Git Notes

Filippo Valmori

2nd June 2024

I. Installation

§ Installation procedure (tested on Windows 10 OS):

- download and launch installer from Git website (free and open-source);
- set *C:\Program Files\Git* as installation path;
- tick *Open Git Bash here* and untick *Open Git GUI here* within *Windows Explorer integration*;
- select *Use Visual Studio Code as Git's default editor*;
- select *Let Git decide* about default branch naming;
- select *Git from command line and also from 3rd-party software*;
- select *Use bundled OpenSSH*;
- select *Use the OpenSSL library*;
- select *Checkout Windows-style, commit Unix-style line endings*;
- select *Use MinTTY*;
- select *Fast-forward or merge* as pull-command behavior;
- select *Git Credential Manager*;
- tick *Enable file system caching*
- skip the *Experimental options* window and start the installation.

II. SETUP

§ Configure user's name and email:

- to configure Git username → *git config --global user.name "Filippo Valmori"*;
- to configure Git email → *git config --global user.email "filippo.valmori@gmail.com"*;
- NB #1: for the last x2 commands, *--system* or *--local* could be used in place of *–global* to (however that's in general not recommended, see Coursera's training for more details);
- to readback set user's name and email → *git config user.name* and git config user.email (or all at once via *git config [--global] --list*);
- to avoid line-ending issues among team members working with different OSs and automatically convert 'CRLF' (typical of Windows) line-endings into 'LF' (typical of Linux and macOS) when adding a file to the index (and vice versa when it checks out code onto your filesystem) → *git config --global core.autocrlf true* (in particular, when asserted on Windows machines, this converts 'LF' endings into 'CRLF' when you check out code);
- NB #2: 'CR' = '\r' = *Carriage Return* character | 'LF' = '\n' = *Line Feed* character.

III. ANNEX

Hereafter a list of useful trigonometric relations.

$$
\begin{aligned}
cos^2(x) + sin^2 &= 1 \\
2sin(x)cos(x) &= sin(2x) \\
1 + cos(2x) &= 2cos^2(x) \\
cos(x \pm y) &= cos(x)cos(y) \mp sin(x)sin(y) \\
sin(x \pm y) &= sin(x)cos(y) \pm cos(x)sin(y)
\end{aligned}
$$

References

[1] B. Sklar, P. K. Ray, *Digital Communications*, Chap. 4-9, Pearson Education, 2012.