Test Strategy and Configuration Management

PetSpeed

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Test Strategy

Software testing is a systematic process that aims to identify verifying that the software performs its tasks in such a way as to (that is, according to the requirements provided by the stakeholders) and also if he eventually does what he should not do.

Software development is often a rather complex activitywhich often leads to the occurrence of failures in the resulting system. These failures can be present at all stages of the development process and this fact may lead a team to the generation of a different product than was initially specified. A bug generated by a programmer may result in an error that will generate a state of inconsistency in a certain functionality, that is, errors can cause a failure, which is a unexpected behavior in a software and this can affect the end user. The later an error is discovered within a software, the greater the time and complexity for correction. In many cases, many software may need to be redone.

The applied software test that will ensure quality is the acceptance test. This happens at the user interface layer and usually involves all layers of the application tested to validate a business scenario. Are formal testing of user needs, requirements, and business processes conducted to determine whether a system satisfies or not the acceptance criteria. The scenario in acceptance testing will be, login and logout, user registration, registration of animals, scheduling, among others.

Acceptance tests are much more sensitive to changes in the than any other type of test, precisely, by testing the flow of information among several layers of a distributed application, need a job constant so they are always up to date. They can be any type of application, be it web, mobile, desktop, watch and even applications of background.

Configuration Management

1 Tools, Environment and Infrastructure

Type	Tool
Operational system	Linux/Windows
Version control	Git
Development environment (IDE)	Android Studio
Diagram editor	Draw.io
Communication	Discord/Hangouts

Development Environment Hardware Minimum Requirements

- 1.8GHz dual-core microprocessor with burn support;
- 4GB RAM Memory;
- 16GB free disk space;
- Connecting to the Internet.

Minimum Hardware Requirements of the Execution Environment (smartphone)

- 1GHz dual-core microprocessor (with Android 4.0+ system installed); Memory RAM 512MB;
- Free space in internal memory 2MB.

2 The Configuration Management Program

2.1 Version Repository Structure

GitHub is a software project hosting platform that offers, in addition to storing GIT repositories and a specific documentation repository area. In order to take better advantage of the platform and agility in the PetSpeed Scrum lifecycle, all software artifacts and project management will be done in GitHub and / or in integrated GitHub tools.

Main Repository

The PetSpeed repository, which can be controlled by the GIT version control system, must have the following artifacts in the respective directories listed below:

Directory	Content
Diagramas-de-classe-atualizados	Class diagrams updated according to the current stage of the project.
PetSpeed-App	Java source code - Android Studio project.
petspeedufrpe.github.io	Link to access the project website
Prototipo	Application prototype README

2.2 Configuration Status Estimate

2.2.1 Media Storage Process and Project Release

The repository should be cloned by all team members in a directory monitored by some synchronization application and in case any unforeseen event happens the source code will be saved and can be retrieved in which the Git repository directory was located.

3 Frames

The Configuration Management Plan is changed in the following cases:

- The version repository is not meeting the needs of the team members;
- The Plan was not approved by the client and needs to be refactored.