



VERSION CONTROL SYSTEM

Git & GitHub



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EXERCISE 01

Create your first Repository and Commit

Exercise 1: Create your first Commit.

Task:

- Initialize your Repository: `git init project Exercise-1`
- Create a file with name `index.html`
- Write code in newly created file
- Stage `index.html`
- Commit with message '**Initial Message.**'



EXERCISE 02

Commit only one file

Exercise 2: Commit only one file.

Task:

- Initialize your Repository: `git init Exercise-2`
- Create a files with names `index.html` and `about.html`
- Add code in both files.
- Stage only one file.
- Commit with message: '**File x added.**'



EXERCISE 03

Modify last commit

Exercise 3: Modify last commit.

Task:

- Initialize your Repository: `git init project Exercise-3`
- Create a file with name `index.html`
- Write code in newly created file
- Stage `index.html`
- Commit with message 'adding index.html.'
- Add new `about.html` file with some code.
- Now modify message of previous commit as 'Adding index.html and about.html 'and add `about.html` file in previous commit.

EXERCISE 04

Create git ignore file

Exercise 4: Create git ignore file

Task:

- Initialize your Repository: `git init Exercise-4`
- Create a gitignore file that will ignore
 - all files with 'exe' extension
 - all files with 'o' extension
 - all files with 'jar' extension
 - the whole libraries directory



EXERCISE 05

Save your work with stash

Exercise 5: Save your work with stash.

Task:

- Initialize your Repository: `git init Exercise-5`
- Add some random files with code
- Now use `git stash` command to save required files from above files.

(For this exercise don't send repository just submit git commands and output of `git stash list`)



EXERCISE 06

Reset Previous Commit Keeping changes. (Soft Reset)

Exercise 6: Reset Previous Commit Keeping changes. (Soft Reset)

Task:

- Initialize your Repository: `git init Exercise-6`.
- Do some series of commits.
- Now use `git reset` command to reset one of the commit and keep changes in staging area.

In answer also add output of `git status` command.



EXERCISE 07

Reset Previous Commit (Hard Reset)

Exercise 7: Reset Previous Commit (Hard Reset).

Task:

- Initialize your Repository: `git init Exercise-7`.
- Do some series of commits.
- Use `git reset` command to reset one of the commit without keeping changes.



EXERCISE 08

Merge branch (No Conflicts)

Exercise 8: Merge branch (No Conflicts).

Task:

- Initialize your Repository: `git init Exercise-8`
- Create `index.html` file add some code.
- Make Commit.
- Create new branch from master branch with name **my-feature**.
- Add `about-us.html` file with code and commit changes in my-feature branch.
- Now checkout master branch.
- Merge my-feature branch into master.

EXERCISE 09

Merge branch (Conflicts)

Exercise 9: Merge branch (Conflicts).

Task:

- Initialize your Repository: `git init Exercise-9`
- Create `index.html` file add some code.
- Make Commit.
- Create new branch from master branch with name `my-feature`.
- Add `about-us.html` file with code
- Make changes in `index.html`
- Commit changes in `my-feature` branch.
- Now checkout master branch.
- Do some code changes in `index.html`
- Commit changes.
- Now merge `my-feature` branch into master.
- You will get conflicts for `index.html` file. Resolve conflict by selecting both changes for the same `index.html` file.

BEST PRACTICES

1- <https://www.katacoda.com/courses/git>

2- <https://learngitbranching.js.org/>

NOTE: Please go through the above link to complete the exercise in a much more visual way on the Version Control System.

The recommended way is to complete the first one first.



Timeline

This is just an estimation, please complete at your ease

	Time in Minutes		
Levels Assignment	Beginner	Intermediate	Expert
Exercise-1	15	10	5
Exercise-2	15	10	5
Exercise-3	30	20	15
Exercise-4	5	5	5
Exercise-5	25-30	20	15
Exercise-6	45	30	30
Exercise-7	45	30	30
Exercise-8	60	45	45
Exercise-9	90	60	60
Total Time	5.08 HRs	3.83 HRs	3.5 HRs

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