

PROJECT REPORT

Computer Science Fundamentals and Career Pathways

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Submitted as part of coursework

Introduction

This project focuses on understanding the fundamentals of Git, a powerful version-control system used by software developers to track changes in code and collaborate efficiently. The screenshots provided show the initialization of a Git repository, configuration of the username and email, and verification of Git status inside Visual Studio Code (VS Code). In addition, the project includes creating a simple Python-based calculator, demonstrating basic programming skills and applying version control to manage the code effectively.

Explanation of Git Commands Used

1. **git init**: Initializes a new Git repository.
2. **git config --global user.email**: Sets global commit email.
3. **git config --global user.name**: Sets global commit username.
4. **git add .**: Stages all modified files.
5. **git status**: Displays the current state of the repository.

Overview of the Python Calculator Project

A basic calculator was created using Python which performs:

- Addition
- Subtraction
- Multiplication
- Division

Using Git to Push the Code to GitHub

1. **git add .**
2. **git commit -m "Added calculator project"**
3. **git remote add origin <repository_URL>**
4. **git push -u origin master**

Conclusion

This project demonstrates the use of Git for version control and a simple Python calculator program. These skills build a strong foundation for future growth in AI and Machine Learning.

Git Command Screenshots

A screenshot of the Visual Studio Code interface. The terminal window shows the following command sequence:

```
PS C:\CSFCP> & C:/Users/hp/AppData/Local/Programs/Python/Python313/python.exe c:/CSFCP/PYTHON.PY
PS C:\CSFCP> git init
Reinitialized existing Git repository in C:/CSFCP/.git/
PS C:\CSFCP> git config --global user.email "khushitanwar0005@gmail.com"
PS C:\CSFCP> git config --global user.name "khusni"
PS C:\CSFCP> git add.
git: 'add.' is not a git command. See 'git --help'.
```

The status bar at the bottom right indicates the date as 11/21/2025 and the time as 8:34 AM.

A screenshot of the Visual Studio Code interface. The terminal window shows the following command sequence:

```
PS C:\CSFCP> git status
On branch master
No commits yet
Untracked files:
  (use "git add <file>..." to include in what will be committed)
```

The status bar at the bottom right indicates the date as 11/21/2025 and the time as 8:37 AM.