**QMBE 1320: GitHub, GitHub Desktop, and Assignments with Pull Requests**

This guide will equip you with the tools to manage your analytics assignments and projects effectively and collaborate seamlessly with the instructor. We will be using **GitHub**, a popular online platform for version control, and **GitHub Desktop**, a user-friendly application that simplifies analytics workflows. Finally, we'll learn how to submit your work using **pull requests**, a vital tool for analytics, code review, and collaboration.

### Step 1: Setting Up Your GitHub Account

1. Click on [GitHub](https://github.com) and click "Sign Up for GitHub".
2. Fill out the registration form with your Hamline email address, username, and a strong password.
3. Verify your email address by clicking the link sent by GitHub.

**Congratulations!** You now have a GitHub account, ready to store and manage your analytics assignments and projects.

### Step 2: Downloading and Installing GitHub Desktop

1. Visit the GitHub Desktop download page: [GitHub Desktop](https://github.com/apps/desktop).
2. Download the installer for your operating system (Windows, macOS, or Linux).
3. Double-click the downloaded file and follow the on-screen instructions to complete the installation.

### Step 3: Configuring Git for GitHub Desktop (Optional)

**Note:** This step might be pre-configured during installation.

1. Launch GitHub Desktop.
2. Go to **Preferences** (**GitHub Desktop** menu on macOS, **edit** menu on Windows) and select **Options**.
3. Under **Git**, locate the fields for "Username" and "Email". Enter your GitHub username and the email address associated with your account.
4. Click **Apply** to save the configuration.

### Step 4: Cloning Your First Assignment Repository

1. Obtain the repository URL from your instructor. It might be a public repository on GitHub.com or a private one within your institution's GitHub organization.
2. In GitHub Desktop, click on **File** and then **Clone Repository**.
3. Paste the repository URL into the **URL** field.
4. Choose a local directory (folder) on your computer where you want to store your assignment files. Click **Clone**.

This process downloads a copy of the class repository onto your local machine.

### Step 5: Working on Your Assignment

1. Open the downloaded folder containing your assignment files. This is where you'll do your assignments and add new files.
2. Follow the instructions as shown in the assignment prompt. Make sure you save your assignment before closing the Excel file.

### Step 6: Tracking Changes with Git (Staging Files)

1. Back in GitHub Desktop, you'll see a list of files in your project.
2. Files with modifications will appear under the **Changes** tab. These are the files you plan to submit.
3. Click on the checkbox next to each file you want to include in your pull request.

**Staging** a file tells Git that you want to include those specific changes in your next commit.

### Step 7: Committing Your Changes

1. Once you've staged all the desired files, click on the **Commit to Master** button (the message box is optional, but it's good practice to add a brief description of your changes).
2. A commit creates a snapshot of your project at that specific point in time. It's like saving your progress with a meaningful message.

### Step 8: Creating a Pull Request

1. Click on the **Publish branch** button in GitHub Desktop. This creates a new branch (a temporary copy of your work) on the remote repository (on GitHub.com) specifically for this assignment.
2. Enter a descriptive title for your pull request and optionally add a more detailed explanation of your changes in the body section.
3. Click on **Publish pull request**.

This action sends a notification to your instructor, informing them that you have completed your assignment and are ready for them to review your work.

### Step 9: Responding to Feedback and Making Further Changes (Optional)

1. Your instructor will review your pull request and might provide feedback or suggest modifications.
2. Make the necessary changes to your project locally and repeat steps 6, 7, and 8 to commit and push your updates.
3. GitHub Desktop will automatically update your pull request with the latest changes.

### Step 10: Merging Your Changes (Instructor's Responsibility)

Once your instructor is satisfied with your work, they will **merge** your pull request. This integrates your changes into the main branch of the repository, essentially finalizing your submission.

**Congratulations!** You've successfully used Git and GitHub Desktop to manage your assignments, track changes, and collaborate with your instructor through pull requests. Remember to repeat these steps for each assignment throughout the semester.

**Additional Tips:**

* Regularly commit your changes