**Lab 01**

1. Try to setup [Thunderbird](https://www.mozilla.org/en-US/thunderbird/) to work through your [email account](https://itservices.usc.edu/google/config/). Then install [Enigmail](https://www.enigmail.net/index.php/en/) and [GPG4Win](https://www.gpg4win.org/) (Windows) / [GPGTools](https://gpgtools.org/) (OSX) to get GPG working with Thunderbird.

There is one major difference between Mailvelope and Thunderbird when it comes to sending encrypted emails. What is it? What is the difference between the two?

**Hint:**

There is a possibility that the GPG keychain used in the Git Shell maybe different from the keychain for GPP4Win/GPGTools. If that is the case, what can you do to overcome the problem.

**Ans.** In Thunderbird, the keys in GPG keychain gets automatically synced with it. Whereas, in case of Mailvelope the keys in GPG keychain don’t get automatically synced with it as it is a browser extension. The user has to manually add the keys.

1. In regards to question 1, what is a way to could overcome this problem?

**Ans.** One method suggested to overcome this problem is if keybase.io is published directly on the key server. So, people can add pgp.keybase.io into their server list. And, then thunderbird or mailvelope will directly start looking for the keybase keys for validation/encryption purposes. It will work in case of symmetric key encryption.

1. In regards to question 2, if you suggested a solution that involves symmetric encryption it’s not bad. What would be a way to solve the problem while still using asymmetric encryption? What would you need to type in the command line to accomplish it?

**Ans.** For asymmetric encryption we will need to create two keybase.io. One for public key and other for private key for attaining automatic sync.

**Command line code:**

winscp.exe [mysession] /synchronize [local\_directory] [remote\_directory] [/defaults]

winscp.exe [mysession] [/privatekey=<file>] [/hostkey=<fingerprint>]

**Reference:**

* 1. https://winscp.net/eng/docs/commandline