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Advanced Software Development Techniques, 55DPH
Exercise 8 ASDT GIT

1. **Create a new remote repository.**

```
TrustMaramba@Chamu MINGW64 ~/ASDT_4 (main)
$ git checkout main
Already on 'main'

TrustMaramba@Chamu MINGW64 ~/ASDT_4 (main)
$ git remote add origin https://github.com/chamumaramba/ASDT_exercise_8.git
```

2. **Push all commits from Exercise 6a/6b to the remote repository.**

```
TrustMaramba@Chamu MINGW64 ~/ASDT_4 (main)
$ git push -u origin main
Enumerating objects: 33, done.
Counting objects: 100% (33/33), done.
Delta compression using up to 8 threads
Compressing objects: 100% (24/24), done.
Writing objects: 100% (33/33), 1.68 MiB | 186.00 KiB/s, done.
Total 33 (delta 10), reused 3 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (10/10), done.
To https://github.com/chamumaramba/ASDT_exercise_8.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.

TrustMaramba@Chamu MINGW64 ~/ASDT_4 (main)
$ git remote -v
new-remote      https://github.com/chamumaramba/Exercise-8.git (fetch)
new-remote      https://github.com/chamumaramba/Exercise-8.git (push)
origin  https://github.com/chamumaramba/ASDT_exercise_8.git (fetch)
origin  https://github.com/chamumaramba/ASDT_exercise_8.git (push)
```

3. Play with the git remote, git fetch, git push, git pull, git branch

Git remote command

- git remote -v is used to **list all remote repositories** that are associated with your local Git repository and show the URLs for fetching and pushing data to those remotes.

```
TrustMaramba@Chamu MINGW64 ~/ASDT_4 (main)
$ git remote -v
new-remote      https://github.com/chamumaramba/Exercise-8.git (fetch)
new-remote      https://github.com/chamumaramba/Exercise-8.git (push)
origin  https://github.com/chamumaramba/ASDT_exercise_8.git (fetch)
origin  https://github.com/chamumaramba/ASDT_exercise_8.git (push)
```

Git push command

- git push origin main is used to upload your local main branch changes to the remote repository.

```
TrustMaramba@Chamu MINGW64 ~/ASDT_4 (main)
$ git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 287 bytes | 71.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/chamumaramba/ASDT_exercise_8.git
   dbd0f64..b84d271  main -> main
```

Git branch command

- To list both local and remote branches:

```
TrustMaramba@Chamu MINGW64 ~/ASDT_4 (main)
$ git branch -a
  dev-branch
  feature-branch
  feature/gitignore
  feature/hello_world
  feature/hello_world_asdt
  feature/hello_world_asdt_from_tag
  feature/hello_world_asdt_stashing
* main
  new-branch-name
  test-branch
  remotes/origin/dev-branch
  remotes/origin/feature-branch
  remotes/origin/main
  remotes/origin/test-branch
```

Git Fetch command

- To fetch a specific branch from the remote

```
TrustMaramba@Chamu MINGW64 ~/ASDT_4 (main)
$ git fetch origin feature-branch
From https://github.com/chamumaramba/ASDT_exercise_8
 * branch            feature-branch -> FETCH_HEAD

TrustMaramba@Chamu MINGW64 ~/ASDT_4 (main)
$
```

4. Execute fast-forward merge.

```
TrustMaramba@Chamu MINGW64 ~/ASDT_4 (main)
$ git checkout -b feature-branch
Switched to a new branch 'feature-branch'

TrustMaramba@Chamu MINGW64 ~/ASDT_4 (feature-branch)
$ echo "New Feature" >> feature.txt

TrustMaramba@Chamu MINGW64 ~/ASDT_4 (feature-branch)
$ git add feature.txt
warning: in the working copy of 'feature.txt', LF will be replaced by CRLF the next time Git touches it

TrustMaramba@Chamu MINGW64 ~/ASDT_4 (feature-branch)
$ git commit -m "Added a new feature"
[feature-branch b84d271] Added a new feature
 1 file changed, 1 insertion(+)
 create mode 100644 feature.txt

TrustMaramba@Chamu MINGW64 ~/ASDT_4 (feature-branch)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

TrustMaramba@Chamu MINGW64 ~/ASDT_4 (main)
$ git merge feature-branch
Updating dbd0f64..b84d271
Fast-forward
 feature.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 feature.txt
```