

# Encryption function (adds key and swaps RGB values)
def encrypt_image(pixels, key):
    pixels = pixels.astype(np.int16)  # Prevent overflow
    encrypted = (pixels + key) % 256
    encrypted = encrypted.astype(np.uint8)  # Back to image-safe format
    encrypted = encrypted[..., ::-1]  # Swap RGB
    return encrypted

# Decryption function
def decrypt_image(pixels, key):
    pixels = pixels.astype(np.int16)
```

```
def decrypt_image(pixels, key):
    pixels = pixels.astype(np.int16)
    decrypted = pixels[..., ::-1]
    decrypted = (decrypted - key) % 256
    decrypted = decrypted.astype(np.uint8)
    return decrypted

# Encrypt image
encrypted_pixels = encrypt_image(pixels, key)
encrypted_image = Image.fromarray(np.uint8(encrypted_pixels))
encrypted_image.save("encrypted_image.jpg")

# Decrypt image
decrypted_pixels = decrypt_image(encrypted_pixels, key)
decrypted_image = Image.fromarray(np.uint8(decrypted_pixels))
decrypted_image.save("decrypted_image.jpg")

print("Encryption and decryption completed.")
files.download("encrypted_image.jpg")
files.download("decrypted_image.jpg")
```

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Choose Files 1000035008.jpg

- **1000035008.jpg**(image/jpeg) - 65913 bytes, last modified: 5/8/2025 - 100% done

Saving 1000035008.jpg to 1000035008 (10).jpg

7s

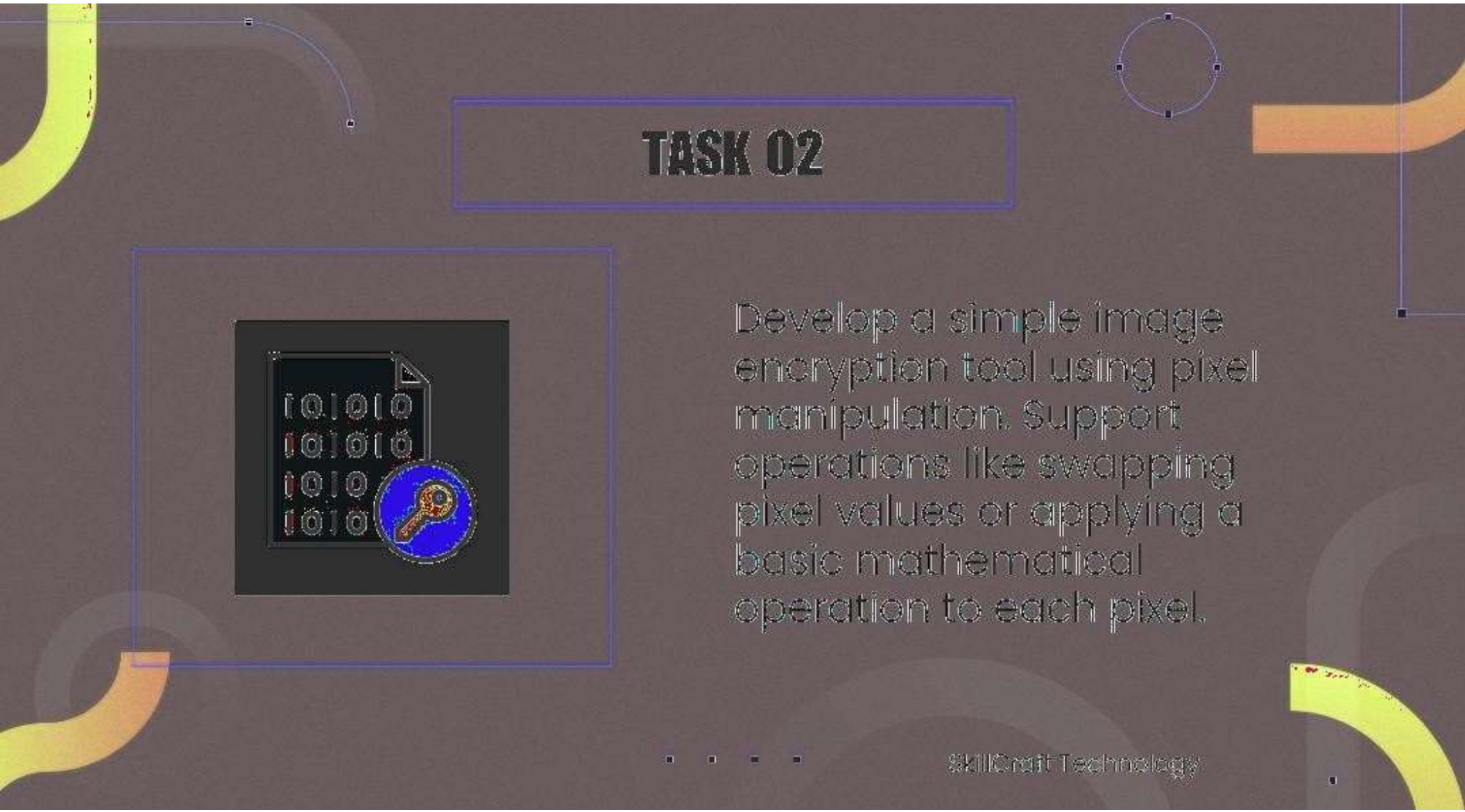
```
# Encrypt image
encrypted_pixels = encrypt_image(pixels, key)
encrypted_image = Image.fromarray(np.uint8(encrypted_pixels))
encrypted_image.save("encrypted_image.jpg")

# Decrypt image
decrypted_pixels = decrypt_image(encrypted_pixels, key)
decrypted_image = Image.fromarray(np.uint8(decrypted_pixels))
decrypted_image.save("decrypted_image.jpg")

print("Encryption and decryption completed.")
files.download("encrypted_image.jpg")
files.download("decrypted_image.jpg")
```

Choose Files 1000035008.jpg

- **1000035008.jpg**(image/jpeg) - 65913 bytes, last modified: 5/8/2025 - 100% done

```
Saving 1000035008.jpg to 1000035008 (10).jpg
Encryption and decryption completed.
```

Encrypted image



Decrypted Image