



UTM
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MODULE 2 : INTRODUCTION TO GIT

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MODULE OUTLINE



01 What is Git?

02 Git Workflow and Fundamental Git Concepts

03 Basic Git Terminology

04 Basic Git Commands in CLI

01

WHAT IS GIT?



WHAT IS GIT?



- **Command** used in **Version Control System (VCS)**
- **Set of commands** that users can **use to perform various version control tasks**
- Version control tasks : make copy of file, changes in file, file status, file history etc

Chan's machine



Maria's machine



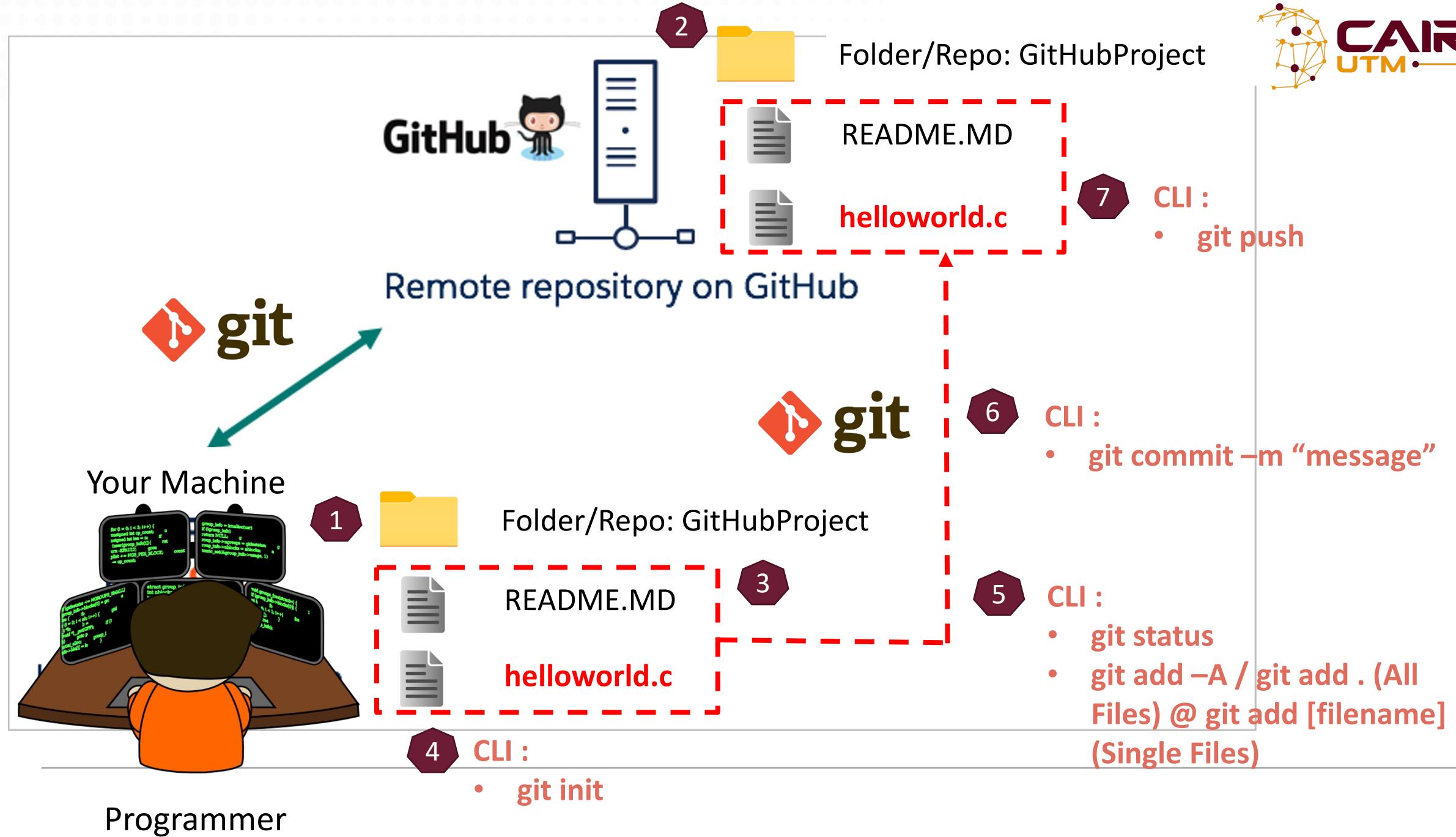
D'Angelo's machine



02

GIT WORKFLOW & FUNDAMENTAL GIT CONCEPT





03

BASIC GIT

TERMINOLOGY



BASIC GIT TERMINOLOGY

Git Terminology	Descriptions
Repository	Storage with collection of files and directories
Init	Initialize new repository
Commit	Changes to repository at specific point in time
Add	Add file
Status	Information which files have been modified
Push	Upload local changes to remote repository

04

BASIC GIT COMMANDS IN CLI



BASIC GIT COMMANDS IN CLI

- Git commands are used by users to communicate with the machine
- Git bash / command prompt is an application for Windows environments
- Terminal is used for Mac user
- There are numerous git commands to perform every functions

GIT BASICS		GIT BRANCHING & MERGING	
git init	will create a new local GIT repository	git branch	will list your branches
git clone	is used to copy a repository.	git checkout	switch to another branch and check it out into your working directory
git add	add a file as it looks now to your next commit (stage).	git merge	will merge the specified branch's history into the current branch
git commit	will create a snapshot of the changes and save it to the git directory.	git log	show all commits in the current branch's history
git push	push local changes to the original		
MAKE A CHANGE		SYNCHRONIZE	
git status	list new or modified files not yet committed	git remote add <name> <url>	Create a new connection to a remote repo.
git diff	lists down changes and conflicts	git fetch	get all the changes from the origin (no merge)
git add [file]	stages the file, ready for commit	git pull	get all the latest changes from the origin and merge
git reset [file]	unstages file, keeping the file changes	git push	is used to upload your local repository changes to the origin remote repo
git commit -m "[descriptive message]"			
commit all stages files to versioned history			

INSTALLATION & CONFIGURATION



INSTALL GIT ON YOUR LOCAL MACHINE



1. Install Git <https://git-scm.com/downloads>
2. Install Visual Studio Code (vscode)
 - Open <https://code.visualstudio.com/>
 - Click Download button



CONFIGURE GIT SETTINGS (NAME, EMAIL ADDRESS)



Configure Git (user information for all local repositories)

- `git config --global user.name "name"`
- `git config --global user.email "email address"`
- `git config --global --list`



THANK YOU



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research.utm.my/cairo/



cairo@utm.my / trainer's email