PA2552 - Software Testing
Lean Testing Principles

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February 2, 2026

Notice of AI usage:

Scopus "AI Query Builder" provided by Blekinge Institute of Technology has been used for the purpose of building database queries in search of relevant articles.

1 Introduction

Testing is an essential part in most large-scale projects, whether that would be in industrial manufacturing plants or software development. The practice of ensuring functionality, reliability and safety of crucial mechanisms is a foundational requirement for any kind of development. There are multiple ways of evaluating different types of metrics for a variety of use cases, some wider known types include: stress testing, performance testing and smoke testing [1].

The purpose of this technical report is to collect, analyse and summarise relevant information touching on the subject of lean software testing. More specifically, this report aims to answer the following questions:

- What do I, the author, think are the most important principles of lean software testing and why they should be considered important

- In which situations can the principles of lean software testing be applicable in general?

- In which situations can the principles of lean software testing be applicable and how would they be applied for me, the author?

2 Methodology

The research method employed by this report is to search the common internet for information that may be relevant for the questions outlined in the introduction (section 1). Various data gathering methods have been utilised, namely the Google Search Engine and the Scopus Journal Database have both been used for said gathering. The vetting of the search results was mainly comprised of filtering the contents based on keywords like "agile testing", "lean testing", "software development", "game development" and "software engineering".

3 Results

Lean testing is based on principles that closely align to the commonly known principles and values of agile and lean where the purpose is to maximise efficiency, adapt to change and minimise waste. The goals of lean testing according to Jain [2], can be reduced to:

1. Value Delivery

2. Waste Reduction

3. Efficiency

4. Continuous Improvement

5. Customer Satisfaction

4 Analysis

5 Discussion

6 Conclusions

References

[1] S. Susnjara and I. Smalley, "What is Software Testing? — IBM — ibm.com," https://www.ibm.com/think/topics/software-testing, [Accessed 02-02-2026].

[2] R. Jain, "Lean Testing — What it is, Principles & How to Do? — testsigma.com," https://testsigma.com/blog/lean-testing/, 2024, [Accessed 02-02-2026].