Assignment #1

Git Exercises

1. **Clone the repository for the class**

*#Cloning the repository from Github*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git clone* [*https://github.com/BI-DS/GRA-4152*](https://github.com/BI-DS/GRA-4152)

*#change directory to the cloned repository*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> cd .\GRA-4152\*

1. **Explore the version history by visualizing it as a graph.**

The graph was taken from Github’s Insight feature, showing a graph of all commits made in the repository GRA4152.

A graph with green lines and numbers

Description automatically generated

1. **When was the last time README.md was modified?**

*#check git commits version history through terminal*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\GRA-4152> git log README.md*

A computer screen with white text

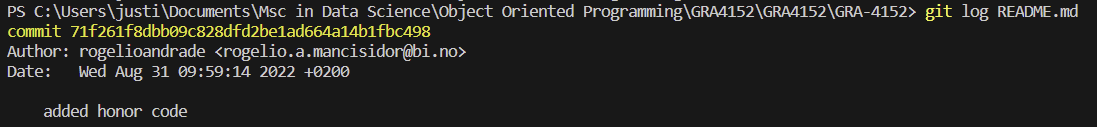
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The last time README.md was updated was Wednesday August 31 2023 with commit key “71f261f8dbb09c828dfd2be1ad664a14b1fbc498”.

1. **What was the last commit message associated with the last modification to the README.md?**

*#check the message put in the latest commit/last modification on README.md*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\GRA-4152> git log README.md*

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You can also use git log to show all the details of the latest commit including the comment made which is below saying “added honor code.”

1. *#cd out of the cloned repository back to own repository*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\GRA-4152> cd ..*

*#creating a new .gitignore file in the repository.*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> notepad .gitignore*

*#add, commit, and push it in the repository*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git add .gitignore.txt*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git commit -m "Add gitignore txt file"*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git push*

*#creating a new foo.py file and then adding it to the repository.*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git add foo.py*

*#commit the changes and push it in the repository*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git commit -m "Added foo.py"*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git push*

1. **Cloning a new repository (freecodecamp)**
   1. **use git stash**

*#Clone the new repository if your choice*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git clone* [*https://github.com/EbookFoundation/free-programming-books*](https://github.com/EbookFoundation/free-programming-books)

*#change cd*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152> cd .\GRA4152\free-programming-books\*

*#use git stash*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\free-programming-books> git stash*

When you do git stash the changes you made will disappear and will be stashed somewhere and can be seen using git stash list.

* 1. **Git log –all –oneline**

*# using git log –all –oneline*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\free-programming-books> git log --all –oneline*

When you do this code, it will show you a simplified and summarized view of all the git commit history of all the branches in the repository including all the comments and commit keys.

* 1. **Git stash pop**

*# using git stash pop*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\free-programming-books> git stash pop*

This is useful in cases when you want to revert back to the original state of the file without the temporary changes. If you have made changes to the working directory that you are working on but later on decided not to keep them, you can use git stash pop to get rid of all the changes you have made and revert back to the original.

* 1. **Current stashes and dropping it.**

*# show all current stashes made.*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\free-programming-books> git stash list*

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*# drop the current stash id you have stash@{0}*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\free-programming-books> git stash drop "stash@{0}"*

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Now, modify a file and stash changes. Make a new modification to the same file, but this commit those changes.

1. ***# staging the changes made and committing***

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\free-programming-books> git add "README.md"*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\free-programming-books> git commit -m "Added wazzzupppp in the text"*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\free-programming-books> git stash pop*

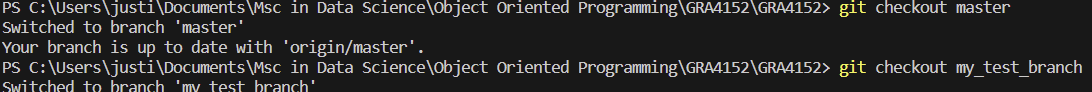
Once you used git stash pop again and opened the file you made changes in, the changes you made which were initially stashed (disappeared from the file) will reappear again.

1. **Create a new branch called my\_test\_branch**

*# creating a new branch called my\_test\_branch*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git checkout -b "my\_test\_branch"*

1. **Explore both branches by switching back and forth.**



1. **Make changes to readme.md file in the branch**

*# add a new comment in the readme file stage it and then commit it.*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git add "README.md"*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git commit -m "added a comment about new branch"*

1. **Merge the branches**

*# merge the my\_test\_branch into the master branch.*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git merge my\_test\_branch*

1. **Fork the class repository.**

**A close up of numbers

Description automatically generated**

*# cloning the forked*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152> git clone* [*https://github.com/S1044345/GRA-4152.git*](https://github.com/S1044345/GRA-4152.git)

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\GRA-4152> git add "S1044345.txt"*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\GRA-4152> git commit -m "Added student txt file"*

*PS C:\Users\xxxx\Documents\Msc in Data Science\Object Oriented Programming\GRA4152\GRA4152\GRA-4152> git push*