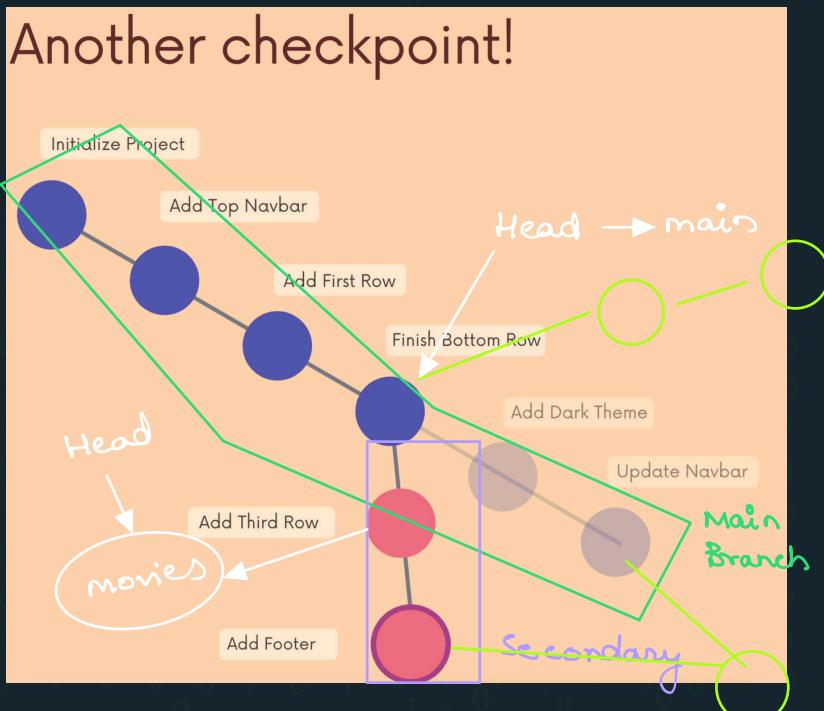


Agenda :

- Bridging the gap [Revision] ✓
- Branch [How to Create it]. ✓
- Switch The branch [Checkout] ✓
- Merge the branch. [Head]{git log}
- Cloning / Forking -> git diff -> Deleting branch

Branching ->



If we are adding/ committing everything on the main branch -> Fast forwarding.

Branching :

-> Main Branch [1]- Important Work

-> Movies -> Branch 2

-> Cricket -> Branch 3.



How Can I know which branch I am currently working?

`git branch`

`git branch--list`

```

Pathan@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Github (main) $ git branch
* main
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Github (main) $ █
  
```

How I can Create a new Branch ?

-> `[git branch <name>]`

```

@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Github (main) $ git branch movie
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Github (main) $ git branch
* main
  movie
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Github (main) $ █
  
```

How I can switch between 2 branch?



-> **git switch <branch_name>**

Movie

```
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Github (main) $ git switch movie
Switched to branch 'movie'
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Github (movie) $ git branch
  main
* movie
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Github (movie) $
```

Can we switch the branch with any other syntax ?

-> **git checkout <branch_name>**

Present Scenario -> **git branch <name> + git switch <name>**

Simultaneously
With a Single Command

git checkout -b <branch_name>

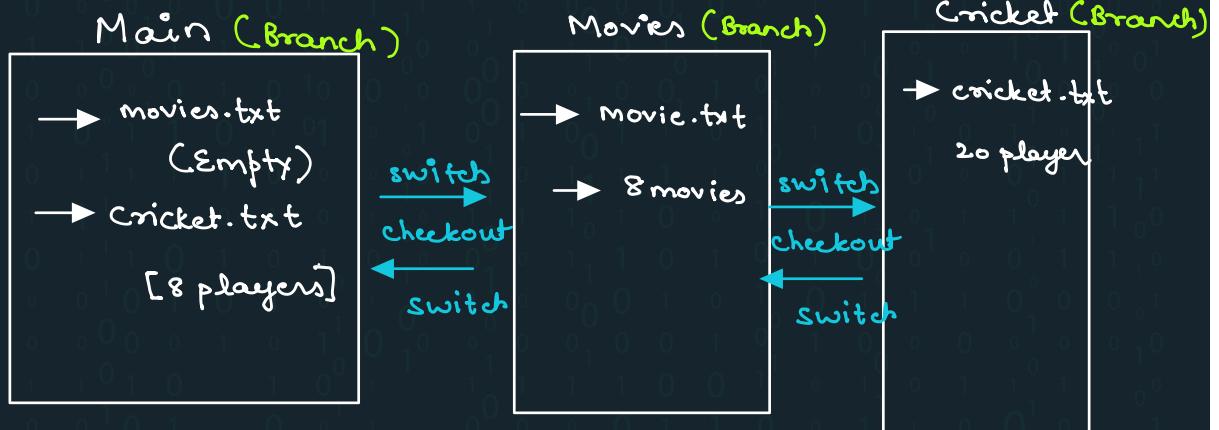
Checkout -> -b flag , I can create the branch and switch to the same branch just by writing single command.

git switch -c <branch_name>

Switch -> -c flag , I can create the branch and switch to that branch at the same time.

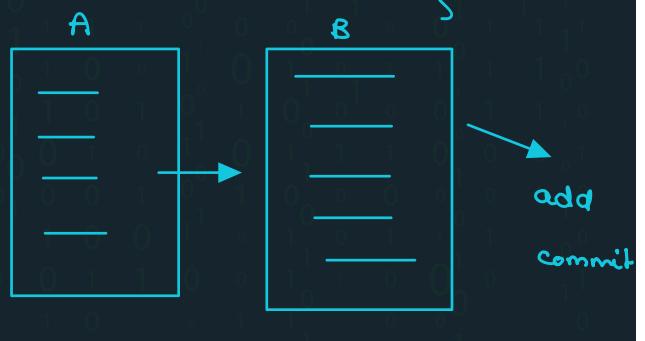
Cricket

- @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) \$ git checkout -b cricket
Switched to a new branch 'cricket'
- @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (cricket) \$ git branch
* **cricket**
 main
 movie
- @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (cricket) \$ █



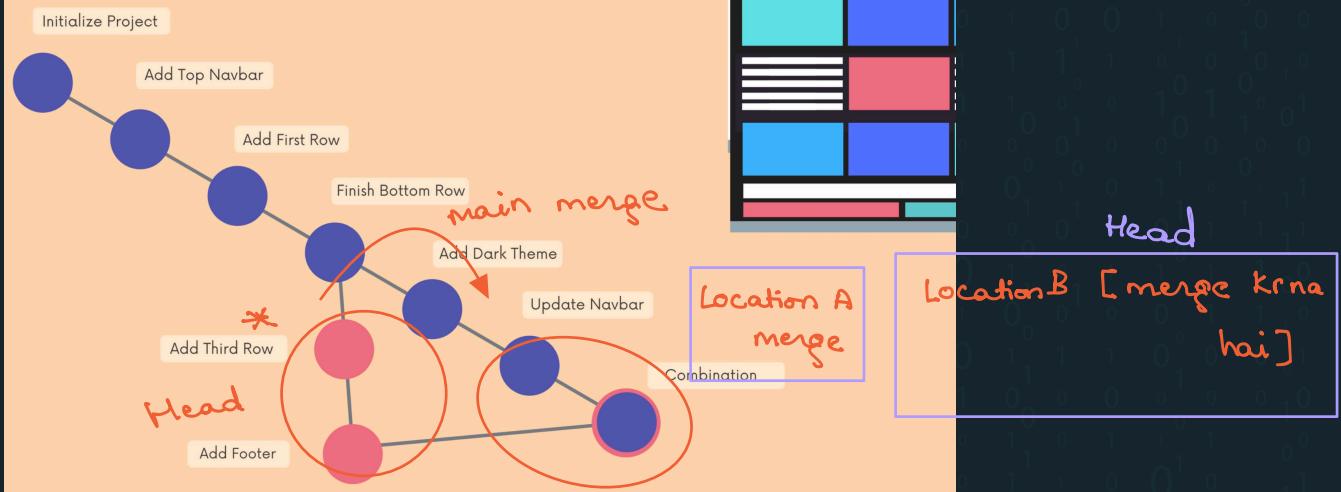
git diff :

```
Index: 004e/c..99c/50 100044
--- a/Github/cricket.txt
+++ b/Github/cricket.txt
@@ -18,8 +18,3 @@ Arshdeep
 Gambhir
 Jadeja
 Ashwin
-Rahane
-Zahir Khan
-Harbajan
-Pujara
-Dinesh Kartik
\ No newline at end of file
```



Merging :

And I can even combine checkpoints!



Viewing your branch information.

```
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Github (cricket) $ git branch -v
* cricket 326156e adding 5 more cricketer in cricket.txt
  main 5e24ef2 [ahead 2] Adding 8 players in my cricket.txt
  movie 6390e1c Added few awesome movies in movies.txt
```

Syntax of merging Command:

`git merge <What branch you want to merge>`



Disclaimer - Before merging move to the branch where you have to merge the other merge.

```

• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ git merge cricket
  Updating 5e24ef2..afac219
    Fast-forward
      Github/cricket.txt | 17 ++++++
      1 file changed, 17 insertions(+)
○ @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ █

```

How to delete the branch ?

-> **git branch -d <branch_name>**

-> **git branch -D <branch_name> [Forcefully]**

```

• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (cricket) $ git branch -d cricket
error: cannot delete branch 'cricket' used by worktree at '/workspaces/Committing_Basic_Exercise'
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (cricket) $ git switch main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 5 commits.
  (use "git push" to publish your local commits)
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ git branch
  cricket
* main ✓
  movie
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ git branch -d cricket
Deleted branch cricket (was afac219).
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ git branch
* main
  movie
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ █

```

cricket
Branch

Git Recommendation ?

```

• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ git branch -d movie
error: the branch 'movie' is not fully merged.
If you are sure you want to delete it, run 'git branch -D movie'
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ █

```

```

  If you are sure you want to delete it, run git branch -D movie
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ git branch -D movie
Deleted branch movie (was 6390e1c).
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ git branch
* main
○ @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ █

```

Git Clone → Working directory

-> `git clone <url>`

...or create a new repository on the command line

```
echo "# abcd" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/Krishna-Geekster/abcd.git
git push -u origin main
```

Github repo

forking Master - main

...or push an existing repository from the command line

```
git remote add origin https://github.com/Krishna-Geekster/abcd.git
git branch -M main
git push -u origin main
```

...or import code from another repository

You can initialize this repository with code from a Subversion, Mercurial, or TFS project.

Import code

```
* main
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Github (main) $ git clone https://github.com/Krishna-Geekster/Pepsi-project.git
Cloning into 'Pepsi-project'...
remote: Enumerating objects: 22, done.
remote: Counting objects: 100% (22/22), done.
remote: Compressing objects: 100% (20/20), done.
remote: Total 22 (delta 5), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (22/22), 543.68 KiB | 21.75 MiB/s, done.
Resolving deltas: 100% (5/5), done.
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Github (main) $
```

Cloning → Working Directory

forking → Github Repository

Local

Remote

push

```
COMMITTING_BASIC_EXERCISE [CODESPACES:...]
└─Github
    └─Pepsi-project
        └─index.html
        └─logo.png
        └─pepsi001.png
        └─pepsi002.png
        └─pepsi003.png
        └─README.md
        └─style.css
        └─twitter.png
    └─cricket.txt
    └─movies.txt
    └─groceries.txt
    └─yard.txt
```

Branching Exercise :

Branching Exercise

1. Make a new folder called `Patronus`
 2. Make a new git repo inside the folder (make sure you're not in an existing repo)
 3. Create a new file called `patronus.txt` (leave it empty for now)
 4. Add and commit the empty file, with the message "add empty patronus file"
 5. Immediately make a new branch called `harry` and another branch called `snares` (both based on the master branch)
 6. Move to the `harry` branch using the "new" command to change branches.
 7. In the `patronus.txt` file, add the following:

Solution :

- ```
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Github (main) $ cd ..
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise (main) $ mkdir Patronus
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise (main) $ git init
 Reinitialized existing Git repository in /workspaces/Committing_Basic_Exercise/.git/
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise (main) $ touch patronus.txt
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise (main) $ rm patronus.txt
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise (main) $ cd Patronus/
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ git init
 Initialized empty Git repository in /workspaces/Committing_Basic_Exercise/Patronus/.git/
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ touch patronus.txt
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ git add patronus.txt
• @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ git commit -m "add empty patronus file"
[main (root-commit) daa51b1] add empty patronus file
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 patronus.txt
○ @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ █

@Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ git branch harry
@Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ git branch snape
@Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ git branch
 harry
* main
 snape
```

```
patronus.txt >

Patronus > patronus.txt
1 HARRY'S PATRONUS
2
3 /| |\ \
4 _ //_
5 || ||
6 __ |__/
7 __ //_
8 -.-:---:--:-
9 _:_ :/_/
10 @@ .@|
11 | |
12 ,\,-/ \
13 ;`-` _----_.-
14 ;;;
15 ';;;
16 ; |
17 \ \ \ \ | / \
18 _ _ / \ \ \ \
19 '|;|/ \ \ \
20 | | | \ / / |
21 \ \ | | / / |
22 | | | | | | |
23 | | | | | | |
24 | | | | | | |
25 | | | | | | |
26 /|//| /|/| /|/|
```

---

PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS    COMMENTS

- @Krishna-Geekster → /workspaces/Committing\_Basic\_Exercise/Patronus (main) \$ git branch Snape
- @Krishna-Geekster → /workspaces/Committing\_Basic\_Exercise/Patronus (main) \$ git branch Harry
- @Krishna-Geekster → /workspaces/Committing\_Basic\_Exercise/Patronus (main) \$ git switch Harry
- Switched to branch 'Harry'
- @Krishna-Geekster → /workspaces/Committing\_Basic\_Exercise/Patronus (Harry) \$ █

 Geekster

8. Add and commit the changes, with the commit message "add harry's stag patronus"

9. Move over to the `snape` branch using the "older" command to change branches.

10. Put the following text in the `patronus.txt` file:

11. Add and commit the changes on the `snape` branch with the commit message "add snape's doe patronus"

12. Next, create a new branch based upon the `snap` branch called `lily`

13. Move to the `lily` branch

14. Edit the `patronus.txt` file so that it says **LILY'S PATRONUS** at the top instead of **SNAPE'S PATRONUS** (leave the doe ascii-art alone)

15. Add and commit the change with the message "add lily's doe patronus"

16. Run a git command to list all branches (you should see 4)

17. **Bonus:** delete the `snape` branch (poor Snape)

## Solution :

```

@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (harry) $ git status
On branch harry
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: patronus.txt

no changes added to commit (use "git add" and/or "git commit -a")
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (harry) $ git add patronus.txt
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (harry) $ git commit -m "add harry's stag patronus"
[harry e50b585] add harry's stag patronus
 1 file changed, 26 insertions(+)
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (harry) $

● @Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (harry) $ git checkout snape
Switched to branch 'snape'
● @Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (snape) $ git status
On branch snape
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: patronus.txt

no changes added to commit (use "git add" and/or "git commit -a")
● @Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (snape) $ git add patronus.txt
● @Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (snape) $ git commit -m "add snape's doe patronus"
[snape 323acbc] add snape's doe patronus
 1 file changed, 16 insertions(+)
● @Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (snape) $

@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (snape) $ git branch lily
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (snape) $ git branch
 harry
 lily
 main
* snape
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (snape) $ git switch lily
Switched to branch 'lily'
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (lily) $ git status
On branch lily
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: patronus.txt

no changes added to commit (use "git add" and/or "git commit -a")
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (lily) $ git add patronus.txt
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (lily) $ git commit -m "add lily's doe patronus"
[lily 96bc35e] add lily's doe patronus
 1 file changed, 1 insertion(+), 1 deletion(-)
@Krishna-Geekster ~ /workspaces/Committing_Basic_Exercise/Patronus (lily) $ git branch --list
 harry
* lily
 main
 snape

```

first I need to switch in order to delete.



```
● @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (snape) $ git switch main
Switched to branch 'main'
● @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ git branch -d snape
error: the branch 'snape' is not fully merged.
If you are sure you want to delete it, run 'git branch -D snape'
● @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ git branch -D snape
Deleted branch snape (was 323acbc).
● @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ git branch
 harry
 lily
* main
● @Krishna-Geekster → /workspaces/Committing_Basic_Exercise/Patronus (main) $ █
```