**Hong Van**

**CS504 – Software Engineering**

**Individual Project 1**

**Requirements:**

The student will create test cases to demonstrate how the following situations are handled in the CMS and related processes:

* Code check out
* Code check in
* Code snapshot (or release point)
* Code in development by two users, first one checks out code, second checks out code, makes changes and checks in, first makes changes and needs to check in.
* Code changes need to be rolled back to a previous level.
* One developer is working on a new version, one is fixing bugs in a previous release.

1. **Create my GitHub Repository and an initial README.md file for my individual project**

The screenshot below shows my repository and README.md file for this project

Graphical user interface, text, application, email

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***Screenshot 1: GitHub Repository***

1. **Code Checkout – Clone with HTTPS**

* To check out the source code from my git repository, I need a copy of Git using HTTPS - (See screenshot 2 below).
* Open my Command Prompt and go to the directory – IP\_CS504 – where I want to clone the file.
* Running git clone command and then it will automatically create a folder with the repository name – CS504-Individual-Project-HongVan and download the file there.
* The I use cd CS504-Individual-Project-HongVan and ls command to go to the new directory. As you see, there is only the README.md file for now – (See screenshot 3 below).

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*Screenshot 2: Clone the repository using HTTPS*

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*Screenshot 3: Git clone using Command Prompt on Windows*

1. **Code changes:**

In this project, I am going to create a test case, called "Birthday", to demonstrate how the codes check in, check out, code changes, code snapshot, and code development by two users are handled in the CMS - GitHub environment.

This test case will be run on VSCode using C# language

- Firstly, I opened the repo on VSCode, then open the terminal and run the "dotnet new console" command to create “Program.cs” project using C# language, the dependencies in “obj” folder, and the “Projectname.csproj”, the name folder that I created for this individual project.

- Then, I renamed the "Program.cs" file to "Birthday.cs" and add the code to it. To see the output of the console, I run the "dotnet run" comment. (See screenshot 4 below)

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*Screenshot 4: Make some changes to the code*

1. **Code check in:**

* To see what I have changed to the file, I run **ls** command or run **git status** command – see screenshot 5 below:

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*Screenshot 5: Check code changes*

* Then I have successfully pushed all the code changes to GitHub by using **git add** ., **git commit -m,** and **git push** to save the changes and send the changes committed to a central server – see screenshot 6 below.

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*Screenshot 6: Code check in*

1. **Code in development by 2 users:**

* To add another user to this project, I have invited 123lalami to collaborate on this project repository – See screenshot 7 below:

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*Screenshot 7: Invite another user to collaborate in this project*

**5.1: Code check in and out by user 2 – 123lalami**

- Code check out:

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Code changes:

* The user 2 has add the comments into the Birthday.cs file and add a new Date-Time.cs file under the root folder.

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A picture containing text, monitor, screenshot, screen

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Code check in:

* The user 2 has pushed all the changes into GitHub:

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* 1. **Code check in and out by me**
* Code check out to see all the changes that the user 2 have made

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* I have made some changes showed as the screenshot below:

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Text

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* Code check in:

Text

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1. **Fixing bugs:**

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Text

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