Purpose Statement

The purpose of this lab is to provide you with hands-on experience in setting up and configuring essential software development tools, specifically Visual Studio Code (VS.Code), Git, and GitHub.

Introduction Statement

Proficiency in development environments and version control systems is crucial for success. This lab focuses on VS.Code, a powerful code editor, and Git and GitHub, essential tools for version control and collaboration.

Learning Outcomes

- Set up a development environment by installing compilers and configuring VS.Code for Python, Java, and C/C++.
- Differentiate between Git and GitHub functionalities and apply them for effective version control in projects.

Activities

1. **Form Course Project Groups**

2. **Prepare Your Computer**
   a. Uninstall VS.Code
   b. Uninstall JDK
   c. Uninstall Python
   d. Uninstall C/C++ compiler/IDE
   e. Uninstall Git
   f. Uninstall Visual Paradigm
   g. Double-check you have uninstalled all versions

3. **Visual Paradigm**
   a. Offline version (Community Edition)
   b. Online version (Free Edition)

4. **Compilers/Interpreters**
   a. Install the latest Python and JDK
   b. For C/C++, WSL + GCC, VS, Code::Blocks, or QT

5. **Learn VS.Code**
   a. Install VS.Code
   b. Learn concepts: Workspace vs. Folder
   c. Learn concepts: Built-in Terminal
   d. Learn concepts: Extensions
      i. Python Extension Pack
      ii. Extension Pack for Java
      iii. C/C++ Extension Pack

6. **Git & GitHub**
   a. Install Git
   b. Use Git Bash to Follow the W3Schools Git Tutorial (https://www.w3schools.com/git/default.asp)
   c. Create a GitHub account.
   d. Follow the Git and GitHub Tutorial (https://www.w3schools.com/git/git_remote_getstarted.asp)
   e. Git & VS.Code
   f. Follow the Git Contribute Tutorial (https://www.w3schools.com/git/git_remote_fork.asp)
   g. Follow the Git Advanced Tutorial (https://www.w3schools.com/git/git_ignore.asp)

Deliverables

1. Screenshot of the About window of Visual Paradigm
2. Screenshot of the output of `git log` after completing Activity 6.d