

# My WORKFLOW

master

develop

review

dev-1

Task

---|---|artifex3

dev-2

Task

artifex1|---|---

dev-3

Task

---|artifex2|---

1. git

->CREATE LOCAL REPO

See below for how-to

2.

->CREATE & SWITCH TO NEW BRANCH

In the master project

3.

:git checkout -b [develop]

Create a permanent branch for all developer to share

4.

:git push -u origin [develop]  
:git branch

Check if the branch was created

->Dev1 and Dev2 PULL BRANCHES

@Dev1 - Terminal

5.

:git config --global user.name "your-name"  
:git config --global user.email "your-email"

6.

:git clone <url> [.]or[blank]  
  
:git clone -b branch-name <url> [.]

[blank] get project folder too

Clone one branch from repo

7.

:git branch -a

View all available branches

8.

:git checkout -t origin/develop

-t to-track

9.

:git checkout develop

Switch to develop branch

10.

:git pull

11.

:git checkout -b feature/1 develop

Create feature/1 branch out of develop branch

12.

:git push -u origin feature/1

|     |                                                                                                                                                                                                                              |                                                                                                                                                                      |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |                                                                                                                                                                                                                              | Push to remote repo                                                                                                                                                  |
|     | Edit the function(s)<br>:git add single-file<br>:git commit -m "changes made"<br>:git pull<br><b>ONCE THE FEATURE IS COMPLETED AND TESTED</b><br>:git push -u origin feature/1                                               | ./queuetest<br>gdb queuetest<br>valgrind ./queuetest                                                                                                                 |
|     | <b>BRANCH CREATION, USE &amp; MERGE</b><br><br><a href="https://youtu.be/HVsySz-h9r4?list=PL-osiE80TeTuRUFjRe54Eea17-Yfn00Ax&amp;t=1266">https://youtu.be/HVsySz-h9r4?list=PL-osiE80TeTuRUFjRe54Eea17-Yfn00Ax&amp;t=1266</a> |                                                                                                                                                                      |
| 13. | >git branch give_a_name                                                                                                                                                                                                      | Creates a branch                                                                                                                                                     |
| 14: | >git checkout given_branch_name                                                                                                                                                                                              | Makes the branch active<br>NOTE: Now you can make all necessary code changes<br><br>>THIS IS LOCAL-REPO<br>>git add<br>>git commit<br><br>Affect only current branch |
| 15. | >git branch -a                                                                                                                                                                                                               | View all available branches                                                                                                                                          |
| 16. | <b>PUSH TO REMOTE REPO</b><br>>git push -u origin given_branch_name                                                                                                                                                          | Reason for doing this:<br>-Others can pull and checkout the branch to perform e.g. Unit-test                                                                         |
| 17. | >git branch -a                                                                                                                                                                                                               | Check if the push was successful                                                                                                                                     |
| 18. | <b>PREPARE TO MERGE</b><br>>git checkout master<br><br>>git pull origin master<br><br>>git branch --merged                                                                                                                   | Local repo master<br><br>Pull remote repo master<br><br>Display a list of                                                                                            |
| 19. | <b>NOW MERGE</b><br>>git merge given_branch_name                                                                                                                                                                             | Local repo                                                                                                                                                           |

```

cs101 ~ > HTML > mason-web git branch --merged
* master
cs101 ~ > HTML > mason-web git merge indentation
Updating efbc299..af90015
Fast-forward
index.html | 38 ++++++++-----
1 file changed, 11 insertions(+), 27 deletions(-)
cs101 ~ > HTML > mason-web

```

|     |                                                                   |                                                    |
|-----|-------------------------------------------------------------------|----------------------------------------------------|
| 20. | PUSH local MASTER to remote MASTER<br><br>>git push origin master | Push to remote repo                                |
| 21. | DONE<br>NEXT DELETE USED BRANCH                                   | <b>SEE DELETE<br/>BRANCH<br/> <br/>V<br/>BELOW</b> |

|                                   | ACCESS REMOTE REPO                                               |                                                                                                                                        |
|-----------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| REMOTE LOCATION<br>*master branch | REMOTE RIPO                                                      |                                                                                                                                        |
|                                   | 1. <code>:git clone &lt;url&gt; .</code>                         | Copy project <i>files</i> to here <.> dir-path                                                                                         |
|                                   | 2. <code>:ls -la</code>                                          | Verify if the remote repo was cloned to current dir                                                                                    |
|                                   | 3. <code>:git remote -v</code>                                   | View remote repo infor                                                                                                                 |
| GOTO BRANCHING                    | 4. <code>:git branch -a</code>                                   | View all branches<br>If there are no other branches other than the *master<br><b>CREATE A NEW BRANCH</b> and work from the new *branch |
| Do not do this                    | 5. <b>Vim-Edit</b> file or files and save<br>In this cloned repo |                                                                                                                                        |
|                                   | 6. <code>:git difftool</code>                                    | See changes made                                                                                                                       |
|                                   | 7. <code>:git status</code>                                      |                                                                                                                                        |
|                                   | 8. <code>:git add -A</code>                                      |                                                                                                                                        |
|                                   | 9. <code>:git commit -m "What &amp; why"</code>                  |                                                                                                                                        |
|                                   | 10. <code>:git log</code>                                        |                                                                                                                                        |
|                                   | 11. <code>:git pull origin master</code>                         | Pull any changes made if any                                                                                                           |
|                                   | 12. <code>:git push -u origin master</code>                      |                                                                                                                                        |

|                                  |                                                                                              |                                                            |
|----------------------------------|----------------------------------------------------------------------------------------------|------------------------------------------------------------|
| CREATE A WORK STATION<br>*branch | CREATE A BRANCH, USE IT, MERGE IT AND DELETE IT<br><b>BRANCHING</b><br><b>WORKING BRANCH</b> |                                                            |
|                                  | 1. :git branch <code>branch-name</code>                                                      |                                                            |
|                                  | 2. :git branch                                                                               | See available branches<br>And the currently active *branch |
|                                  | 3. :git <code>checkout</code> branch-name                                                    | Switch to branch-name<br>branch { copy project to here}    |
|                                  | 4. <b>Vim-Edit</b> file or files and save                                                    | RUN Unit Tests<br>RUN Check memory leak<br>Etc.            |
|                                  | 5. :git difftool                                                                             |                                                            |
|                                  | 6. :git status                                                                               |                                                            |
|                                  | 7. :git add -A                                                                               |                                                            |
|                                  | 8. :git commit -m "What & why"                                                               |                                                            |
|                                  | 9. :git push -u origin branch-name                                                           | Push to remote repo                                        |
|                                  | 10. :git branch -a                                                                           | Display all branches                                       |
|                                  | <b>MERGING</b>                                                                               |                                                            |
|                                  | 11. :git checkout master                                                                     | Now switch to master branch                                |
|                                  | 12. :git <code>pull</code> origin master                                                     |                                                            |
|                                  | 13. :git branch --merged                                                                     | Display what branches have been merged with the master     |
|                                  | 14. :git merge [--no-ff] branch-name                                                         | Merge now                                                  |
|                                  | 15. git <code>push</code> origin master                                                      | DONE NEXT DELETE                                           |
|                                  | <b>DELETE BRANCH</b>                                                                         |                                                            |
| 16.                              | >git <code>branch</code> --merged                                                            | Verify if the merge was successful                         |
| 17.                              | >git <code>branch -d</code> branch- name                                                     | Deletes the branch locally                                 |
| 18.                              | >git <code>branch -a</code>                                                                  |                                                            |
| 19.                              | >git <code>push origin --delete</code> branch-name                                           | Delete the branch in remote repo                           |

|  |                                     |                                                                                |
|--|-------------------------------------|--------------------------------------------------------------------------------|
|  | <b>ADD NEW FILES TO REMOTE REPO</b> |                                                                                |
|  | 1. :git init                        |                                                                                |
|  | 2. :git remote -v                   | Check for any connection                                                       |
|  | 3. :git remote add origin <url>     | Should execute with no problems                                                |
|  | 4. :git remote -v                   | Verify remote repo                                                             |
|  | 5. :git branch                      | What branch are we working on?<br>If *master goto<br><b>WORKING<br/>BRANCH</b> |

|                                    |                                                                                      |                                                                                   |
|------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
|                                    | <b>LOCAL REPO</b>                                                                    |                                                                                   |
|                                    | [1-8] from source file                                                               |                                                                                   |
| 1 New repo<br>In local<br>code dir | 1. :git config --global user.name "xxx"<br>2. :git config --global user.email "y@yy" |                                                                                   |
|                                    | 3. :git inti                                                                         | Initialize <i>local</i> repo                                                      |
|                                    | 4. :ls -la                                                                           | Verify if <.git> repo was created<br>If .git no longer needed<br>:git rm -rf .git |
|                                    | 5. :git status                                                                       | Verify current branch<br><br>Verify commits<br><br>View untracked                 |
|                                    | 6. :touch README.md                                                                  | Create file<br>:vim README.md<br>Describe project usage                           |
|                                    | 7. :touch .gitignore<br>Get it on line:<br>e.x: .gitignore for C                     | :vim .gitignore<br>#list all files not be included<br>#in the local repo          |

|  |                                 |                                                                                        |
|--|---------------------------------|----------------------------------------------------------------------------------------|
|  |                                 | #the list may contain wild card<br>#e.g: *.o                                           |
|  | 8. :git status                  | Verify if .gitignore is listed                                                         |
|  | 9. :git add -A                  | Add all files to staging area<br>Note added file will be displayed in green            |
|  | 10. :git status                 |                                                                                        |
|  | 11. :git reset                  | Will remove all files in staging area<br>:git reset file_name<br>Remove this file only |
|  | 12.:git commit -m "Message"     | Write to repo                                                                          |
|  | 13. :git log                    | See the list of all commits                                                            |
|  | 14. git remote add origin <url> | Push if new repo otherwise pull remote repo first the push                             |
|  | 15. git push -u origin master   | NEXT: Create develop branch                                                            |

|  |                                                               |                                   |
|--|---------------------------------------------------------------|-----------------------------------|
|  | CLEAR ALL CHANGES                                             |                                   |
|  | :git checkout file-name                                       | Clear all recently made changes   |
|  |                                                               |                                   |
|  | FIX-LAST-COMMIT                                               | Fix-wrong commit                  |
|  | :git commit -amend -m "new message."                          |                                   |
|  |                                                               |                                   |
|  | FILES CHANGE HISTORY                                          |                                   |
|  | :git log --stat                                               |                                   |
|  |                                                               |                                   |
|  | CREATE & SWITCH TO NEW BRANCH                                 |                                   |
|  | :git checkout -b branch-name                                  |                                   |
|  | :git push origin branch-name                                  |                                   |
|  |                                                               |                                   |
|  |                                                               |                                   |
|  | TAGS                                                          |                                   |
|  | :git tag -a milestone1<br>:git push -u origin milestone1      | Create tag<br>push to remote repo |
|  | :git tag -a V1.0 -m 'version 1.0'<br>:git push -u origin V1.0 | Tag the finished master project   |
|  |                                                               |                                   |

|          |              |                                        |
|----------|--------------|----------------------------------------|
| UTIL     |              |                                        |
| 1. Linux | Ctrl+Shift+T | Open ->  Terminal   Terminal   --<br>- |

|        |               |                                                          |
|--------|---------------|----------------------------------------------------------|
| 2. vim | :tag function | Goto function or type definition                         |
|        | <b>CTRL-]</b> | jumps to the tag of the word<br>that is under the cursor |
|        |               |                                                          |
|        |               |                                                          |
|        |               |                                                          |
|        |               |                                                          |