Roll no. 20/11/EC/055
Kshama Meena

Date:
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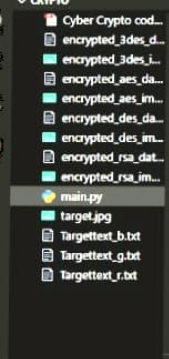
Table with encryption time for each algorithm

Algorithm	Block size (Bits)	Key size (Bits)	Time taken in Encryption in nanoseconds
DES	64	56	0.032007694244384766
3DES	64	168	0.09101398838623047
AES	128	256	0.003015041351318359
RSA	128	256	12.584460830688



main.py > ...

```python
# Save the arrays as text files
np.savetxt('encrypted_des_data.txt', encrypted_des_array)
np.savetxt('encrypted_3des_data.txt', encrypted_3des_array)
np.savetxt('encrypted_aes_data.txt', encrypted_aes_array)
np.savetxt('encrypted_rsa_data.txt', encrypted_rsa_array)

# Calculate the new shape based on the desired dimensions
width = 1855
height = 1855
new_size = width * height

# Determine the resizing factor
resizing_factor = int(len(encrypted_rsa_array) / new_size)

# Create images from the encrypted data
encrypted_des_image = np.reshape(encrypted_des_array, image_array.shape)
encrypted_3des_image = np.reshape(encrypted_3des_array, image_array.shape)
encrypted_aes_image = np.reshape(encrypted_aes_array, image_array.shape)
encrypted_rsa_image = np.reshape(encrypted_rsa_array[:new_size * resizing_factor], (width, height))  # Reshape without the color channel
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PVS-STUDIO COMMENTS

Code

```
Microsoft Windows [Version 10.0.19045.3031]
(c) Microsoft Corporation. All rights reserved.

D:\Crypto>python -u "d:\Crypto\main.py"
b'ƒ\x857\r\xc4\xef \xaa'
b'~\x8b\xde\x9dQ`@\xe2/\x92\xd2:u\xedw\x87k\xd2\xe3,\xee\xf5[\xe1'
b'\xf7\t\xe0r\xe9#\xe3\xd3\x86\xa8\xad\xc9\xb7\xbd\\\xe9\xd1u\xf0\xe2\xb00Qwf\x82n\x900\xf4\x8b\xf3'
Private RSA key at 0x19DE7642110
Time taken to encrypt the data using DES: 0.032007694244384766
Time taken to encrypt the data using 3DES: 0.09101398838623047
Time taken to encrypt the data using AES: 0.0030150413513183594
Time taken to encrypt the data using RSA: 12.564044608306885

D:\Crypto>
```

OUTLINE

TIMELINE