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In [2]:

```
from PIL import Image
import numpy as np

def encrypt_image(image_path, key, output_path):

    img = Image.open(image_path)
    img_array = np.array(img)


    encrypted_array = img_array ^ key


    encrypted_img = Image.fromarray(encrypted_array)
    encrypted_img.save(output_path)
    print(f"Image encrypted and saved to {output_path}")

def decrypt_image(image_path, key, output_path):

    encrypted_img = Image.open(image_path)
    encrypted_array = np.array(encrypted_img)


    decrypted_array = encrypted_array ^ key


    decrypted_img = Image.fromarray(decrypted_array)
    decrypted_img.save(output_path)
    print(f"Image decrypted and saved to {output_path}")

def main():
    print("Image Encryption Tool")
    print("1. Encrypt an image")
    print("2. Decrypt an image")
    print("3. Exit")
```

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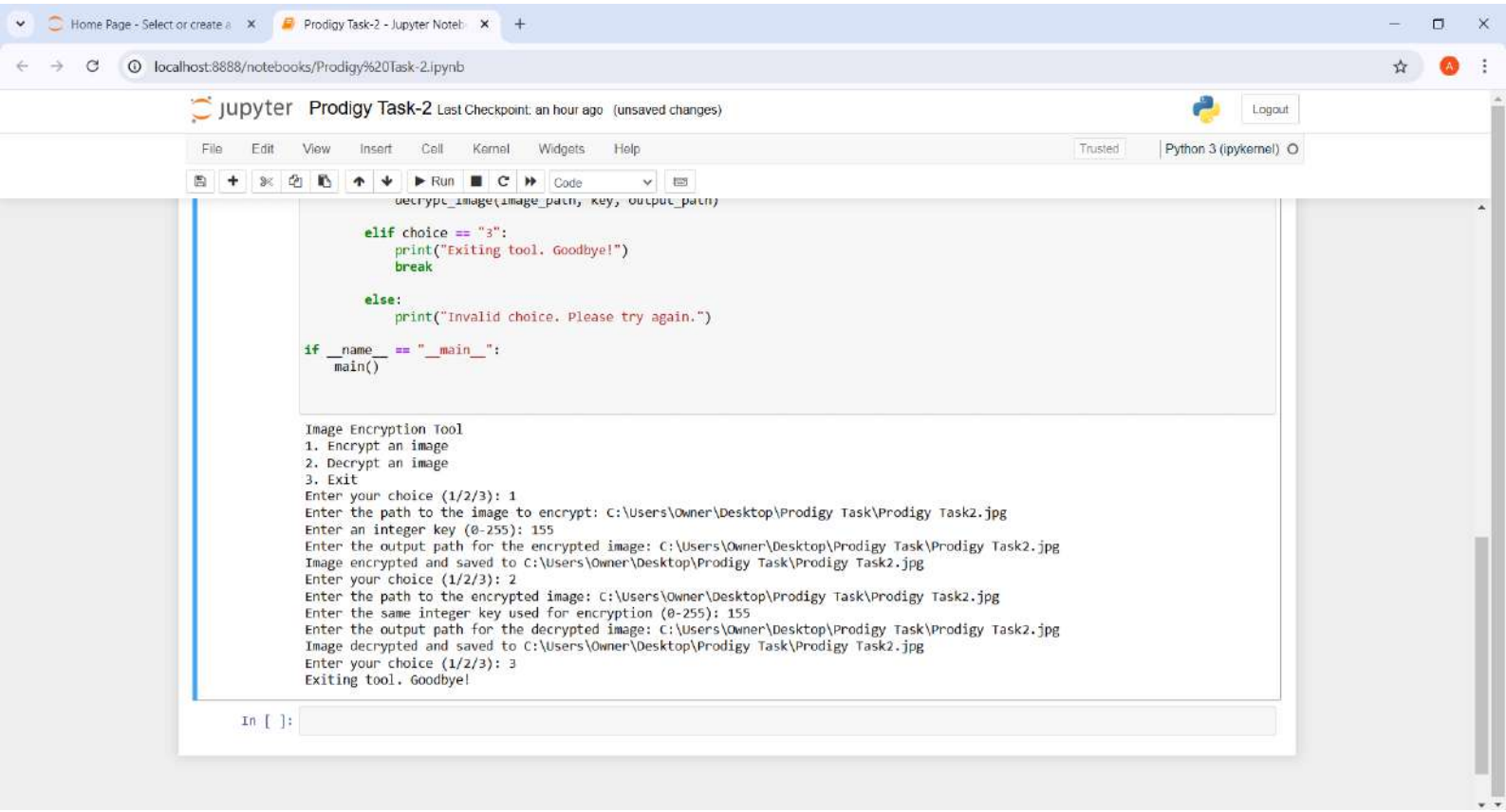
```
def main():
    print("Image Encryption Tool")
    print("1. Encrypt an image")
    print("2. Decrypt an image")
    print("3. Exit")

    while True:
        choice = input("Enter your choice (1/2/3): ")
        if choice == "1":
            image_path = input("Enter the path to the image to encrypt: ")
            key = int(input("Enter an integer key (0-255): "))
            output_path = input("Enter the output path for the encrypted image: ")
            encrypt_image(image_path, key, output_path)

        elif choice == "2":
            image_path = input("Enter the path to the encrypted image: ")
            key = int(input("Enter the same integer key used for encryption (0-255): "))
            output_path = input("Enter the output path for the decrypted image: ")
            decrypt_image(image_path, key, output_path)

        elif choice == "3":
            print("Exiting tool. Goodbye!")
            break

        else:
            print("Invalid choice. Please try again.")

if __name__ == "__main__":
    main()
```

```
Image Encryption Tool
1. Encrypt an image
2. Decrypt an image
3. Exit
Enter your choice (1/2/3): 1
```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Trusted
Python 3 (ipykernel)
Run
Code
decrypt_image(image_path, key, output_path)
elif choice == "3":
print("Exiting tool. Goodbye!")
break
else:
print("Invalid choice. Please try again.")
if __name__ == "__main__":
main()
Image Encryption Tool
1. Encrypt an image
2. Decrypt an image
3. Exit
Enter your choice (1/2/3): 1
Enter the path to the image to encrypt: C:\Users\Owner\Desktop\Prodigy Task\Prodigy Task2.jpg
Enter an integer key (0-255): 155
Enter the output path for the encrypted image: C:\Users\Owner\Desktop\Prodigy Task\Prodigy Task2.jpg
Image encrypted and saved to C:\Users\Owner\Desktop\Prodigy Task\Prodigy Task2.jpg
Enter your choice (1/2/3): 2
Enter the path to the encrypted image: C:\Users\Owner\Desktop\Prodigy Task\Prodigy Task2.jpg
Enter the same integer key used for encryption (0-255): 155
Enter the output path for the decrypted image: C:\Users\Owner\Desktop\Prodigy Task\Prodigy Task2.jpg
Image decrypted and saved to C:\Users\Owner\Desktop\Prodigy Task\Prodigy Task2.jpg
Enter your choice (1/2/3): 3
Exiting tool. Goodbye!
In [ ]: