MSSE672 – Component Based Software

Week 1 Submission Guide

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Assignment: JUnit Testing

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## Summary

This document provides evidence of successful unit test execution for the QuadController class. All tests were written using JUnit 5 and executed within IntelliJ IDEA.

**Screenshot – JUnit Test Results***This screenshot shows the JUnit test output in IntelliJ, confirming that all unit tests passed successfully with no errors or failures.*

A screenshot of a computer

AI-generated content may be incorrect.

**Test Class Overview**

Tested Class: QuadController  
Framework: JUnit 5  
Test Focus:

* Validating correct HTTP status codes and JSON responses
* Confirming error handling for invalid quadrilateral inputs
* Ensuring state reset when receiving invalid input
* Verifying correct QuadResponse generation on valid inputs

**Example Test Cases**

|  |  |  |
| --- | --- | --- |
| **Test Name** | **Purpose** | **Expected Outcome** |
| post\_returns200ForSquare() | Validates correct classification of a square | Pass – 200 OK |
| post\_returns400ForInvalidQuadrilateralInequality() | Ensures invalid sides (e.g., 1+2+3 ≤ 10) trigger validation error | Pass – 400 Bad Request |
| put\_returns200ForValidSquare() | Updates sides via PUT after POST is initialized | Pass – 200 OK |
| put\_returns400WhenNotInitialized() | PUT before POST returns proper error | Pass – 400 Bad Request |
| post\_invalidQuadrilateral\_uninitializesState() | Invalid POST resets state and disables GET | Pass – 400 Bad Request |