



DEPI

Graduation Project

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Track: Software Testing

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Date Of Presentation: 25/10/2024

Introduction

01. Overview of the project

02. Project Scope and Requirements

03. Challenges and Solutions

04. Project Outcome



01. Overview of the project

Project sections



Manual testing involves human testers executing test cases to identify defects, while automation testing uses specialized tools to automate test execution and increase efficiency

1 Overview of the project

Manual Testing



Manual Testing

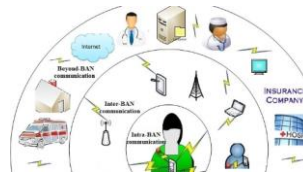
In this section we are simulating real-world scenarios that end users might encounter across various domains, such as e-commerce, government services, and healthcare.



e-commerce platforms



government services



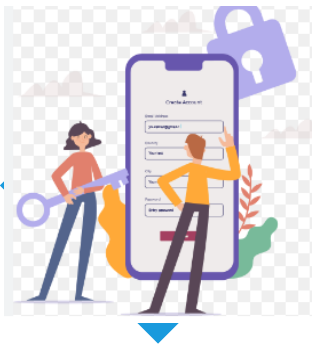
Healthcare environments

1 Overview of the project

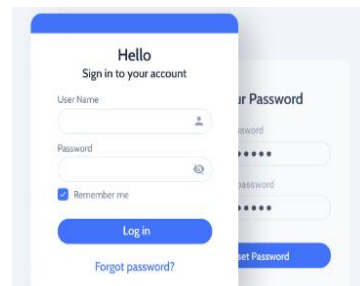
Automation Testing



In this section we automate different scenarios that an end user would typically encounter on an e-commerce website



User registration



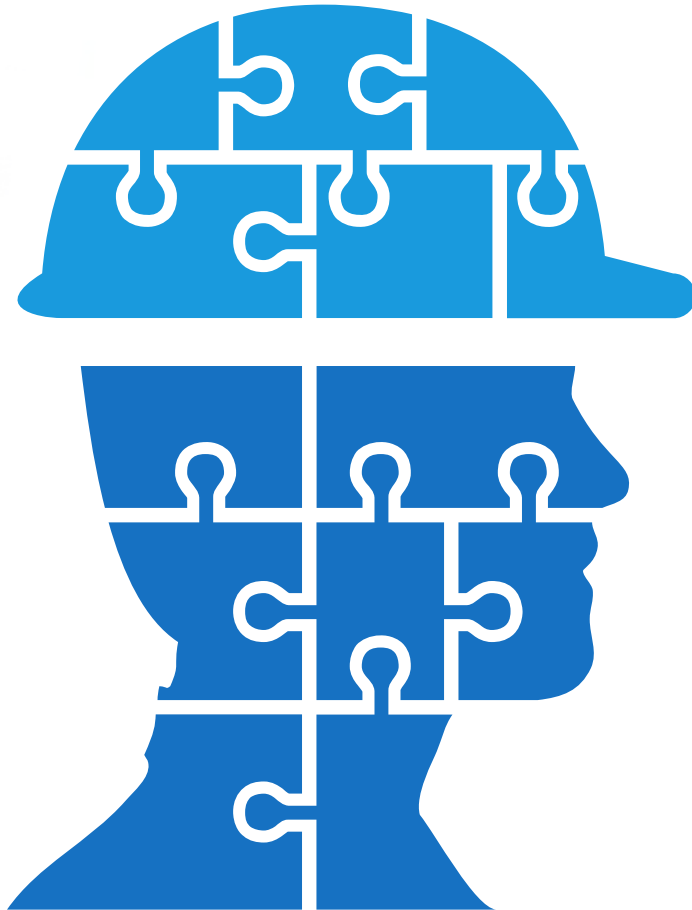
Login functionality



Landing page interactions



Wishlist management



The main goal of Manual testing is a quality assurance process that involves manually executing test cases to identify defects, usability issues, and ensure the software meets its requirements. It plays a crucial role in delivering a high-quality product.

Automation testing aims to increase efficiency and accuracy in software testing by executing test cases automatically. It enables faster feedback, reduces human error

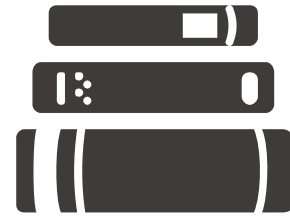
1 Overview of the project

- Tools used
- **Manual** : Excel.
- **Automation**: Selenium WebDriver, Java, IntelliJ IDEA
- **Frameworks**: TestNG, Cucumber



TestNG





02. Project Scope and Requirements

2 Project Scope and Requirements

Manual



User Story 1

As a customer, I want to filter products by category, so I can easily find items that match my interest.



User Story 2

As a citizen, I want to apply for a new passport online, so I can avoid visiting the passport office in person



User Story 3

As a patient, I want to schedule an appointment with my doctor online so that I can choose a convenient time without calling the office

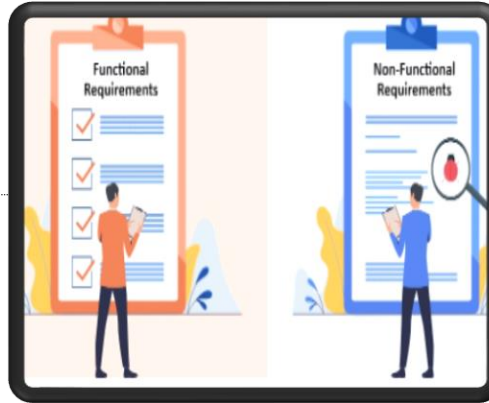
User Story 1

2 Project Scope and Requirements



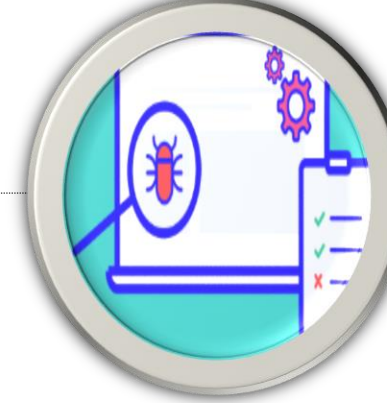
Scope

This user story focuses on implementing a product filtering feature on an e-commerce website. The primary goal is to allow users to easily find products that match their specific interests by filtering them based on predefined categories



Functional requirements

- 1- Display product categories
- 2- Select categories
- 3- Filter products
- 4- Clear filters
- 5- Update product count
- 6- Show selected filters
- 7- Responsive design



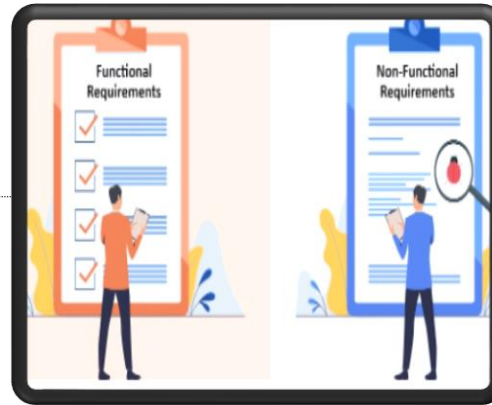
Non - functional requirements

- 1- Performance
- 2- Usability
- 3- Security



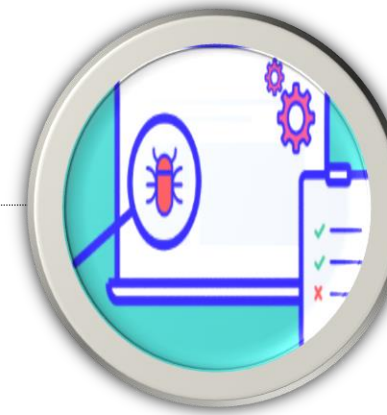
Scope

this user story focuses on enabling citizens to apply for new passports online, eliminating the need for in-person visits to passport offices



Functional requirements

- 1- Accessibility
- 2- Data entry
- 3- Validation
- 4- Progress saving
- 5- Submission
- 6- Confirmation
- 7- Status tracking
- 8-Payment



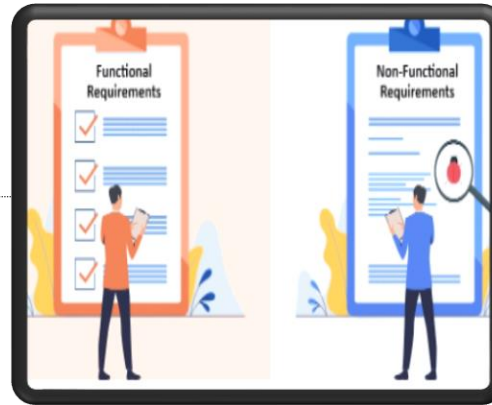
Non - functional requirements

- 1- Performance
- 2- Usability
- 3- Security
- 4-Integration



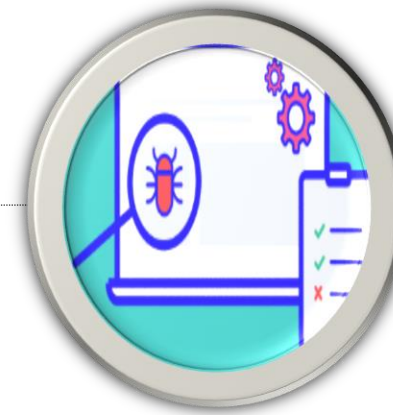
Scope

this user story focuses on enabling patients to schedule appointments with their doctors online, providing more flexibility and convenience than traditional phone-based scheduling.



Functional requirements

- 1-Appointment availability
- 2- Selection
- 3- Confirmation
- 4- Access
- 5- Rescheduling/cancellation
- 6- Notifications



Non - functional requirements

- 1- Performance
- 2- Usability
- 3- Security
- 4-Integration

Automation

Register

- TC1: Validate an error message is displayed when the user leaves the "Confirm Password" field empty
- TC2: Validate an error message is displayed when the password and confirm password do not match
- TC3: Validate that after registration with valid data, the user is navigated to the "My Account" page



Landing Page

- TC1: Validate that "Hot Sellers" is displayed and each card contains a price in \$
- TC2: Validate that each product card contains an "Add to Cart" button and is clickable
- TC3: Validate that a guest user can add products to the cart



Login

- TC1: Validate that the user can log in with a registered email and password



Wishlist

- TC1: Validate that guest users cannot add products to the wishlist
- TC2: Validate that logged-in users can add products to the wishlist





03. Challenges and Solutions

Manual

Manual testing can be time-consuming, prone to human error, and difficult to scale for large applications. It may also struggle to keep up with rapid development cycles.

Manual Testing vs Automation Testing



Automation

Automating tests can be complex, especially for dynamic and complex applications. Maintaining test scripts as the application evolves can be time-consuming, and achieving high test coverage can be challenging.



04.

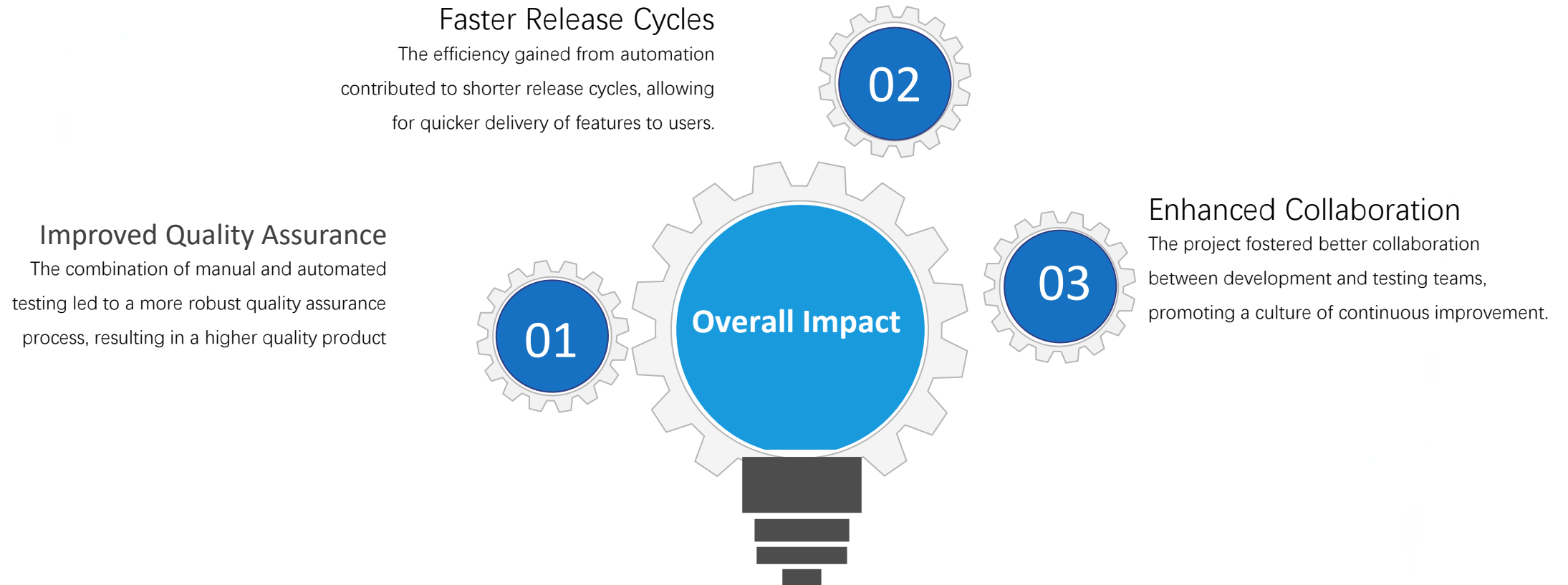
Project Outcome



The project aimed to implement a testing framework that incorporates both manual and automated testing methods to ensure comprehensive quality assurance for a software application and web.

Documentation: Detailed test cases and scenarios were documented, providing a valuable reference for future testing cycles.

Increased Efficiency: Automated tests significantly reduced testing time, allowing for faster iterations and quicker feedback on code changes.



Acknowledgements

I want to thank Engineer Mohamed Shafi for his ongoing guidance and support, from the moment he took over until the end.

I am grateful to all contributors who provided insights and assistance, making this project a success.



Thank you



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