

Assignment 1-YP

1. What are the basic steps to init a git repo in your local?

1. create a directory that you want to create the project
2. go to the directory
command: `cd directory`
3. initiate
command: `git init`
4. write some code/ create some files
5. add files
command: `git add`
6. commit with comments
command: `git commit -m "first commit"`

2. How to clone a repo from Github?

create the directory that you want to store your project
cd to project directory
types: `git clone git@github.com:repo name(link from Github)`

3. How to create a new branch and checkout to that branch?

cd to the repo
create your branch: `git checkout -b [branch's name]`
check out branch: `git checkout [branch's name]`

4. How to merge the new branch with the master branch? show me the commands

`git push --set-upstream origin [your branch name]`

5. What is the maven's role? what it be used to do?

Maven is a powerful project management tool based on POM(Project Object Model) mainly used for java-based project development. It is used for project build, dependency, and documentation.

6. What is the lifecycle of a maven? could you tell me the details?

There are three built-in build lifecycles:

default lifecycle handles project deployment.

clean lifecycle handles project cleaning.

site lifecycle handles the creation of project's site documentation.

The default Maven lifecycle consists of 8 major steps or phases for compiling, testing, building, and installing a given Java project

Validate: validate if the project structure is correct (For example – It checks if all the dependencies have been downloaded and are available in the local repository.)

Compile: Compiles the source code and converts the .java file to .class file and stores classes files in classed/target folder

Test: run unit tests for the project

Package: packages the compiled code in a distributable format like JAR or WAR.

Integration Test: runs the integration tests for the project.

Verify: runs checks to verify that the project is valid and meets the quality standards.

Install: installs the packaged code to the local Maven repository.

Deploy: It copies the packaged code to the remote repository for sharing it with other developers.

7. what is the difference between package and install in the maven lifecycle?

The package is to package the compiled source code to distributable formats like JAR or WAR files.

install is to install the packaged code to the local Maven repository

8. What is the difference between passing by value and passing by reference?

In java, is always passed by value

For primitive types. passed by value means “copy” the value itself

For object types, passed by value means “copy” the value of reference of the objects

Could you design a code to verify your understanding and screenshot it for me?

Example 1:

```
public static void main(String[] args) {  
    int x = 5;  
    changeIntValue(x);  
    System.out.println(x); // x = 5  
}  
  
public static void changeIntValue(int y) {  
    y = 10;  
}
```

Example 2:

```
public static void main(String[] args) {  
    Simple s3 = new Simple(5);
```

```

    s3 = changeValue3(s3); // s3 = 10
    System.out.println(s3.value); // s3.value = 10
}

public static Simple changeValue3(Simple simple) {
    Simple newSimple = new Simple(10);
    return newSimple;
}

```

9. practice git and GitHub then provide one screenshot to prove you have done it.

```

no changes added to commit (use "git add" and/or "git commit -a")
[Chens-MacBook-Air:chuwa4.1ShortQuestions chenbao$ git remote -v
origin  git@github.com:bcpy1314/chuwa4.1ShortQuestions.git (fetch)
origin  git@github.com:bcpy1314/chuwa4.1ShortQuestions.git (push)
upstream https://github.com/TAlSRIch/chuwa4.1ShortQuestions.git (fetch)
upstream https://github.com/TAlSRIch/chuwa4.1ShortQuestions.git (push)
[Chens-MacBook-Air:chuwa4.1ShortQuestions chenbao$ git fetch upstream
remote: Enumerating objects: 24, done.
remote: Counting objects: 100% (24/24), done.
remote: Compressing objects: 100% (13/13), done.
remote: Total 16 (delta 4), reused 13 (delta 3), pack-reused 0
Unpacking objects: 100% (16/16), 8.52 KiB | 335.00 KiB/s, done.
From https://github.com/TAlSRIch/chuwa4.1ShortQuestions
* [new branch]      Lifan_Zeng -> upstream/Lifan_Zeng
* [new branch]      Lifang_Yan -> upstream/Lifang_Yan
* [new branch]      Qiyun_Zhao -> upstream/Qiyun_Zhao
* [new branch]      master -> upstream/master
[Chens-MacBook-Air:chuwa4.1ShortQuestions chenbao$ git rebase upstream/master
error: cannot rebase: You have unstaged changes.
error: Please commit or stash them.
[Chens-MacBook-Air:chuwa4.1ShortQuestions chenbao$ git status
On branch Yue_Pan
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
    modified:   .DS_Store

no changes added to commit (use "git add" and/or "git commit -a")
[Chens-MacBook-Air:chuwa4.1ShortQuestions chenbao$ git reset --hard HEAD
HEAD is now at b19e9ec Merge branch 'TAlSRIch:master' into master
[Chens-MacBook-Air:chuwa4.1ShortQuestions chenbao$ git status
On branch Yue_Pan
nothing to commit, working tree clean
[Chens-MacBook-Air:chuwa4.1ShortQuestions chenbao$ ls
README.md      assignment_1    hw_4_6oop
[Chens-MacBook-Air:chuwa4.1ShortQuestions chenbao$ git rebase upstream/master
Successfully rebased and updated refs/heads/Yue_Pan.
[Chens-MacBook-Air:chuwa4.1ShortQuestions chenbao$ git push -u origin Yue_Pan
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 4 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 839 bytes | 839.00 KiB/s, done.
Total 3 (delta 0), reused 2 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'Yue_Pan' on GitHub by visiting:
remote:   https://github.com/bcpy1314/chuwa4.1ShortQuestions/pull/new/Yue_Pa
remote:
To github.com:bcpy1314/chuwa4.1ShortQuestions.git
 * [new branch]      Yue_Pan -> Yue_Pan
Branch 'Yue_Pan' set up to track remote branch 'Yue_Pan' from 'origin'.

```

10. create a maven project using IntelliJ as the teacher did in the class, and send a screenshot to me.

