VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama", Belagavi-590 018

PROJECT MANAGEMENT WITH GIT - BCS358C

Assignment-01

Submitted by:

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Sem   : III

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2025-2026

Using Git collaboration, perform a team-based version control activity involving two or three contributors. Each contributor should make meaningful changes to the project with clear and descriptive commit messages. After completing the collaboration, display the Git commit history showing the author names, email IDs, timestamps, and commit messages in a well-formatted (pretty) output.

Explanation of the Collaborative Git Activity Output

The screenshots show a collaborative Git workflow where multiple contributors worked on the same project by configuring their identities and making commits with meaningful messages.

1. Repository Initialization

git init

git init team-project

cd team-project

- git init initializes a Git repository.

- A new directory team-project is created and initialized as a Git repository.

- Git starts tracking changes in this folder.

2. Configuring User Details

Each contributor sets their name and email before committing:

git config user.name "Pushpa SS"

git config user.email "pushpass0331@gmail.com"

Later changed to:

- Tejaswini M

- bindushree

- amrutha

This allows Git to record **who made each change**.

3. Creating README and Initial Commit

echo "# Team Project" > README.md

git add README.md

git commit -m "Initial commit: Add project README"

- A README file is created.

- It is added and committed as the **first commit**.

4. Adding Calculator Module

echo "def add(a, b): return a + b" > calculator.py

git add calculator.py

git commit -m "Add calculator module with add function"

- A Python file is created with an add() function.

- Committed with a descriptive message.

5. Enhancing Calculator with Subtract Function

echo "def subtract(a, b): return a - b" >> calculator.py

git commit -m "Extend calculator module with subtract function"

- A new function is appended.

- The commit message clearly states what was enhanced.

6. Updating README with Features

echo "## Features\n- Add\n- Subtract" >> README.md

git commit -m "Update README with feature list"

- The README is updated to document features.

7. Adding Test Cases

echo "print(add(5,3))\nprint(subtract(5,3))" > test_calculator.py

git commit -m "Add basic test cases for calculator functions"

- A test file is created to verify functionality.

8. Adding Usage Instructions

echo "## Usage\nRun test_calculator.py to verify functions" >> README.md

git commit -m "Add usage instructions to README"

- Instructions for users are documented.

9. Viewing Commit History

git log --pretty=format:"..."

Displays:

- Commit hash

- Author name and email

- Date

- Commit message

This shows a **clean, understandable project history**.

10. Warning Message Explanation

LF will be replaced by CRLF

This warning appears on Windows systems and means:

- Git is converting line endings for compatibility.

- It does **not affect program correctness**.

This practical session helped in understanding how Git supports collaborative development through commits, version history, and contributor tracking. By following best practices such as writing clear commit messages and documenting features, the team ensured maintainability, transparency, and easy debugging of the project.

```
manum@BINDUSHREE MINGW64 ~/team-project (master)
$ git init
Reinitialized existing Git repository in C:/Users/manum/team-project/.git/

manum@BINDUSHREE MINGW64 ~/team-project (master)
$ git init team-project
cd team-project
git config user.name "Pushpa SS"
git config user.email "pushpass0331@gmail.com"
Initialized empty Git repository in C:/Users/manum/team-project/team-project/.git/

manum@BINDUSHREE MINGW64 ~/team-project/team-project (master)
$ echo "# Team Project" > README.md
git add README.md
git commit -m "Initial commit: Add project README"
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it
[master (root-commit) 6d1d9b4] Initial commit: Add project README
 1 file changed, 1 insertion(+)
 create mode 100644 README.md

manum@BINDUSHREE MINGW64 ~/team-project/team-project (master)
$ git config user.name "Tejaswini M"
git config user.email "tejaswinimanjunath7@gmail.com"

manum@BINDUSHREE MINGW64 ~/team-project/team-project (master)
$ echo "def add(a, b): return a + b" > calculator.py
git add calculator.py
git commit -m "Add calculator module with add function"
warning: in the working copy of 'calculator.py', LF will be replaced by CRLF the next time Git touches
it
[master af69732] Add calculator module with add function
 1 file changed, 1 insertion(+)
 create mode 100644 calculator.py

manum@BINDUSHREE MINGW64 ~/team-project/team-project (master)
$
echo "def subtract(a, b): return a - b" >> calculator.py
git add calculator.py
git commit -m "Extend calculator module with subtract function"
warning: in the working copy of 'calculator.py', LF will be replaced by CRLF the next time Git touches
it
[master 8765907] Extend calculator module with subtract function
 1 file changed, 1 insertion(+)

manum@BINDUSHREE MINGW64 ~/team-project/team-project (master)
$ git config user.name "bindushree"
git config user.email "lnbindushree@gmail.com"
```

```
manum@BINDUSHREE MINGW64 ~/team-project/team-project (master)
$ echo "## Features\n- Add\n- Subtract" >> README.md
git add README.md
git commit -m "Update README with feature list"
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it
[master 2efb54f] Update README with feature list
 1 file changed, 1 insertion(+)

manum@BINDUSHREE MINGW64 ~/team-project/team-project (master)
$ git config user.name "amrutha"
git config user.email "amruthau.24.beai@acharya.ac.in"

manum@BINDUSHREE MINGW64 ~/team-project/team-project (master)
$ echo "print(add(5,3))\nprint(subtract(5,3))" > test_calculator.py
git add test_calculator.py
git commit -m "Add basic test cases for calculator functions"
warning: in the working copy of 'test_calculator.py', LF will be replaced by CRLF the next time Git tou
ches it
[master aa666d4] Add basic test cases for calculator functions
 1 file changed, 1 insertion(+)
 create mode 100644 test_calculator.py

manum@BINDUSHREE MINGW64 ~/team-project/team-project (master)
$ git config user.name "Pushpa SS"
git config user.email "pushpass0331@gmail.com"

manum@BINDUSHREE MINGW64 ~/team-project/team-project (master)
$ echo "## Usage\nRun test_calculator.py to verify functions" >> README.md
git add README.md
git commit -m "Add usage instructions to README"
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it
[master 39acf80] Add usage instructions to README
 1 file changed, 1 insertion(+)

manum@BINDUSHREE MINGW64 ~/team-project/team-project (master)
$ git log --pretty=format:"%C(yellow)%h%Creset | %C(cyan)%an%Creset <%ae> | %C(green)%ad%Creset | %s" -
-date=short
39acf80 | Pushpa SS <pushpass0331@gmail.com> | 2026-01-09 | Add usage instructions to README
aa666d4 | amrutha <amruthau.24.beai@acharya.ac.in> | 2026-01-09 | Add basic test cases for calculator f
unctions
2efb54f | bindushree <lnbindushree@gmail.com> | 2026-01-09 | Update README with feature list
8765907 | Tejaswini M <tejaswinimanjunath7@gmail.com> | 2026-01-09 | Extend calculator module with subt
ract function
af69732 | Tejaswini M <tejaswinimanjunath7@gmail.com> | 2026-01-09 | Add calculator module with add fun
ction
6d1d9b4 | Pushpa SS <pushpass0331@gmail.com> | 2026-01-09 | Initial commit: Add project README
```