# CS 305 Module Two Written Assignment Template

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## Instructions

Replace the bracketed text with the relevant information in your own words. If you choose to include images or supporting materials, make certain to insert them in all the relevant locations in the document.

## Areas of Security

The aspects I consider most pertinent to evaluating vulnerability through the Vulnerability Assessment Process Flow diagram include Input Validation, the API, and Code Quality. In my opinion, these three elements are crucial to evaluating vulnerability, as they are closely linked to the methods used to exploit vulnerabilities.

## Areas of Security Justification

To justify my selections regarding Input Validation, the API, and Code Quality, I prioritized Input Validation because it is essential to prevent external code injection that could compromise the system or produce erroneous outputs. Following this, I focused on the API since nearly all websites depend on a database; utilizing Spring for structuring and managing the API’s dependencies will enhance the program’s security and robustness. Lastly, Code Quality is crucial as it facilitates user authentication and access authorization based on user roles, ensuring that each role has minimal access necessary to reduce the risk of unauthorized access to sensitive areas of the program while also promoting effective management.

## Code Review Summary

The team is currently using an outdated version of webmvc in the POM.xml file instead of the latest release. The scan data is directly linked to a string within the “GreetingController.java” code, and at the same time, a clear text format is appended to it. If any illegal strings are generated, this could potentially lead to issues within the application. Consequently, this approach may create vulnerabilities for future security breaches.

## Mitigation Plan

Firstly we should migrate the to the current version of webmvc. Working with an up-to date version not only conserves time but also protects the project from potential issues that could arise from transitioning to a new framework, both now and in the future.

Then I would recommend that we limit the string length in GreetingController.java and a include additional input validation method.