

Software Testing Portfolio - Web

Software Testing Projects for Web Based application

I have successfully accomplished various projects in Software Testing from small level to enterprise level for Web Based applications. Few of the projects are mentioned below.

1. **Medefer Healthcare Application**

Overview

This is .NET MVC project. The core functionality of this application is to improve patient healthcare outcomes and reduce the financial burden on the NHS. There are different types of roles available in this application like General physician, consultant, registrar and admin. Two types of authentication, user dashboard, email notification and automatic add patient entry if any new patient detail comes into the email, doctor availabilities with hours and time are the core functionality of this application. This application is very secure application.

Challenges

- Requires expertise in testing, and usually, it is high in cost
- Dates are important and need to be accurate
- While designing test cases consider various roles.
- Testing team needs to be well aware of the various functionalities, clinical usage, and the environment used for the software.
- Cross dependency of software- testers need to ensure that any changes in one component or layer should not lead to side effect on the other.
- Additionally, the client wanted to confirm that upgrading from the previous release to the latest release wouldn't cause any issues. So the QA needed to quickly ramp up on the application and new functionalities introduced in latest release through exploration and requirement specifications.

Recommended Solution and Result

In order to help to client and to meet their testing needs, I followed these steps:

- I had explored application and developed an understanding of the application document.
- Created Test design documents like Test Cases, Test Scenarios from the requirement document.
- I developed a utility using browser stack to execute multiple scripts at a time in different browser/OS combinations that helped to identify functional issues in different browsers.
- By executing all test cases, I have achieved 100% Test coverage.
- Usability testing is very important. Some features or user scenarios are executed hundreds or thousands of times per day. So any inconvenience in these scenarios is critical. In addition, they don't want to use a mouse for frequently executed tasks. They expect to use only a keyboard with lots of shortcuts.

Tools and Technologies

- **Technologies:** MVC 5.0, ASP.NET, C#, .NET Framework 3.5, LINQ, jQuery, JSON, SQL Server 2012, IIS 7/8
- **Tools:** JIRA
- **Browsers:** Chrome, Firefox, IE11

Major Testing Performed:

- Functional Testing
- Regression Testing
- Integration Testing
- Cross Browser testing
- End-To-End Testing
- Usability Testing

Provided Documents and Reports

- Requirement Analysis document
- Test Plan
- Test Cases
- Bug Report
- Test Summary Report

2. APPLEBEES / IHOP**Overview**

Applebee's Services, Inc., franchises what is today the largest casual-dining chain in the world, with over 1,900 restaurants in 49 states, 15 international countries and one U.S. territory. Applebees is built in Sitecore MVC. It is used for displaying menu of restaurants. It has location, gift cards, order now and many other pages. Menu will display the items based on location. User will set the default location and based on that location, it will display the restaurants, Menu will be display based on restaurants selection done by the user. It has also many other pages like contact us, terms and condition, lighter fare, about us etc. It is multisite architecture. IHop and Applebees, both are hosted on single Sitecore instance.

Challenges

- There was an operational stability of pre-release versions of the application and I had a task to check it to give recommendations on how to improve main features of the application.
- Client was looking to automate their regression test suite for their web-based application to minimize the effort required to execute them any time they make a change to the application.
- Client wanted to have a comprehensive, maintainable Automation suite which would allow them to add and remove tests from the test scenarios with minimal change in code.
- Script Execution Support for IE, Firefox, Chrome using Automation.
- Due to the great coverage of application, the main task was to conduct exploratory testing to find complex logic and non-trivial bugs. The result of this test should be a report about the quality of the product being tested. Moreover, the app should support different browsers.

Recommended Solution and Results

- At the initial stage of testing, I recommended a lot of UI changes, and then the changes were made that helped to improve the features of the application. Solutions related to Hotel management operation were made directly in the core functional part of the application. Those corrections had a positive effect on application performance.
- Due to the creation of separate servers for development, testing and a release server, the this hotel management website had gone mainstream and received a lot of positive feedback.

- I developed the framework where all of the test scenarios, test data and keywords would be defined in an Excel workbook.
- Automation accelerated the time to market and caught bugs at a very early stage.
- Test suite covering all regression scenarios. Additional cases can be easily added to the suite
- Client achieved 100% test automation coverage for cross browser compatibility.
- Successfully managed parallel execution on multiple machines simultaneously.

Tools and Technologies

Technologies: Sitecore 8.0, C#.Net, .NET MVC 5, SQL Server 2012, Full stack development

Tools: JIRA, Selenium.

Browsers: Chrome, FF, IE11, Safari

Mobile Browsers: Chrome, FF, IE11, Safari

Major Testing Performed

- Functional Testing
- GUI Testing
- Regression Testing
- Cross Browser Testing
- Integration Testing
- Exploratory Testing
- Database Testing

Provided Documents and Reports

- Bug Report
- Test Scenarios
- Test Cases
- Test Summary Report
- Release Note

3. COATS

Overview

Coats is the world's leading industrial thread manufacturer and a major player in the Americas textile crafts market. COATS project is developed in Helix architecture. It also has Templates, Layout, Rendering controls etc. Has many controls such as Products, Industries, Software solutions, Coats in Action, Header, Information Hub, Contact Us and Many other controls across the websites. It is a multilingual website with 10 different languages as being presence in the Europe.

Challenges

- There was an important development aspect to make the visual part of the application and to simplify its usage. For this purpose, the I required to audit the application usability and offer its UI solutions.
- COATS website was developed in multilingual to support many countries, so it was required to test the localization and internationalization multiple languages.
- Testing also required to conduct functional and GUI testing, regression and security testing.

Recommended Solution and result

During Execution of QA, I recommended some solutions and following results has been achieved:

- During design and development stage, numerous errors in the application logic and interface were identified. Number of changes were proposed to improve the application usability.
- Based on the Scrum methodology, exploratory testing was included as an important factor in the general testing plan. This allowed me to reveal a number of non-trivial errors.
- Cross-browser testing revealed critical and non-trivial bugs.
- Security testing was one of the key stages of the project. It helped to identify and further eliminate the critical moments in the application security.
- Testing performed for Localization and Internationalization found some issues which are critical.

Tools and Technologies

Technologies: Sitecore 9.0.1, C#.NET 4.5, MVC5, LINQ, JQuery, SQL Server 2012

Tools: JIRA, XENU Link Checker, Fiddler

Browsers: Chrome, Firefox, IE11, Safari

Mobile Browsers: Safari, Chrome

Major Testing Performed

- Functional Testing
- Regression Testing
- GUI Testing
- Cross Browser Testing
- Usability Testing
- Exploratory Testing
- Security Testing
- Localization and Internationalization Testing

Provided Documents and Reports

- Bug Report
- Test Plan
- Test Cases
- Usability Recommendations
- Test Summary Report
- Security Testing Report

4. Technova

Overview

TechNova is one of the world's largest suppliers of print solutions. TechNova's innovative and world-class products cater to a wide range of industries, such as Commercial & Newspaper Printing, Publishing, Packaging, Signage, Photo, Textile, Engineering & Medical Imaging. This application is developed using nopCommerce. nopCommerce offers a wealth of features and capabilities to create an online store.

Challenges

- I was involved in the development process of the project because of its complex

functionality and continuous extension. In this connection there was a need for constant monitoring for functional bugs, test documentation creation and keeping it up to date.

- Generation of complex test cases to test advanced functionality, support of required number of browsers.
- Application also requires testing of Payment Gateway, Shopping Cart and many other features of eCommerce applications.
- Client's focus was on the application, required an extensive performance testing platform to stress application in which I have to determine the performance level that were used in the application in the development phase.
- The client had a large number of users of the application and expecting more numbers of users in coming days.
- The client wanted us to check and let him know that currently how many concurrent and serial users can access the system and run the application without any performance issue or delay.

Recommended Solution and Result

Since I was introduced to the project, the following results has been achieved:

- Continuously supported test documentation has been created
- Lots of errors in the application logic has been found during functional testing
- GUI testing has revealed numerous bugs in the application interface
- Cross-browser errors have been detected while testing the project in different browsers.
- A number of test cases have been created to test complex functionality of the project
- Generally, the quality and stability of the pre-release builds of the project have been improved.
- Security testing helped to detect and further eliminate critical moments of the application
- I decided to use JMeter for load and performance testing of the application that provides flexibility to simulate any number of users and requests.
- I already have various preloaded listeners and various types of samplers to get desired monitoring result and create a request.
- I was using Monitoring server resources at the time of execution like the CPU, Memory, Disk I/O and Network.

Tools and Technologies

Technologies: MVC 5.0, ASP.NET, C#, .NET Framework 3.5, LINQ, jQuery, JSON, SQL Server 2008, JDE Edwards, IIS 7/8.

Tools: TFS, XENU Link Checker, JMeter

Browsers: Chrome, Firefox, Safari, IE11

Major Testing Performed

- Functional Testing
- Regression Testing
- GUI Testing
- Cross-browser Testing
- Integration Testing
- Database Testing
- System Testing
- Security and Payment Gateway Testing
- Usability and Navigation Testing.

Provided Documents and Reports

- Bug Report
- Test Plan
- Test Scenarios
- Test Cases
- Test Summary Report
- Test Metrics

5. KITE

Overview

Kite is an advanced technology platform that empowers personalized e-commerce solutions for any size of company. They handle custom merchandise and photo print solutions for forward-thinking businesses around the world, enabling their customers to create & personalize over 1,000 different products. The project was to develop such a website which could help Kite convert good number of customers for their services. In this project WordPress CMS is the key component. Along with it, it also has Google Analytics, Yoast plugins and the integration of Mailchimp email service as a major components.

Challenges

- Short duration of time to complete it.
- There was an important development aspect to make the visual part of the application and to simplify its usage. For this purpose, I was required to audit the application usability and offer its UI solutions. Website should be visual, Interactive and Dynamic.
- Website should be optimized to their current conversion rate (CRO)
- Testing is also required to perform functional, GUI testing and Regression testing.

Recommended Solution and Result

Since I was introduced to the project, the following results has been achieved:

- GUI testing allowed to identify numerous errors in the application interface
- Functional testing helped to reveal bugs in the application.
- Cross-browser and cross-platform testing permitted to find errors in various browsers and platforms

Tools and Technologies

Technologies: MySQL, JQuery, JavaScript, Google Analytics, Yoast Plugins, Mailchimp integration for eMail campaign, Integration with social networking

Tools: JIRA, Firebug

Browsers: Chrome, Firefox, IE11, Safari

Major Testing Performed

- Functional Testing
- Regression Testing
- GUI Testing
- Cross-Browser Testing
- Usability Testing

Provided Documents and Reports

- Test Cases
- Bug Report
- Test Summary Report