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**Section:** 324KDV

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**Dept. :-** School of Computing and Engineering

**Subject:** Source Code Management

**Course Code:** CSE - 202

# PART – A

```
Angel@DESKTOP-434MVF MINGW64 /c/git (JACKDAWS)
$ mkdir BYOD

Angel@DESKTOP-434MVF MINGW64 /c/git (JACKDAWS)
$ git init
Reinitialized existing Git repository in C:/git/.git/

Angel@DESKTOP-434MVF MINGW64 /c/git (JACKDAWS)
$ touch fileme.txt

Angel@DESKTOP-434MVF MINGW64 /c/git (JACKDAWS)
$ git add .
```

```
Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git add .

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git status
On branch JACKDAWS
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:  ../fileme.txt
    new file:  ../git-diff-exercise
    modified:  ../merg2/conflict.txt
    new file:  ../merg2/reset
    new file:  ../merg2/yesterday-exercise
    new file:  ../test/assgn6
    new file:  ../test/tested

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)
  (commit or discard the untracked or modified content in submodules)
    modified:  ../git-diff-exercise (modified content)
    modified:  ../merg2/reset (untracked content)
    modified:  ../merg2/yesterday-exercise (modified content)
    modified:  ../test/tested (untracked content)
```

```
Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git commit -m "Staged a new file"
[JACKDAWS 95d58d1] Staged a new file
 7 files changed, 6 insertions(+)
 create mode 100644 fileme.txt
 create mode 160000 git-diff-exercise
 create mode 160000 merg2/reset
 create mode 160000 merg2/yesterday-exercise
 create mode 160000 test/assgn6
 create mode 160000 test/tested
```

```
Ange]@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git log
commit 95d58d1f56a604fbe37312d6ad5b43995840d961 (HEAD -> JACKDAWS)
Author: TARUNNESH <tarunsarmosa@gmail.com>
Date:   Fri Feb 13 10:14:23 2026 +0530

    Staged a new file

commit f64ef9ee7633d73aaa8001241dab6353dd54a39c (diffbranch)
Merge: ca554c1 64cd775
Author: TARUNNESH <tarunsarmosa@gmail.com>
Date:   Mon Feb 2 14:52:30 2026 +0530

    resolved the issue

commit ca554c1ccc243cac1484a8f0439534bbc7a9745c
Author: TARUNNESH <tarunsarmosa@gmail.com>
Date:   Mon Feb 2 14:49:18 2026 +0530

    made changes

commit 64cd77549faea1612ce1c7ac56e104283ca0a379 (manly)
Author: TARUNNESH <tarunsarmosa@gmail.com>
Date:   Mon Feb 2 14:46:37 2026 +0530

    made changes

commit d9cb6ffb4ec5ea2b3abbe622776a1af0e56edf0d
```

## Part – B

```
Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git branch feature

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ cd feature
bash: cd: feature: No such file or directory

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git switch feature
M      git-diff-exercise
M      merg2/reset
M      merg2/yesterday-exercise
M      test/tested
Switched to branch 'feature'

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (feature)
$ ls

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (feature)
$ touch fileme1.txt

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (feature)
$ echo "i have created a new file" > fileme1.txt

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (feature)
$ git add fileme1.txt
warning: in the working copy of 'BYOD/fileme1.txt', LF will be replaced by CRLF the next time it

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (feature)
$ vim fileme1.txt

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (feature)
$ git add fileme1.txt
warning: in the working copy of 'BYOD/fileme1.txt', LF will be replaced by CRLF the next time it

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (feature)
$ git commit -am "added contents to fileme1.txt"
[feature c787269] added contents to fileme1.txt
1 file changed, 2 insertions(+)
create mode 100644 BYOD/fileme1.txt

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (feature)
$ git switch JACKDAWS
M      git-diff-exercise
M      merg2/reset
M      merg2/yesterday-exercise
M      test/tested
Switched to branch 'JACKDAWS'
```

```
Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ cat fileme1.txt
cat: fileme1.txt: No such file or directory

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ ls

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git merge feature
Updating 95d58d1..c787269
Fast-forward
BYOD/fileme1.txt | 2 ++
1 file changed, 2 insertions(+)
create mode 100644 BYOD/fileme1.txt

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ ls
fileme1.txt

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ cat fileme1.txt
i have created a new file
make it twicei
```

```
Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git branch -d feature
Deleted branch feature (was c787269).
```

## Explain part

- **Branches internally represent as the directory which act as an platform for adding committing changes.**
- **Git status has an crucial role as when we use this command we check whether our changes have been added or not.**

## Part - C

```
Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ touch Scenarios

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ echo "welcome to Scenarios" > Scenarios

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ git add .
warning: in the working copy of 'BYOD/Scenarios', LF will be replaced by CRLF the next time it touches it

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ git commit -m "Welcome to Scenarios"
[Scenarios 05184ac] Welcome to Scenarios
 1 file changed, 1 insertion(+)
 create mode 100644 BYOD/Scenarios

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ git merge JACKDAWS
Already up to date.

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ git switch JACKDAWS
M      git-diff-exercise
M      merg2/reset
M      merg2/yesterday-exercise
M      test/tested
Switched to branch 'JACKDAWS'

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git merge Scenarios
Updating c787269..05184ac
Fast-forward
  BYOD/Scenarios | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 BYOD/Scenarios

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git log --oneline
05184ac (HEAD -> JACKDAWS, Scenarios) Welcome to Scenarios
c787269 (feature) added contents to fileme1.txt
95d58d1 Staged a new file
f64ef9e (diffbranch) resolved the issue
ca554c1 made changes
64cd775 (manly) made changes
d9cb6ff resolved the commit issue
99fe955 modified branch
23e7ica (conflict) modified branch
```

```
Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git log --oneline
05184ac (HEAD -> JACKDAWS, Scenarios) Welcome to Scenarios
c787269 (feature) added contents to fileme1.txt
05d58d1 Staged a new file
f64ef9e (diffbranch) resolved the issue
ca554c1 made changes
64cd775 (mainly) made changes
d9cb6ff resolved the commit issue
09fe955 modified branch
23e71ca (conflict) modified branch
19f9ced committed conflict file
0e44111 (bracher) committed conflict file
2f5cf03 (main) added commit
0fde6ab (origin/main) Initial commit
5f7c3ec Initial commit

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git switch Scenarios
M     git-diff-exercise
M     merg2/reset
M     merg2/yesterday-exercise
M     test/tested
Switched to branch 'Scenarios'

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ echo "added changes to it" >> Scenarios

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ git add .
warning: in the working copy of 'BYOD/Scenarios', LF will be replaced by CRLF the next time
it touches it

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ git commit -am "added contents"
[Scenarios def06db] added contents
 1 file changed, 1 insertion(+)

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ git log
commit def06dbffb1c8485ace3a93de80670571db33dbc (HEAD -> Scenarios)
Author: TARUNNESH <tarunsarmosa@gmail.com>
Date:   Fri Feb 13 10:32:17 2026 +0530

    added contents

commit 05184ac251c383ab414b98d066dd13b9718c96aa (JACKDAWS)
Author: TARUNNESH <tarunsarmosa@gmail.com>
Date:   Fri Feb 13 10:28:40 2026 +0530
```

```
commit c78726911c62b16e94a941e831576ea8ecdf1e57 (feature)
Author: TARUNNESH <tarunsarmosa@gmail.com>
Date:   Fri Feb 13 10:20:44 2026 +0530

    added contents to fileme1.txt

commit 95d58d1f56a604fb37312d6ad5b43995840d961
Author: TARUNNESH <tarunsarmosa@gmail.com>
Date:   Fri Feb 13 10:14:23 2026 +0530

    Staged a new file

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ git switch JACKDAWS
M      git-diff-exercise
M      merg2/reset
M      merg2/yesterday-exercise
M      test/tested
Switched to branch 'JACKDAWS'

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ ls
Scenarios  fileme1.txt

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ echo "making changes in main branch"
making changes in main branch

Angel@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ echo "making changes in main branch" > Sc
```

```
Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ cat Scenarios
making changes in main branch

Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git switch Sc
fatal: invalid reference: Sc

Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git switch Scenarios
error: Your local changes to the following files would be overwritten by checkout:
    BYOD/Scenarios
Please commit your changes or stash them before you switch branches.
Aborting
```

```
Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git commit -m "made changes in main"
On branch JACKDAWS
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)
  (commit or discard the untracked or modified content in submodules)
    modified:   Scenarios
    modified:   ../git-diff-exercise (modified content)
    modified:   ../merg2/reset (untracked content)
    modified:   ../merg2/yesterday-exercise (modified content)
    modified:   ../test/tested (untracked content)

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Sc

no changes added to commit (use "git add" and/or "git commit -a")

Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git add .
warning: in the working copy of 'BYOD/Scenarios', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'BYOD/Sc', LF will be replaced by CRLF the next time Git touches it

Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git commit -m "made changes in main"
[JACKDAWS 815002d] made changes in main
 2 files changed, 2 insertions(+), 1 deletion(-)
 create mode 100644 BYOD/Sc

Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git switch Scenarios
  git-diff-exercise
  merg2/reset
  merg2/yesterday-exercise
  test/tested
switched to branch 'Scenarios'

Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ echo " " > Scenarios

Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (Scenarios)
$ echo "My name is tarun " > Scenarios
```

```
Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (Scenarios)
$ echo " " > Scenarios

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (Scenarios)
$ echo "My name is tarun " > Scenarios

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (Scenarios)
$ git add .
warning: in the working copy of 'BYOD/Scenarios', LF will be replaced by CRLF the next time G
it touches it

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (Scenarios)
$ git commit -am "Made changes in Scenarios"
[Scenarios f48955c] Made changes in Scenarios
 1 file changed, 1 insertion(+), 2 deletions(-)

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (Scenarios)
$ git merge
fatal: No remote for the current branch.

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (Scenarios)
$ git switch JACKDAWS
M      git-diff-exercise
M      merg2/reset
M      merg2/yesterday-exercise
M      test/tested
Switched to branch 'JACKDAWS'

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS)
$ git merge Scenarios
Auto-merging BYOD/Scenarios
CONFLICT (content): Merge conflict in BYOD/Scenarios
Automatic merge failed; fix conflicts and then commit the result.

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS|MERGING)
$ git switch -c new
fatal: cannot switch branch while merging
Consider "git merge --quit" or "git worktree add".

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS|MERGING)
$ git switch Scenarios
fatal: cannot switch branch while merging
Consider "git merge --quit" or "git worktree add".
```

```
Ange1@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS|MERGING)
$ git add Scenarios

Ange1@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS|MERGING)
$ git commit -am "Made solution"
[JACKDAWS 829fe73] Made solution

Ange1@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS)
$ git switch Scenarios
M      git-diff-exercise
M      merg2/reset
M      merg2/yesterday-exercise
M      test/tested
Switched to branch 'Scenarios'

Ange1@DESKTOP-434MVFM MINGW64 /c/git/BYOD (Scenarios)
$ git switch JACKDAWS
M      git-diff-exercise
M      merg2/reset
M      merg2/yesterday-exercise
M      test/tested
Switched to branch 'JACKDAWS'

Ange1@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS)
$ git log --oneline
829fe73 (HEAD -> JACKDAWS) Made solution
f48955c (Scenarios) Made changes in Scenarios
815002d made changes in main
def06db added contents
05184ac Welcome to Scenarios
c787269 (feature) added contents to fileme1.txt
95d58d1 Staged a new file
f64ef9e (diffbranch) resolved the issue
ca554c1 made changes
64cd775 (mainly) made changes
d9cb6ff resolved the commit issue
99fe955 modified branch
23e71ca (conflict) modified branch
19f9ced committed conflict file
be44111 (bracher) committed conflict file
2f5cf03 (main) added commit
0fde6ab (origin/main) Initial commit
5f7c3ec Initial commit
```

## Part – D

```

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS)
$ git stash
Saved working directory and index state WIP on JACKDAWS: 829fe73 Made solution

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS)
$ git stash show -p
diff --git a/BYOD/added.txt b/BYOD/added.txt
new file mode 100644
index 0000000..aa150ce
--- /dev/null
+++ b/BYOD/added.txt
@@ -0,0 +1 @@
+tring in the file
diff --git a/BYOD/file b/BYOD/file
new file mode 100644
index 0000000..e69de29

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS)
$ git stash added.txt
fatal: subcommand wasn't specified; 'push' can't be assumed due to unexpected token 'added.txt'

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS)
$ git stash show -p
diff --git a/BYOD/added.txt b/BYOD/added.txt
new file mode 100644
index 0000000..aa150ce
--- /dev/null
+++ b/BYOD/added.txt
@@ -0,0 +1 @@
+tring in the file
diff --git a/BYOD/file b/BYOD/file
new file mode 100644
index 0000000..e69de29

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS)
$ git stash show added.txt
error: added.txt is not a valid reference

Angel@DESKTOP-434MVFM MINGW64 /c/git/BYOD (JACKDAWS)
$ git diff
diff --git a/git-diff-exercise b/git-diff-exercise
--- a/git-diff-exercise
+++ b/git-diff-exercise
@@ -1 +1 @@
-Subproject commit 09cbcc9df5625dabf78ecbc39f29b6984e7d70e1
+Subproject commit 09cbcc9df5625dabf78ecbc39f29b6984e7d70e1-dirty
diff --git a/merg2/yesterday-exercise b/merg2/yesterday-exercise

```

## Git stash and stash -u difference

- The major difference between them is that stash can temporarily hide the recently committed file but stash -u could permanently stash the contents of the last contents.

## Part – E

```
Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git diff
diff --git a/git-diff-exercise b/git-diff-exercise
--- a/git-diff-exercise
+++ b/git-diff-exercise
@@ -1 +1 @@
-Subproject commit 09cbcc9df5625dabf78ecbc39f29b6984e7d70e1
+Subproject commit 09cbcc9df5625dabf78ecbc39f29b6984e7d70e1-dirty
diff --git a/merg2/yesterday-exercise b/merg2/yesterday-exercise
--- a/merg2/yesterday-exercise
+++ b/merg2/yesterday-exercise
@@ -1 +1 @@
-Subproject commit f8b61b19268390c061df9f25991dd86bd6cd355a
+Subproject commit f8b61b19268390c061df9f25991dd86bd6cd355a-dirty
```

```
Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git log --oneline
829fe73 (HEAD -> JACKDAWS) Made solution
f48955c (Scenarios) Made changes in Scenarios
815002d made changes in main
def06db added contents
05184ac Welcome to Scenarios
c787269 (Feature) added contents to fileme1.txt
95d58d1 Staged a new file
f64ef9e (diffbranch) resolved the issue
ca554c1 made changes
64cd775 (manly) made changes
d9cb6ff resolved the commit issue
99fe955 modified branch
23e71ca (conflict) modified branch
19f9ced committed conflict file
be44111 (bracher) committed conflict file
2f5cf03 (main) added commit
0fde6ab (origin/main) Initial commit
5f7c3ec Initial commit
```

```
Ange1@DESKTOP-434MVF MINGW64 /c/git/BYOD (JACKDAWS)
$ git diff 829fe73
diff --git a/git-diff-exercise b/git-diff-exercise
--- a/git-diff-exercise
+++ b/git-diff-exercise
@@ -1 +1 @@
-Subproject commit 09cbcc9df5625dabf78ecbc39f29b6984e7d70e1
+Subproject commit 09cbcc9df5625dabf78ecbc39f29b6984e7d70e1-dirty
diff --git a/merg2/yesterday-exercise b/merg2/yesterday-exercise
--- a/merg2/yesterday-exercise
+++ b/merg2/yesterday-exercise
@@ -1 +1 @@
-Subproject commit f8b61b19268390c061df9f25991dd86bd6cd355a
+Subproject commit f8b61b19268390c061df9f25991dd86bd6cd355a-dirty
```

## **Explanation part**

- **The git diff reveals the difference in commit condition and difference in any parameter we want between two or more commits.**
- **The role of GitHub in SCM is that it can be used as an history of our codes and can be used as a notebook for checking our past commits and can be referred back whenever we want to check the contents.**
- **The one major role is that the remote access of this repository makes it complex for anyone to access, and remote repositories acts as a barrier too.**