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Introducing Lean Canvas Model Adaptation in the Scrum Software Testing

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Abstract

Agile software development and software testing brought new ideas and tools in the software development industry. Day to day more and more companies are adopting an agile approach in their software development process. Scrum is a one of the agile software development mythologies. Software is developed in the iterative and incremental way and scrum provides a framework for managing the process. A software tester plays the key team member role in the scrum software development process also software tester faces key changes such as time limit to test planning, changing requirements and testing everything in sprints, changing requirements, regression testing, test automation planning and integration testing. Nowadays scrum software development adopted many tools in the framework of development, software testing as well as test planning. In recent years planning and validation purpose lean canvas are used in business and this research paper is focused on possibilities of finding the lean canvas model adaptation in scrum software testing.

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Keywords: Agile software testing; Lean canvas for software testing; Scrum software testing; Software validation

1. Introduction

With the growth of technology, humans are now more dependent on using software in daily routine life and for business purposes. The growth of the software development industry introduced a lot of frameworks and software tools to make development and testing more efficient. The basic goal of the software development is to provide a high-quality software to the end customer. In software testing, if we do not identify a bug on an early stage, its cost

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will grow until customer finds that bug in the already developed software. Adopting the appropriate software testing methodology helps to identify and mitigate early stage bugs to improve the overall software quality. In agile changing requirements make software development fast, flexible and improve software delivery speed in another way increase risk of software need to be well tested and error free before delivery to the end customers.

Scrum software development framework promises to deliver the software in iterative and incremental way and scrum business owner can decide what he wants in between development process known as a requirements volatility. In such situations scrum provides an empirical approach to understand requirements quickly and move towards providing solutions to them. In scrum framework software tester faces many challenges such as changing requirements, last minute changes, continuous testing, test automation, test coverage problems.

This paper is divided into three main sections and sub sections which deal with scrum related research, scrum testing problems in scrum, transaction between lean canvas life cycle to scrum life cycle and principles of finding the scrum waste in test process.

2. Scientific novelty of paper and related research

Lean canvas is a white board with several blocks with title names and is used mainly for the evaluation of business ideas. Its one-page light weight that shows the product design to marketing approaches.

The core contribution is to find proper lean canvas designing that fits in the scrum software testing. Specifically finding the appropriate lean canvas prototype in scrum for software testing, improving the scrum test planning, simplifying the scrum test strategy, using the lean principles to create lean canvas design for scrum testing and finding the circumstances blocks for the scrum lean canvas design.

2.1. Related research

Alexander Osterwalder who worked on business models developed and introduced the business model canvas for the strategic management for business. It's a one-page light weight document with number of named blocks. Lean canvas mode is basically a template to describe the business; nowadays it is very popular in start-up based companies[3].

The life cycle of the lean canvas starts with an idea, with idea collection that is needed to build the product and the next step to measure the different metrics once the product is ready. Collected data gives a new insight in the lean planning and a complete loop helps to validate business ideas.

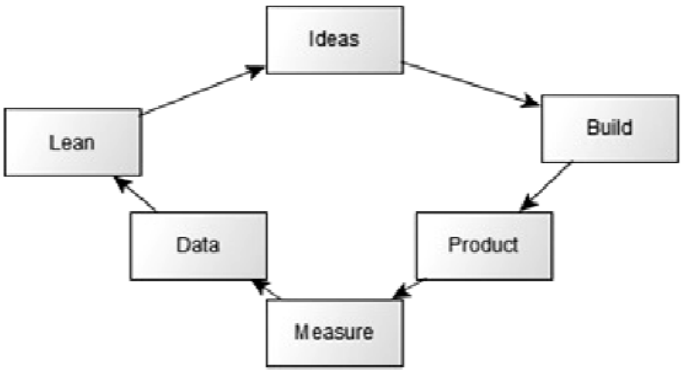

Fig. 1. Lean canvas life cycle.