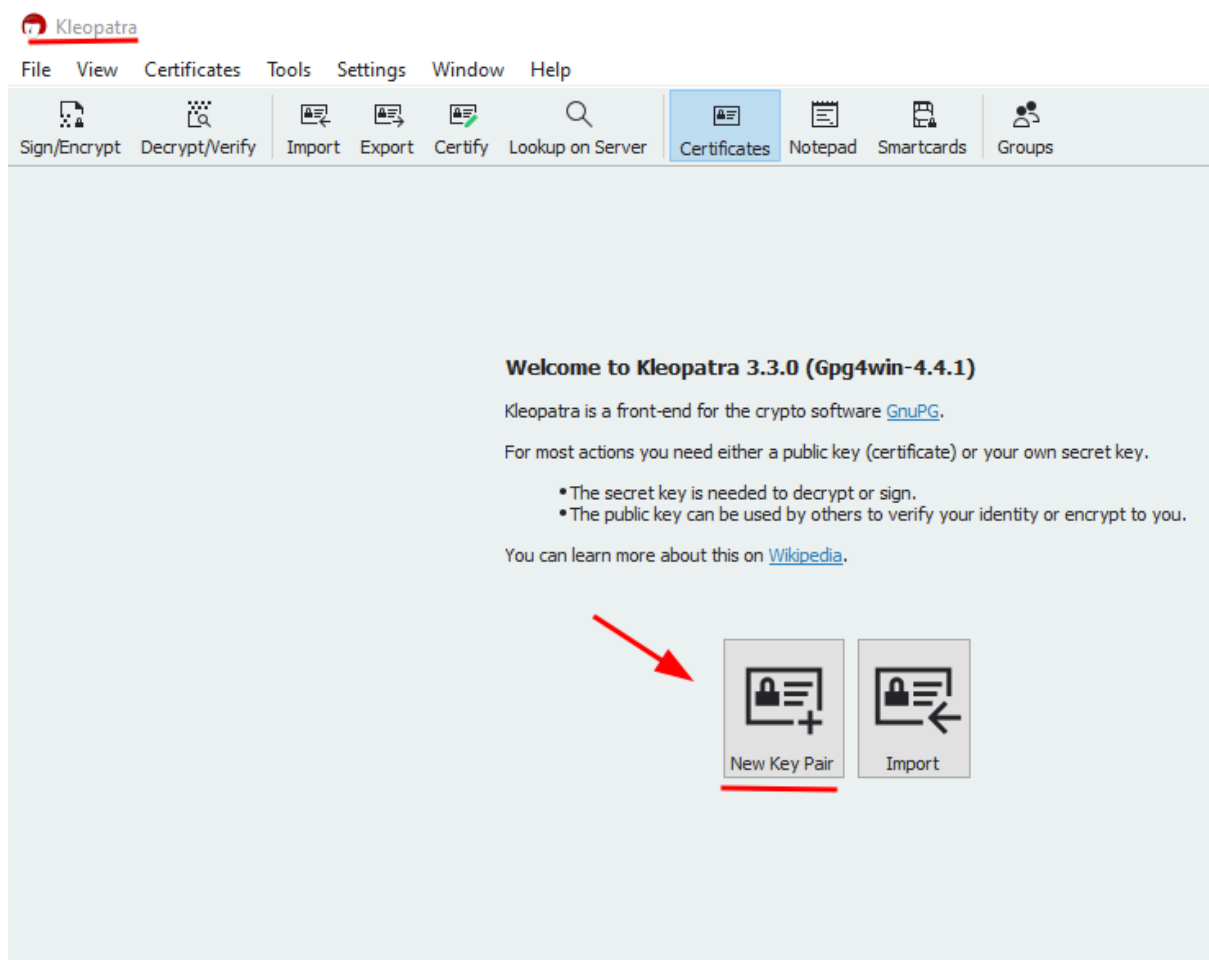
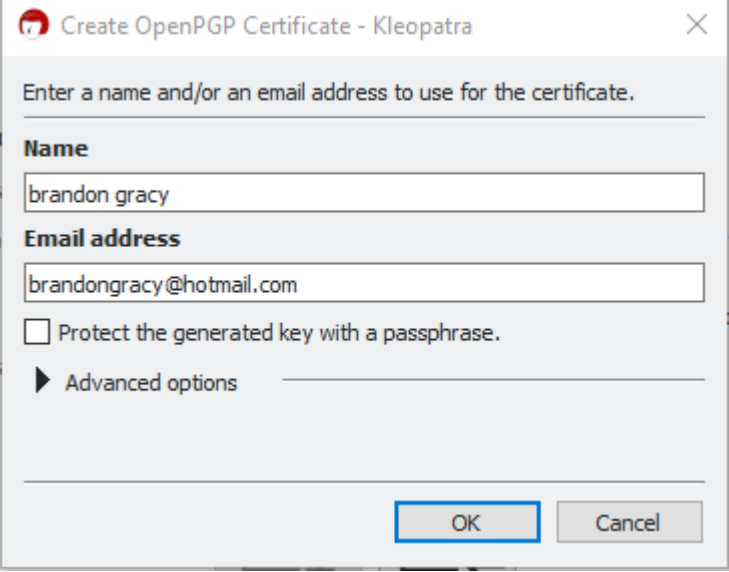


Today we are going to see how to use an asymmetric encryption solution for text, email, files, directories, and disk partitions.

For this assignment, we didn't create virtual machines. my college Miguil was using Ubuntu OS, and i am using Windows OS. we decide to generate our own key, after verifying each other key, we encrypted the files using the other person's public key. This approach ensured two core security pillars: Confidentiality and Integrity.



Let's start downloading the app Kleopatra, it will be our software that will encrypt and decrypt our files.



Create OpenPGP Certificate - Kleopatra

Enter a name and/or an email address to use for the certificate.

Name
brandon gracy

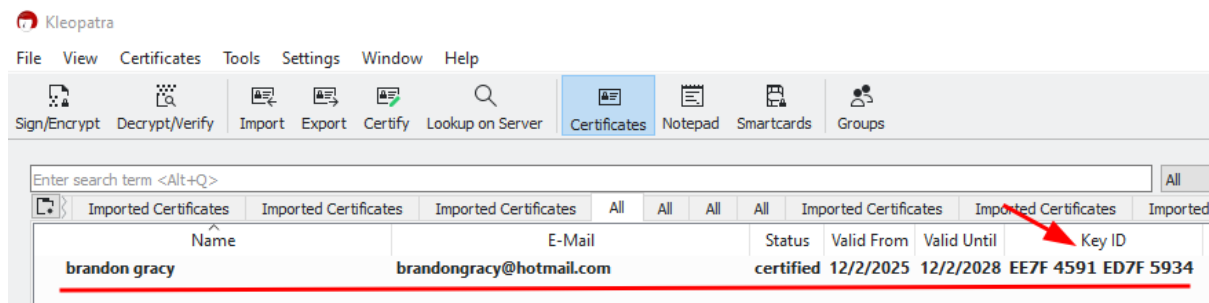
Email address
brandongracy@hotmail.com

☐ Protect the generated key with a passphrase.

► Advanced options


OK Cancel

Here, we have to put our email and name, to create both the keys.



That's the place where we have to put our college's key, to encrypt some file with a key that belongs to him, he will send the key to me.

You have imported a new certificate (public key) - Kleopa... X

 In order to mark the certificate as valid it needs to be certified. Certifying means that you check the Fingerprint. Some suggestions to do this are:

- A phone call to the person.
- Using a business card.
- Confirming it on a trusted website.

Do you wish to start this process now?

☐ Do not ask again

Certify **Cancel**

We have to certificate this key to encrypt the file to send to him.

Kleopatra

File View Certificates Tools Settings Window Help

Sign/Encrypt Decrypt/Verify Import Export Certify Lookup on Server **Certificates** Notepad Smartcards Groups

Enter search term <Alt+Q> All

Name	E-Mail	Status	Valid From	Valid Until	Key ID
brandon gracy	brandongracy@hotmail.com	certified	12/2/2025	12/2/2028	EE7F 4591 ED7F 5934
MS	<u>cmdmiguelsousa@gmail.com</u>	<u>certified</u>	12/2/2025	12/2/2028	1454 3612 0720 1D37

Now we can see the public key that belong to our college.

Sign/Encrypt Files - Kleopatra

✕

Sign / Encrypt Files

Prove authenticity (sign)

☒ Sign as:

✓ brandon gracy <brandongracy@hotmail.com> (certified, created: 12/2/2025)

✕

👤

Encrypt

☐ Encrypt for me:

✓ brandon gracy <brandongracy@hotmail.com> (certified, created: 12/2/2025)

✕

👤

☒ Encrypt for others:

✓ MS <cmdmiguelsousa@gmail.com> (certified, OpenPGP, created: 12/2/2025)

✕

👤

✕ Please enter a name or email address...

✕

👤

☐ Encrypt with password. Anyone you share the password with can read the data.

Output

Output files/folder:

📁

C:/Users/brand/OneDrive/Desktop/hello

✕

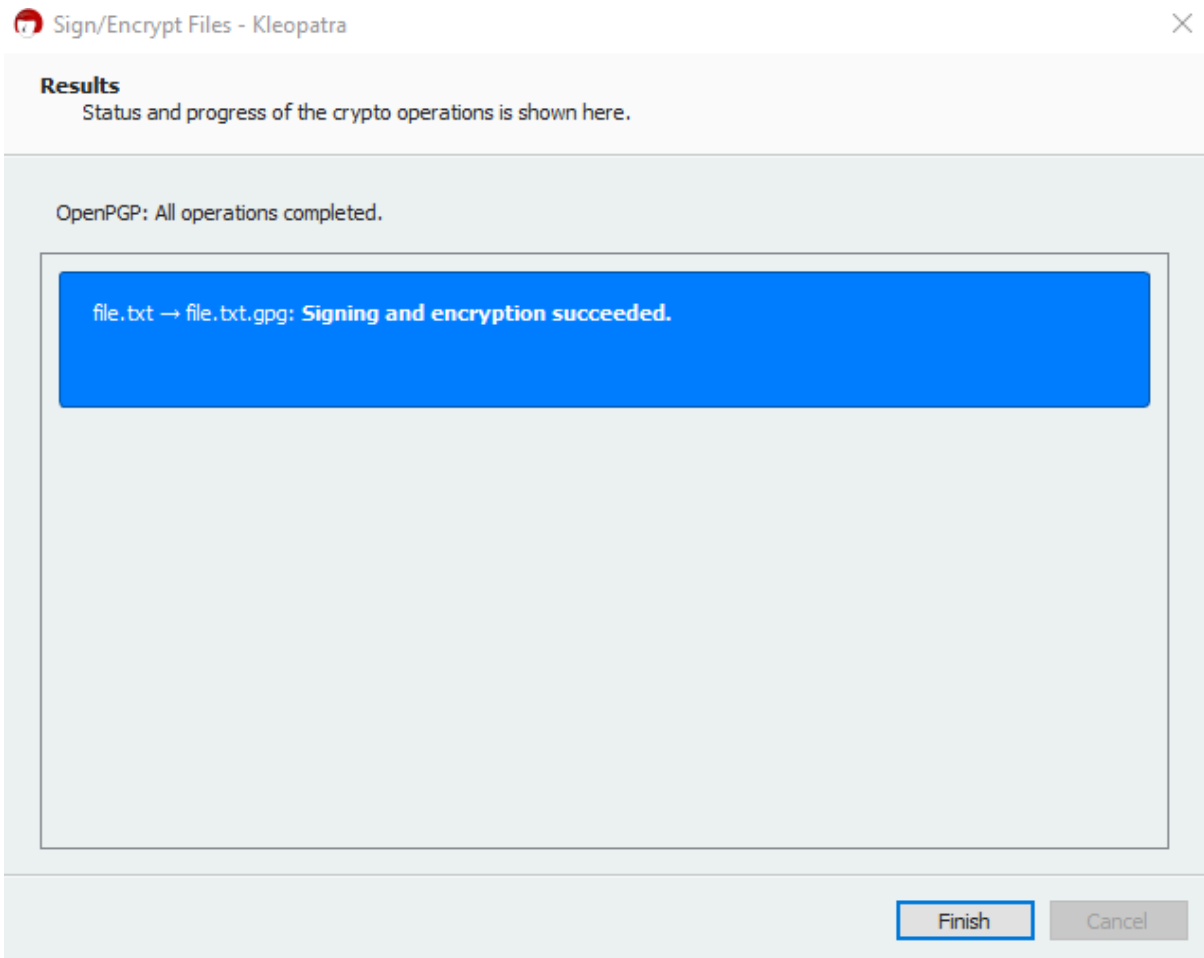
📁

☒ Encrypt / Sign each file separately.

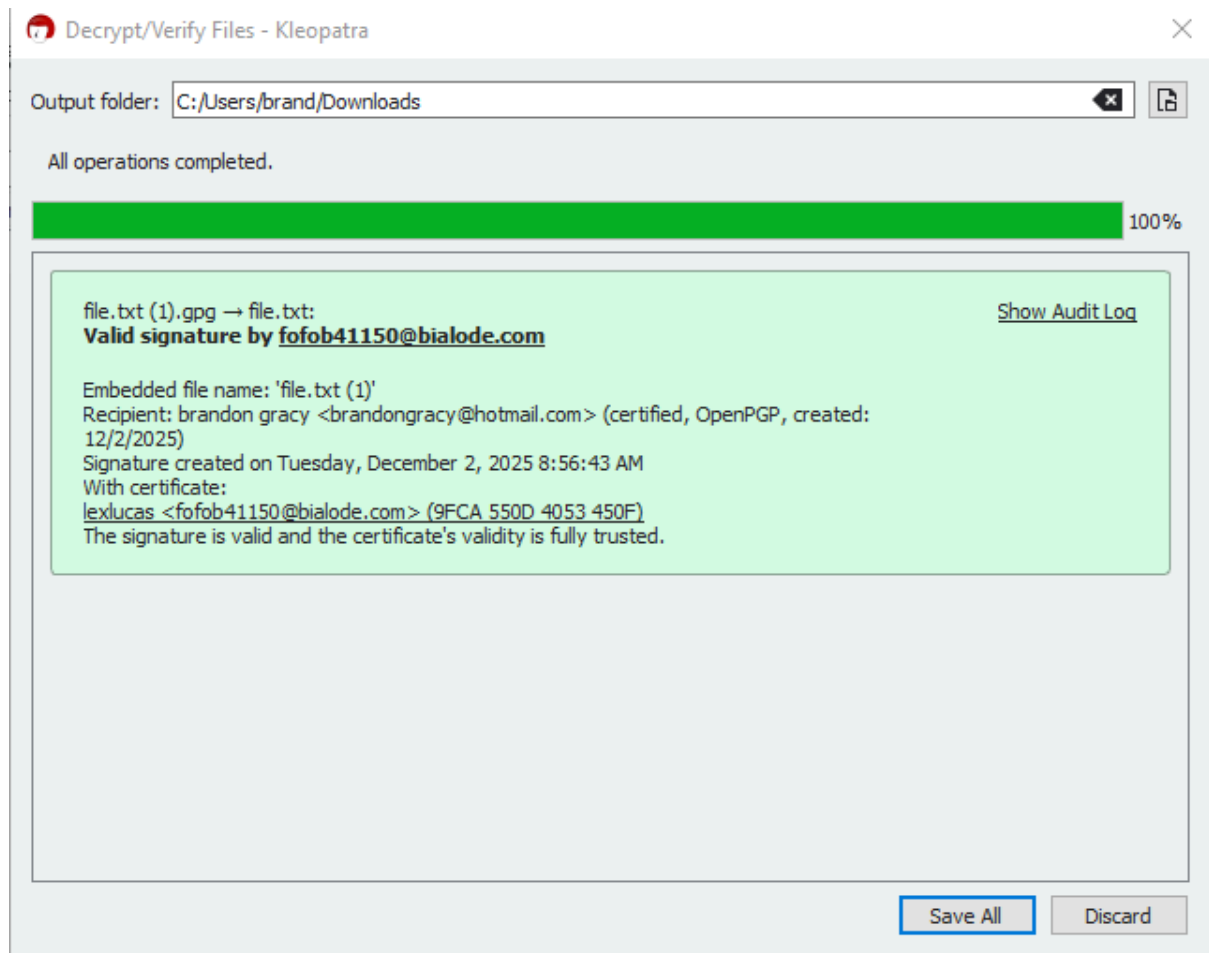
Sign / Encrypt

Cancel

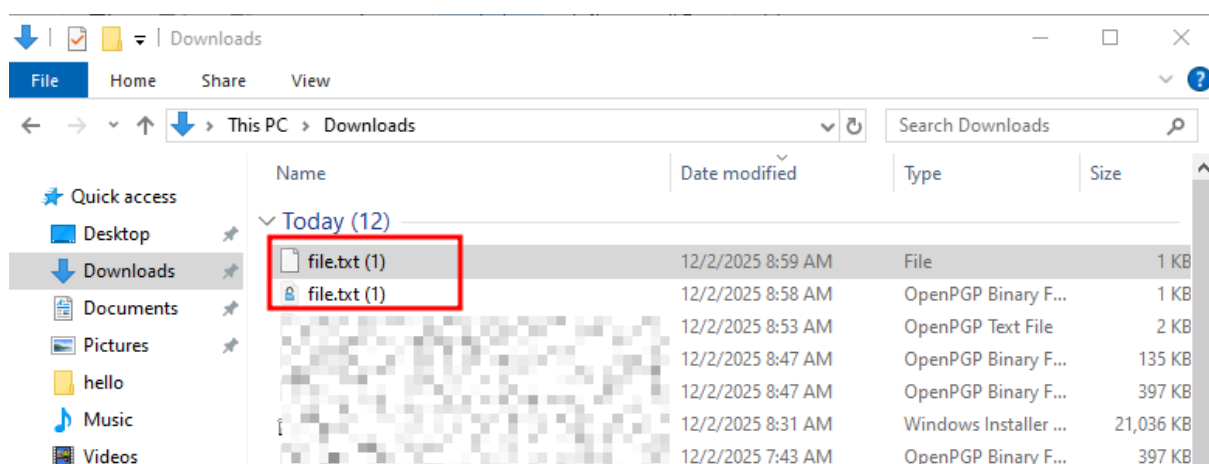
Now, let's encrypt some file with his key and send it to him.



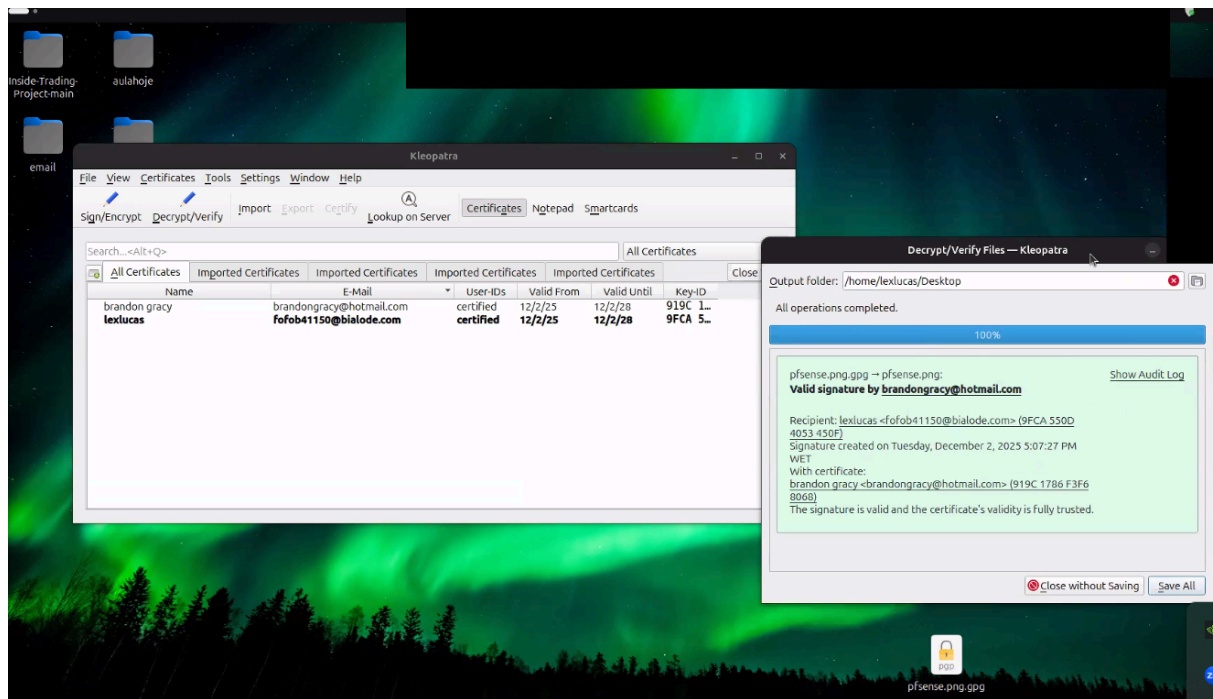
Now, it's already encrypted, we just have to send it to him, and he will be able to decrypt with his private key.



Here we can check that we decrypt one file sand by our college with the college's public key that he did sand to us before.



Now, the file can be read, because it is decrypted.



That's a picture by my college's computer showing that he got decrypt the file that i sand to him.