**PES UNIVERSITY**

**AUGUST – DECEMBER 2022 SEMESTER 5**

**SOFTWARE ENGINEERING LAB TASKS**

**UNIT 3 LAB TASK**

**SUBMITTED BY**

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**PROBLEM STATEMENT 1:**

**Programming standards give your code a more uniform approach and enhance its testability. Keeping your project in mind, attempt the below questions:**

**Do you think Defensive Programming is applicable to your project?**

**Follow up: is Redundancy not applicable in the case where a single system is executing the program?**

Yes, defensive will be used in our project as it would help with reducing bugs and problems with the functioning of the software, although the performance maybe worse and the code longer, it is safer. It is very much applicable because if the only system fails then there would be no other way to provide the service to the customers

**As a developer, should we rely entirely on the user providing correct input? In your project, include statements to ensure that the program only continues with data is of the expected type**

No, we should not rely entirely on the user providing correct input. We should have test cases and error handling methods included in the code. This is to ensure that there are no vulnerabilities or issues in the software.

**While working on your project, the go to approach to debug is using print statements. Could you include these statements to highlight the location and values at the current point in the project?**

Yes. It is easier to understand and debug faults / errors using print statements. It will be removed when our errors are rectified. This helps us to understand what the values are and how they change over time. Thus helping in understanding the problem properly and resolving the issue faster

**Could you build two valid and invalid test cases for any two functions in your project?**

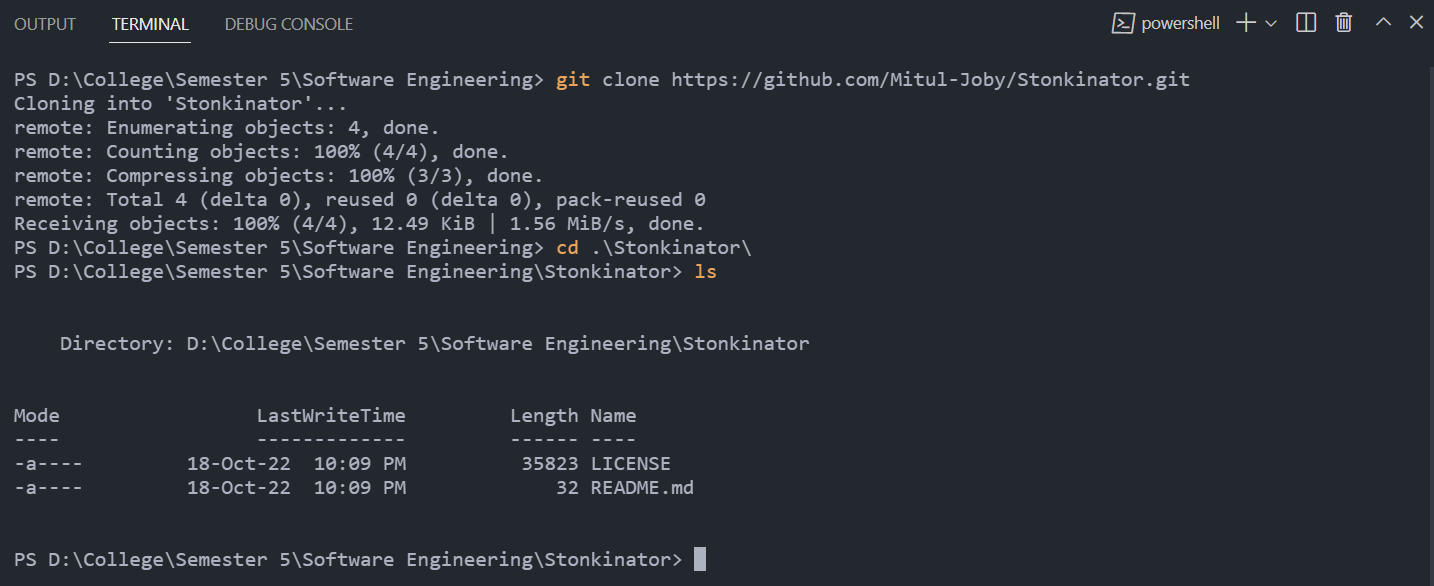
Yes. Some test cases could be assessing model predictions with RMSE values, check results on entering valid User Id and Password, check results on entering Invalid User ID and Password, checking results on entering empty User ID and Password.

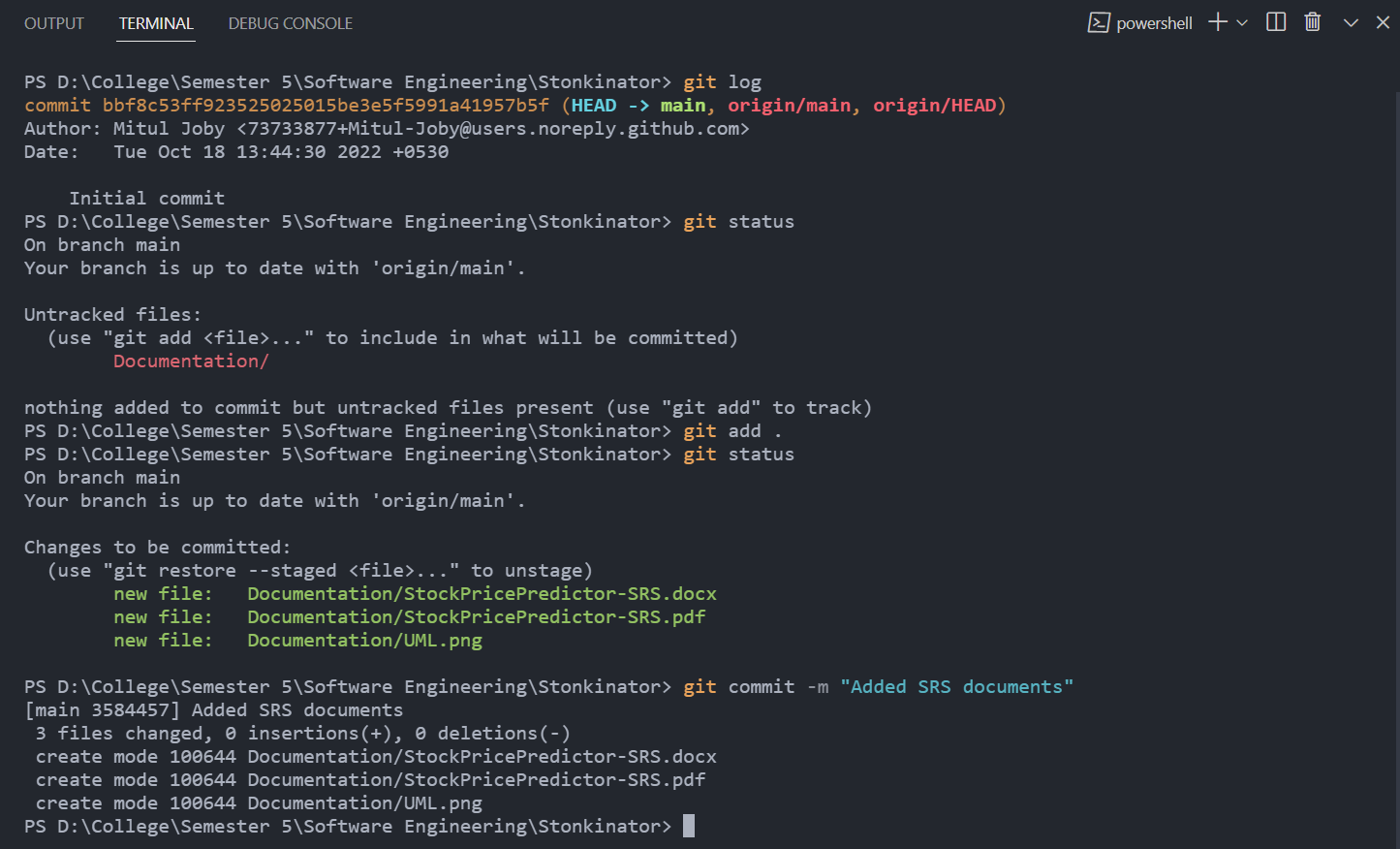
**PROBLEM STATEMENT 3:**

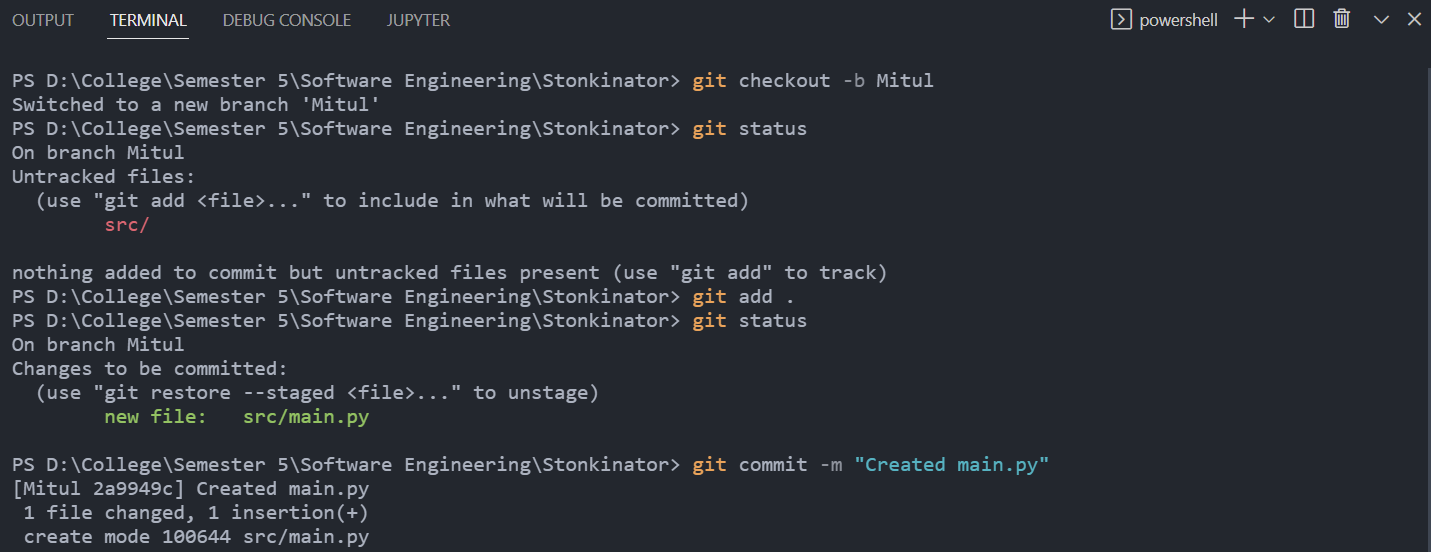
**Configuration management helps maintain various versions of the project and eases promotion of new releases. With respect to your project, answer the below questions and explore the mentioned scenarios with git**

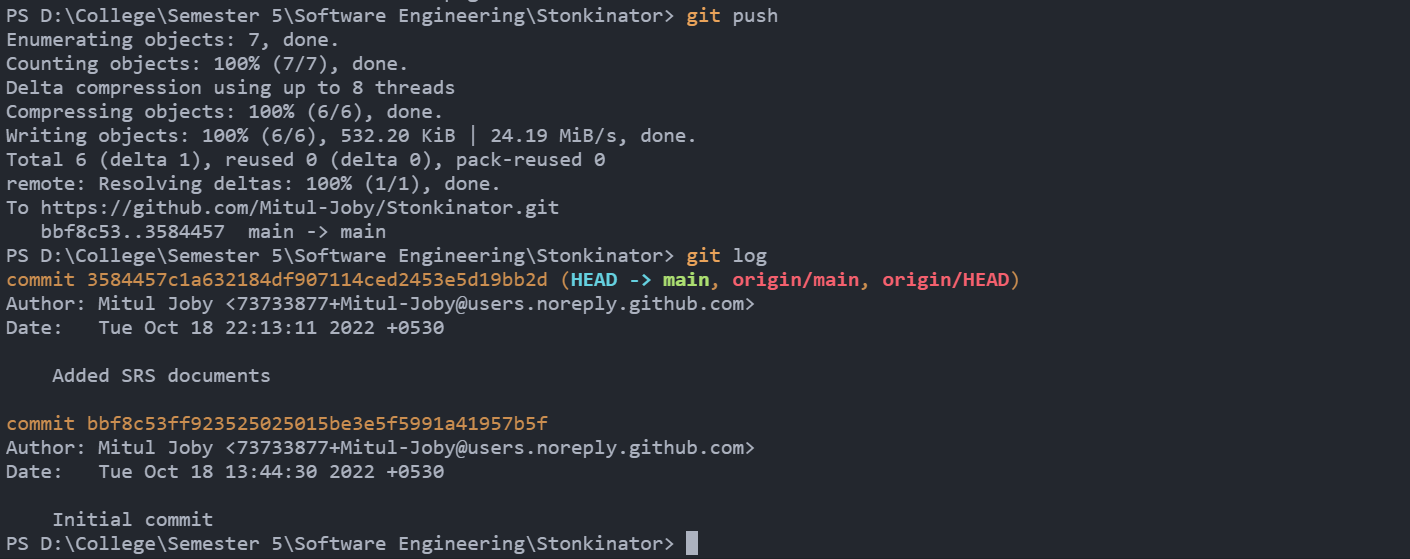
* **Build a table to separate all of your files on the project repository into configuration items**
* **Each team member should add/modify any of the configuration items on a separate branch**
* **Assuming your main branch to be the baseline, make further modifications on a different branch to indicate version of the project**
* **Promote a branch to the baseline by merging**

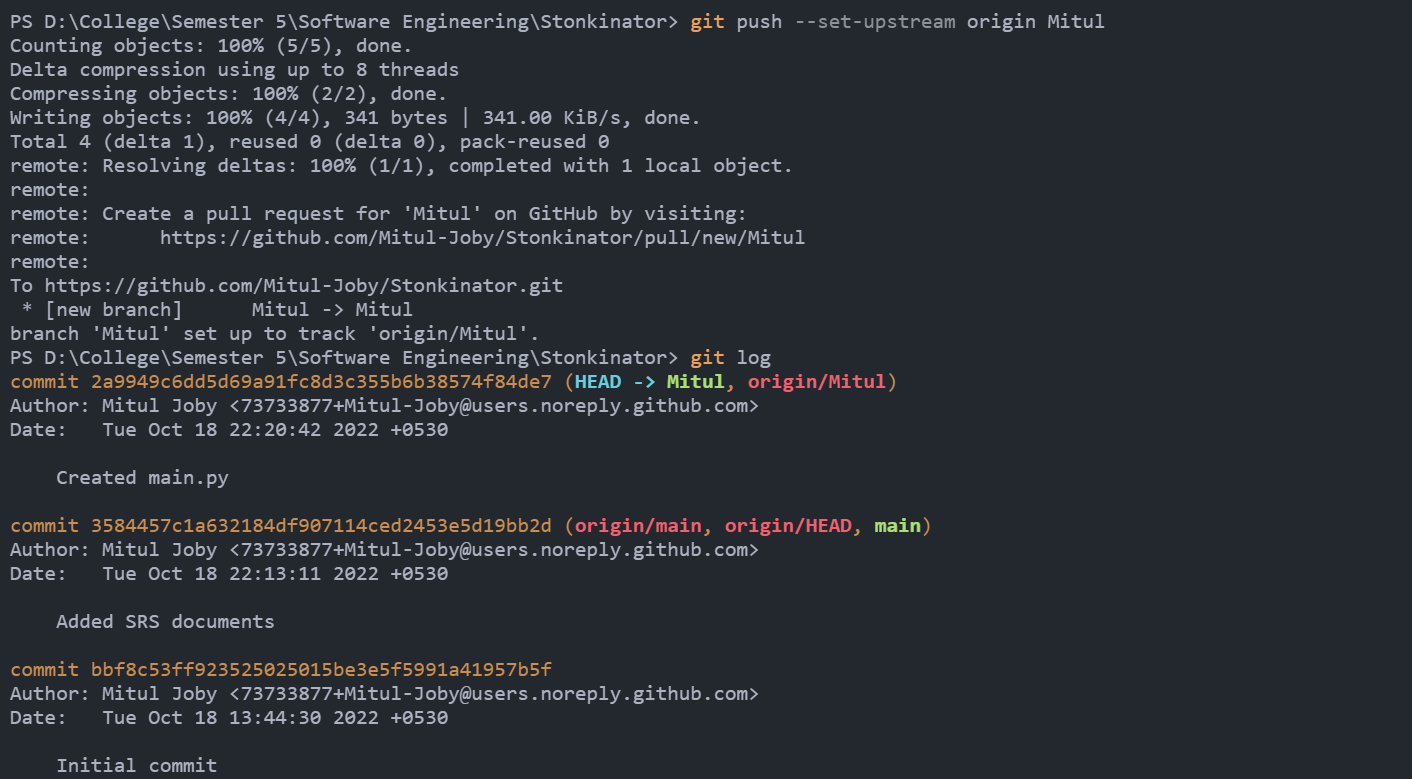
**Solution:**

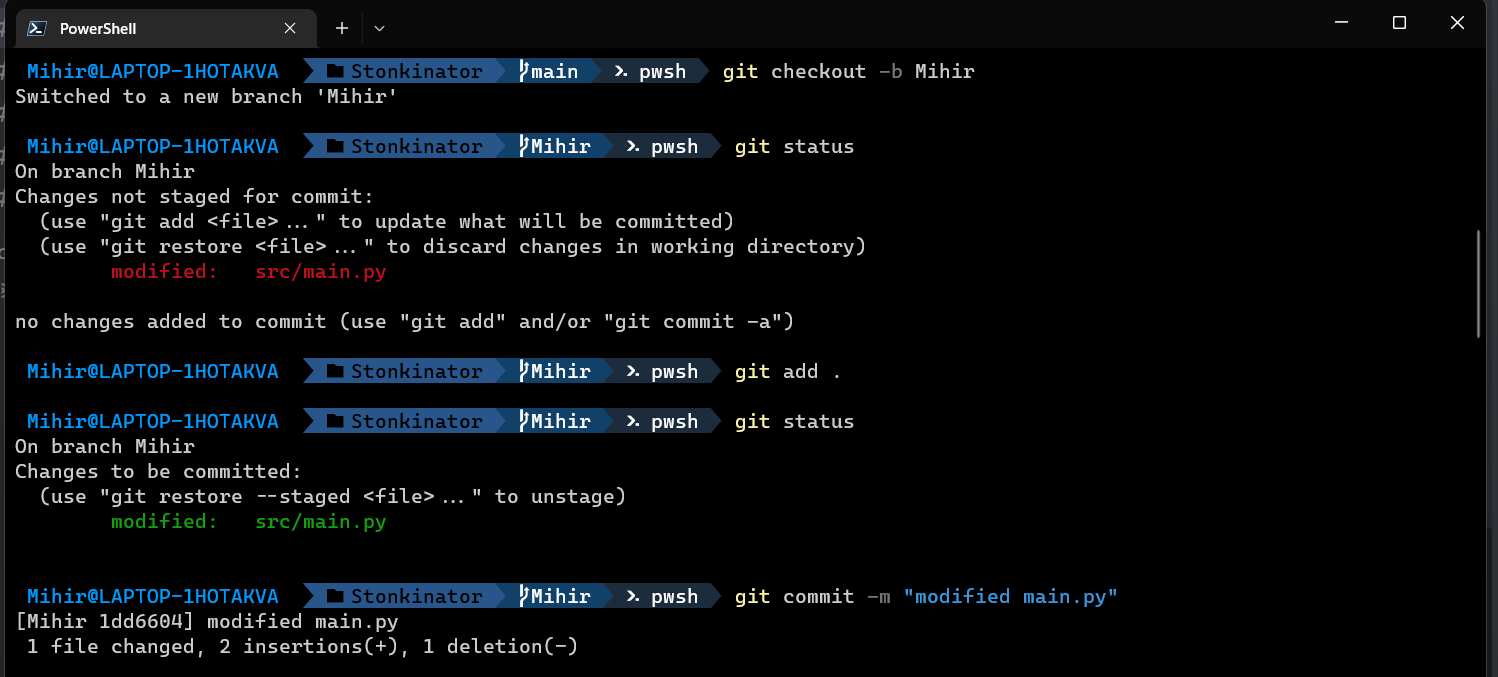
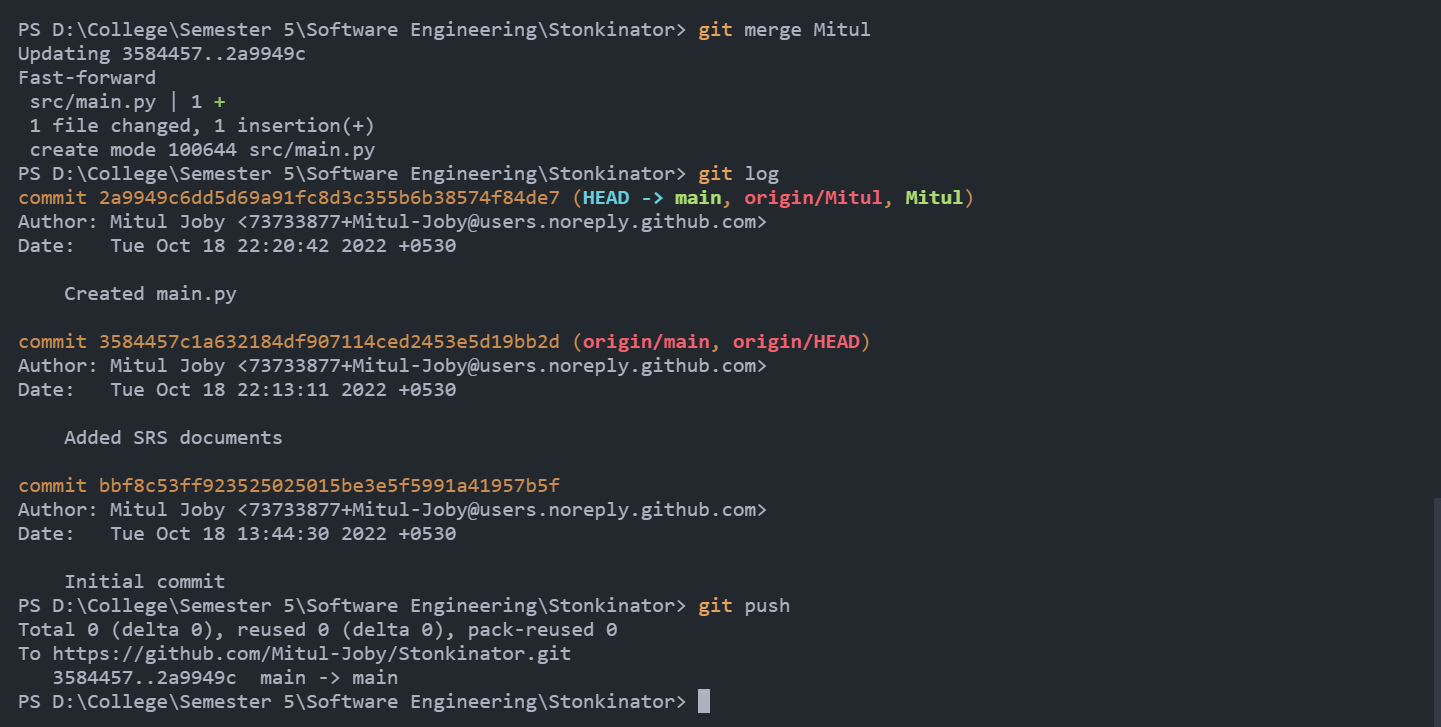
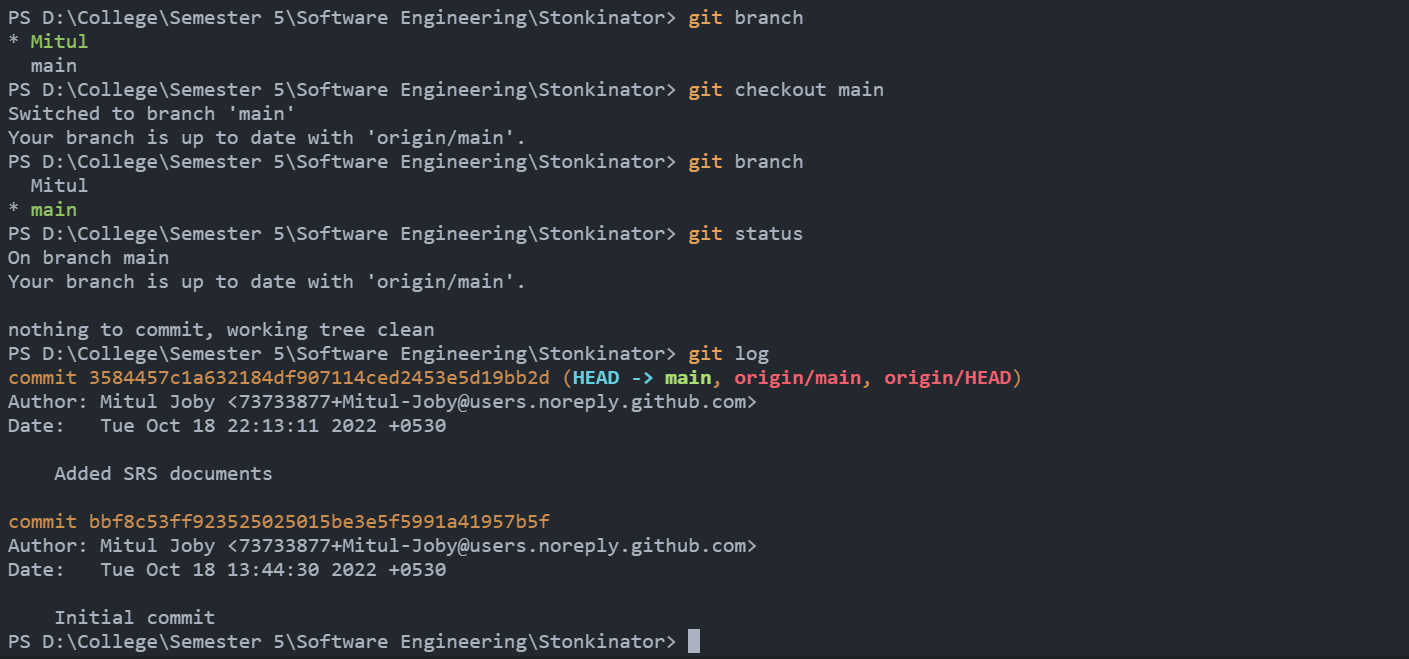


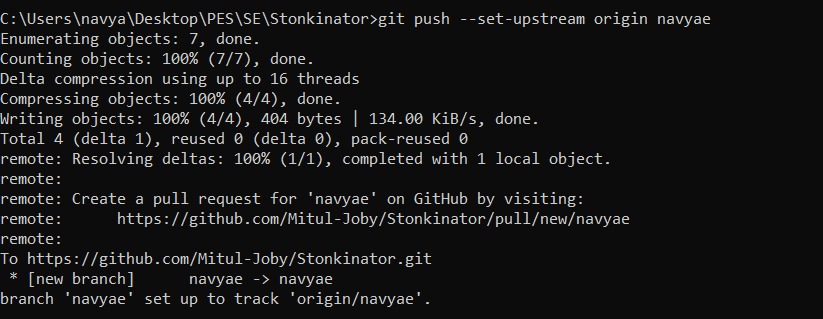
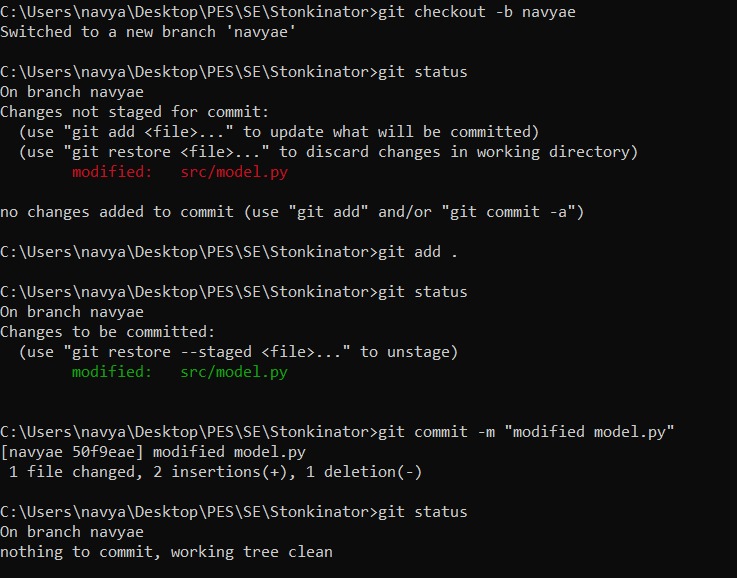
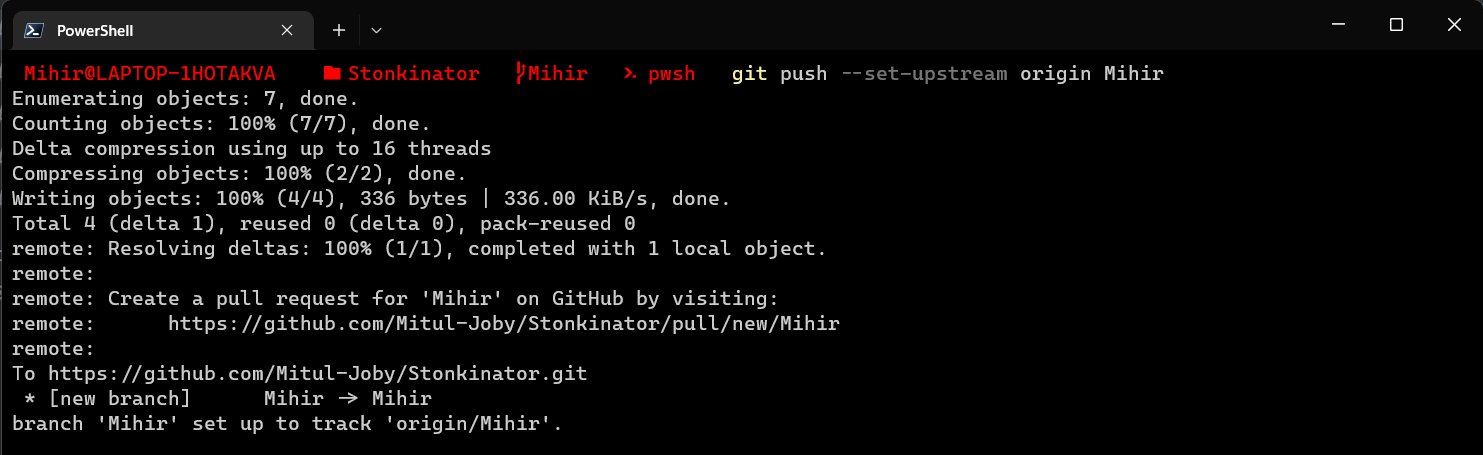


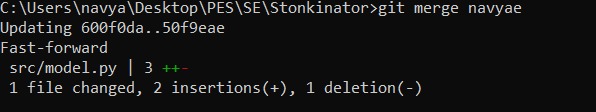
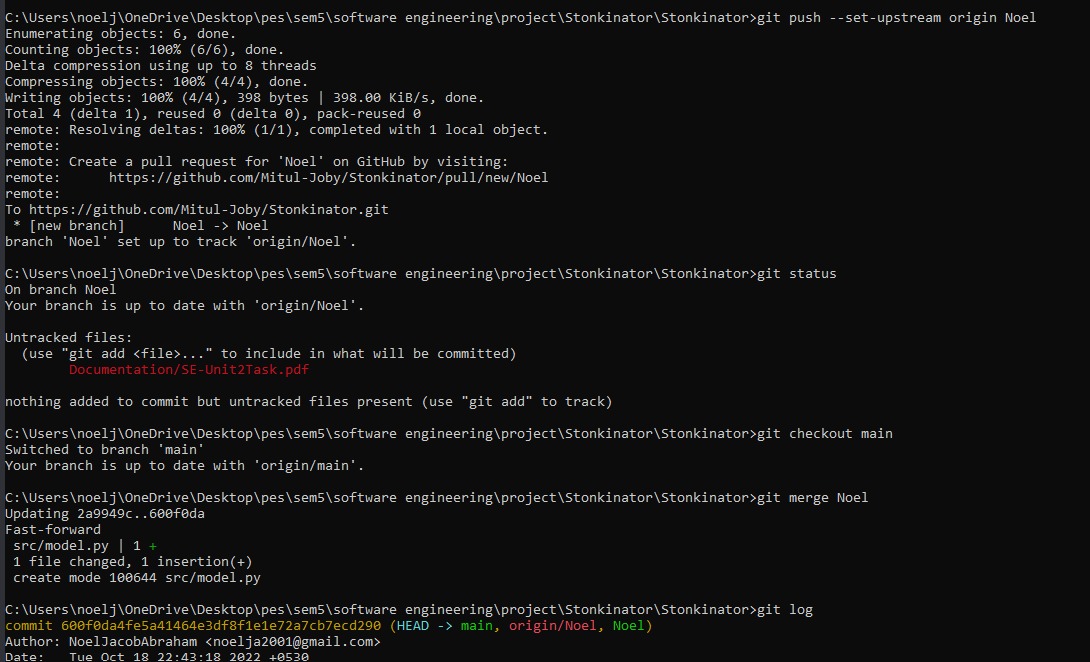
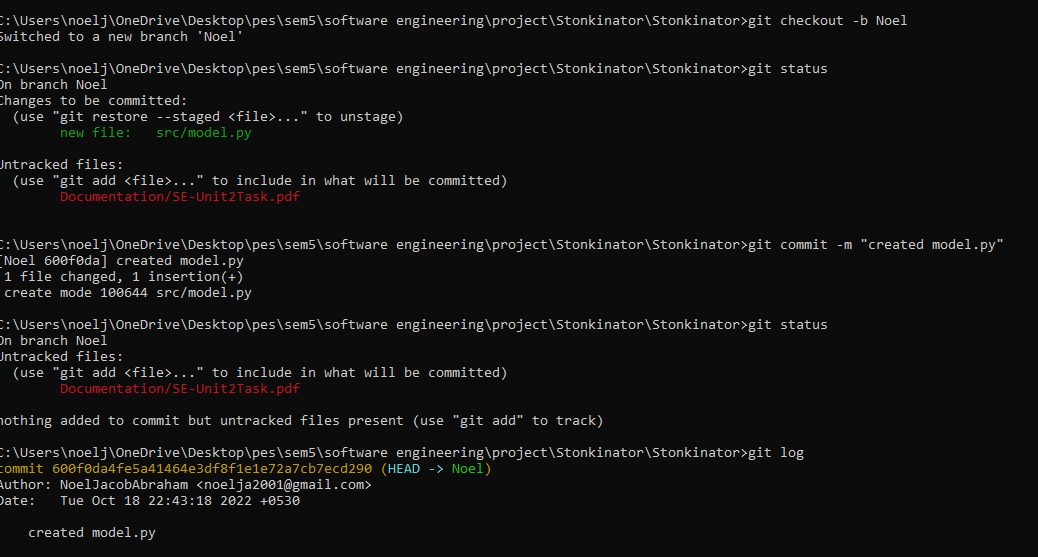










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