ENSF-381: Full Stack Web Development Laboratory

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Lab 10

Objectives

Welcome to the ENSF381 course lab! In this lab, you will: Create and manage a Git repository, Use basic Git commands (`init`, `add`, `commit`, `branch`, `merge`, `push`, `pull`), and Collaborate using remote repositories (GitHub).

Groups

Lab instructions must be followed in groups **of two students**.

Submission

You must submit the complete source code, ensuring it can be executed without any modifications. Also, if requested by the instructor, you may need to submit the corresponding documentation file (e.g., word and image). Only one member of the group needs to submit the assignment, but the submission must include the names and UCIDs of all group members at the top of the code.

Deadline

Lab exercises must be submitted by **11:55 PM on the same day as the lab session**. Submissions made within 24 hours after the deadline will receive a maximum of 50% of the mark. Submissions made beyond 24 hours will not be evaluated and will receive a grade of zero.

Academic Misconduct

Academic Misconduct refers to student behavior which compromises proper assessment of a student's academic activities and includes: cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.

For more information on the University of Calgary Student Academic Misconduct Policy and Procedure and the SSE Academic Misconduct Operating Standard,

please visit: https://schulich.ucalgary.ca/current-students/undergraduate/student-resources/policies-and-procedures

Lab Instructions

1. **Lab Setup**
   a) Install Git: *git-scm.com*
   b) Create a GitHub account: *github.com*
   c) Configure Git:
   ```
   git config --global user.name "Your Name"
   git config --global user.email "your@email.com"
   ```

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2. **Create and Commit to a Repository**
   a) Initialize a local repository:
   ```
   mkdir ENSF381_Lab1
   cd ENSF381_Lab1
   git init
   ```
   b) Create a simple project:
   Add a file `index.html` with:
   ```
   <!DOCTYPE html>
   <html>
     <body>
       <h1>Hello, Git!</h1>
     </body>
   </html>
   ```
   c) Stage and commit:
   ```
   git add index.html
   git commit -m "Initial commit: basic HTML structure"
   ```
   d) Check history:
   ```
   git log (Verify your commit appears here)
   ```

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3. **Branching and Merging**
   a) Create a new branch:
   ```
   git checkout -b feature/add-styling
   ```
   b) Add a CSS file:
   Create `style.css` with:
   ```
   h1 { color: blue; }
   ```
   c) Link it to `index.html` by adding `<link rel="stylesheet" href="style.css">` inside `<head>`.
   d) Commit changes:
   ```
   git add .
   git commit -m "Add CSS styling"
   ```
   e) Merge the branch into main:
   ```
   git checkout main
   git merge feature/add-styling
   ```
   f) Delete the feature branch:
   ```
   git branch -d feature/add-styling
   ```

4. **Remote Collaboration (GitHub)**
   a) Create a GitHub repository:
      Name it `ENSF381_Lab1`.
      Do not initialize with a `README`.
   b) Connect your local repo to GitHub:
      `git remote add origin https://github.com/`***`your-username`***`/ENSF381_Lab1.git` (Replace ***`your-username`*** with your GitHub account username)
      `git push -u origin main`
   c) Authentication:
      Use Personal Access Token (PAT) by following the steps mentioned in the following link:
      https://dev.to/shafia/support-for-password-authentication-was-removed-please-use-a-personal-access-token-instead-4nbk

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5. **Simulate teamwork:**
   a) Partner with a classmate. Clone their repo:
      `git clone https://github.com/partner-username/ENSF381_Lab1.git` (Replace ***`partner-username`*** with your partner's GitHub account username)
   b) Add a footer to `index.html` in your clone:
      `<footer> © 2024 ENSF381</footer>`
   c) Commit and push:
      ```
      git add index.html
      git commit -m "Add footer"
      git push origin main
      ```

Use `git status` frequently to track your progress!

Submission:

Fill out the names and UCIDs of all group members in Answer_sheet. Provide screenshots of all the commands and their output from the terminal and paste it in the Answer_sheet. Also, upload both the completed Answer_sheet.docx and the code to D2L.