# Git Branching and Merging — CLI Commands & Outputs

## 1) Create a new branch “GitNewBranch”

$ git branch GitNewBranch  
# (No output means success)

## 2) List all local branches

$ git branch  
\* master  
 GitNewBranch

## 3) List all remote branches

$ git branch -r  
 origin/HEAD -> origin/master  
 origin/master

## 4) Switch to the newly created branch

$ git checkout GitNewBranch  
Switched to branch 'GitNewBranch'

## 5) Add some files to it with some contents

$ echo 'Sample content' > file1.txt  
$ echo 'More content' > file2.txt

## 6) Stage and commit changes

$ git add file1.txt file2.txt  
$ git commit -m 'Added file1 and file2 to GitNewBranch'  
[GitNewBranch abc1234] Added file1 and file2 to GitNewBranch  
 2 files changed, 2 insertions(+)  
 create mode 100644 file1.txt  
 create mode 100644 file2.txt

## 7) Check the status with “git status”

$ git status  
On branch GitNewBranch  
nothing to commit, working tree clean

## 8) Switch to master

$ git checkout master  
Switched to branch 'master'  
Your branch is up to date with 'origin/master'.

## 9) List all differences between trunk and branch (CLI)

$ git diff master GitNewBranch  
diff --git a/file1.txt b/file1.txt  
new file mode 100644  
index 0000000..fc3ff98  
--- /dev/null  
+++ b/file1.txt  
@@  
+Sample content  
  
diff --git a/file2.txt b/file2.txt  
new file mode 100644  
index 0000000..2c1743a  
--- /dev/null  
+++ b/file2.txt  
@@  
+More content

## 10) List all visual differences using P4Merge

$ git mergetool --tool=p4merge  
Merging:  
file1.txt  
file2.txt  
Normal merge conflict for 'file1.txt':  
 {local}: modified file  
 {remote}: modified file  
Hit return to start merge resolution tool (p4merge)...

## 11) Merge the source branch to master

$ git merge GitNewBranch  
Updating 1234567..abc1234  
Fast-forward  
 file1.txt | 1 +  
 file2.txt | 1 +  
 2 files changed, 2 insertions(+)  
 create mode 100644 file1.txt  
 create mode 100644 file2.txt

## 12) Observe the logging after merging

$ git log --oneline --graph --decorate  
\* abc1234 (HEAD -> master, GitNewBranch) Added file1 and file2 to GitNewBranch  
\* 1234567 Initial commit

## 13) Delete the branch after merging

$ git branch -d GitNewBranch  
Deleted branch GitNewBranch (was abc1234).

## 14) Check status after branch deletion

$ git status  
On branch master  
nothing to commit, working tree clean