Hands-On Lab Exercise for Module 2: Repository Management in Action

By the end of this lab, you will have gained practical experience in structuring a repository, managing access, and utilizing various GitHub features to enhance collaboration and organization. This exercise is designed to reinforce the learning from Module 2 and ensure you have the skills necessary to apply these tools in your role managing federal contracts.

Timeframe:

This detailed lab exercise is designed to take approximately 30 minutes, providing you with hands-on experience in setting up and managing a repository specifically for federal health project documentation.

Scenario:

Organizing Contract Documentation for a Federal Health Project

You are part of a team responsible for managing documentation for a federal health project, which involves setting up a structured and secure repository for various types of documents. This lab exercise will guide you through using GitHub to create, organize, and manage a repository for this purpose.

Starting Point:

1. **Log into GitHub:**
    - Open your web browser and visit GitHub.
    - Click on the "Sign in" button at the top right corner and enter your credentials.
2. **Fork the Course Repository:**
    - Navigate to the GitHub for Federal Contracting Course Repository.
    - Click the "Fork" button at the top right of the repository page. This action will create a copy of the repository in your own GitHub account.

Step-by-Step Lab Exercise Instructions:

Navigate to Your Forked Repository:

1. **Accessing Your Repository:**
   - Click on your profile icon in the top right corner and select "Your repositories" from the dropdown menu.
   - Find and click on the "GitHubFederalContractingCourse" repository you just forked.

2. **Creating a New Repository for Project Documentation:**
   - Click the "+" icon at the top right of any GitHub page and select "New repository."
   - In the repository name field, enter "Federal-Health-Project-Documentation."
   - Check the box to initialize this repository with a README.
   - Choose the "Private" option to keep the repository accessible only to designated individuals.
   - Click the "Create repository" button.

3. **Structuring Your Repository:**
   - On the main page of your new repository, click the "Add file" button and select "Create new file."
   - To create a directory, type the directory name followed by a slash (e.g., `Contracts/`). GitHub will automatically recognize it as a folder.
   - Inside the directory, type `README.md` to create a markdown file.
   - Use the markdown editor to write a brief description of the folder's purpose. For example, use `# Contracts` to create a heading and add a brief description below it.
   - Repeat these steps to create 'Amendments', 'Project_Plans', and 'Compliance_Reports' directories with their respective README.md files.

4. **Role-Based Access Control:**
   - Click on the "Settings" tab at the top of your repository page.
   - On the left sidebar, click on "Manage access."
   - Click on "Invite a collaborator."
   - Enter the username or email address of the person you wish to invite and select their role (Read, Write, or Admin).
   - Click "Add collaborator" to send the invitation.

5. **Practicing Cloning and Branching:**
    - Go back to the main page of your repository.
    - Click on the "Branch" dropdown menu, usually showing "main" by default.
    - In the "Find or create a branch" text box, type 'Draft-Amendments' and then click "Create branch: Draft-Amendments from 'main'."
    - Navigate to the 'Draft-Amendments' branch by selecting it from the branch dropdown menu.

6. **Creating and Managing Documents:**
    - In the 'Draft-Amendments' branch, click the "Add file" button and select "Create new file."
    - Name your file "Amendment_001.md".
    - Use the markdown editor to add a heading and a brief description of the amendment.
    - Scroll down and click "Commit new file" to save the document to the 'Draft-Amendments' branch.
    - Go back to the "Pull requests" tab at the top of the repository page, click "New pull request," select the 'Draft-Amendments' branch, and follow the prompts to create and merge the pull request.

7. **Setting Up Project Boards:**
    - Click on the "Projects" tab at the top of the repository page.
    - Click "New project," name it "Documentation Workflow," and choose a template or start with a blank project.
    - Once the project board is created, click "Add columns" to create "To Do," "In Progress," and "Done" columns.
    - Click "Add cards" to create tasks like "Review Initial Contracts" and "Draft Amendment 002," and drag them to the appropriate columns as you work on them.

Conclusion and Review:

- Once you've completed these tasks, review your repository to ensure it reflects all the changes and additions you've made.
- Think about how these actions apply to real-world federal project documentation management and how you can utilize these practices in your work.