Reflection on Coverage and Performance

Api performance

I ran a basic load test for 100 concurrent users on the /api/tasks get endpoint 10 times. We can see that the slowest response time was 124 ms and the fastest response time was 2 ms. There were no errors. When looking at the aggregate we can see one of the columns call 90% line. It it 49 ms and this is the response where 90% of the requests are below. This is a pretty good indication of the response time most users will experience. The throughput is how many requests are handled per second.
Summary Jmeter:

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
HTTP Request	1000	18	2	124	25.12	0.000%	3.498.583	32.05	4.34	938.0
TOTAL	1000	18	2	124	25.12	0.000%	3.498.583	32.05	4.34	938.0

Aggregate Jmeter:

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Max	Error %	Throughput	Received KB/sec	Sent KB/sec
HTTP Request	1000	18	8	49	86	114	2	124	0.000%	3.498.583	32.05	4.34
TOTAL	1000	18	8	49	86	114	2	124	0.000%	3.498.583	32.05	4.34

Code coverage

I used coverlet to measure the test coverage (coverage-report folder and TestResults folder). For the unit tests I wrote tests for all the functionalities create, read, update and delete as well as testing some of the error handling. The integration tests covered the endpoints and tested them using an in-memory database. This ensured that the endpoints processed data correctly and maintained state across requests. I didn't quite manage to get to 80% test coverage.