**Test Plan Documentation**

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**Unit Name**

**C#**

**Test Plan**

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Overview

Purpose

Purpose of this Test plan document is outline strategies and test implemented for testing Asp. Webpage program implemented for Mr Sparkly requirement for the program. Document will outline test strategies, planning involved, test cases developed and used create final testing of product.   
  
This document outlines process needed finalise testing and any defects that would need be fixed before submission of final product and provide proof that, product meets requirements when being tested for features it needs to have.

A summary be provided for testing show successes and failure listing defects that where encounter in testing. A checklist be provided for testing requirements, and what is required go ahead with the test.

This document requires finalize and provide means for review before final product is released to the client. Its means of testing if product meets customer needs requirement before finally offloading product to the client and going into maintenance phase.

Risks involved with testing phase is any overlooked requirements that is not tested for in the final test plan, this major risk that have cascading failure for product when deployed and plans taken in place with manager myself and client mitigate and control this risk. Agile Development plan be used in place other software development cycles avoid and control changing requirements and also allow for flexibility with the product.

Assumptions

Assumptions for project is within testing environment no over builds or computer system be tested only listed systems are be tested and anything out scope will not be consider a failure. Because out of scope of the project, only details listed within testing and defects found for testing environment be considered any other defect regarding different browsers or system environment will not be covered in this document but however within maintenance phase. Any problems occur after testing phase for the Product will be considered during maintenance phase not testing phase. It be handled once product is released, if serious problem write email to head project manager have it looked by lead personnel.

Any external issues regarding software is not going be considered unless major part of program is incompatible. Another assumption regarding external variables is any other operating system or Internet browser not listed within design document scope will not be tested, or any add-ons also. So any additional issues regarding different environments given within requirements specifications

Scope

After sending few emails regarding requirements this program needs to meet and specifications for the program. I managed put together script of appointments we had and what I view as requirements.

“Mister Sparkly” is a company that manufactures and sells laundry detergent.

The company started its operations in 2009 and has been growing rapidly and now has several employees that work in various departments namely: Administration, Sales, Purchasing, Production, and Logistics.

Mister Sparkly purchases raw materials from a variety of suppliers by sending them with a purchase order. The raw materials go through a series of process to produce laundry detergent that gets bottled in to different popular brands.

The sales agents sell the detergents to the increasing number of retailers in their allocated area in various states and a retailer is assigned to one sales agent. The retailers can **only** place their orders with the sales agents and the agents forward the orders to the Administration department to be processed by creating a Sales Order.

With Mister Sparkly’s growth, the company would like to have an integrated system that would handle the company’s sales and purchasing, as well as managing its products, raw materials, suppliers, customers, and employees.

Mister Sparkly would like the system to do the following:

* Ability to manage the growing list of suppliers
* Ability to manage the list of materials
* Manage the purchasing of raw materials from suppliers
* Ability to manage the growing list of retailers
* Ability to manage the list of different brands of detergents
* Handle the sales of detergent to the retailers by the company’s sales agents
* Ability to manage the growing list of employees including the sales agents.

The security of the system is paramount and so they would like to assign different access rights to different users. Some users may have limited access to the features of the application. For example, users in Purchasing may enter new materials but cannot enter new products; some users in Sales are able to enter sales but can only read the product details; or some users may have administration rights where they can access every feature of the application. Each user will have their own user logins and one user will only be allocated with one login; there will be no cases where one user will have multiple access rights.

Mister Sparkly wants the Ordering / Sales system done in the first stage of the project and wants it to start immediately. The Purchasing system will be done in the second stage of the project and will start upon advice by Mister Sparkly.

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Scope of this project is within requirements for software given in Mr Sparkly script. Requirements be fulfilled by testing or defects logged and corrected. Any additions to requirements will not be considered for this testing document. As of 1/05/2015 requirements are as follow

* Order pages entering new orders
* Customer page for clients
* Products page

Testing for Mr sparkly asp.net webpage project, units being tested are as follows

* What be tested

How testing be performed is using manual testing using small network on local computer. Handling of connecting up connectivity of networks is out scope for this project. It is handled during deployment phase and IT staff for Mr Sparkly. Any internal network problems regarding Mr Sparkly connectivity software development team are not responsible for any external issues. If any external issues regarding testing be noted in defect log but will not consider already passed test as fail because of this.

Testing summary

Scope of testing

Testing will only be done using Microsoft Operating system and within default internet browser application. Any additional changes in scope for requirements will not be considered in this testing. Any changes in scope will be needed submitted and approved before 15/05/2015 by manager John before any inclusion with test plan take any additional changes in scope of the project.  
  
Testing will only include given & chosen platforms and media, testing will not include mobile friendly version. Website is being tested on desktop windows 7 system using Internet explorer as default browser of choice.

Test Strategy

Strategy for testing is incorporating how handles testing within given test plan Person responsible for unit testing would be lead programmer Jade Gorton. Manager is John who overlooks any changes needed before final product is released.

Strategies considered are:

* Reason for choice in using IE 7 is because compatibility with visual studios 2010 Debug mode for websites. Because other Internet browsers.
* Test cases will be used for manual testing of the program.

Test Responsibilities

Primary (P), Secondary(S)

|  |  |  |  |
| --- | --- | --- | --- |
| Test Level | External Party | Project Team | Business |
| Unit Testing |  | P |  |
| Network Testing | S |  | P |
| Product Testing |  | P | S |
| Product Verification |  |  | P |

Test Driven Development

During development planning for Mr sparkly development phase was introduce Test driven development make more robust final product. Using Test driven development would introduce tests in form of scripts allow for automatic testing during development. Testing for TDD is agile, it requires ease of additional features be considered and implemented into program with tests in mind keep existing functionality functional. Testing code is first considered before any functional code. Using test driven development allows for easily improving design quality and making it easier work with in the future.   
  
Each test is written further enhance program and reach final solution. When adding new test allows for pre-existing testing and other features anticipate any problems that occur during development can be addressed with additional test or simply refactoring failing function and making it work with any new features.  
  
Developing testing during test phase also allows you quickly test elements that otherwise be impractical with manual means. Also when feature fails you can quickly assess where it failed with tests you previously written so any unneeded change needed be made make program succeed the test only where program fails it won’t past previous written test. And when you add new features and other tests you can write more tests for specific examples cover any use for functions in test phase.

Environment requirements

|  |  |  |  |
| --- | --- | --- | --- |
| Testing environment | | | |
| Completed | Item | Notes | Result |
|  | Visual studio 2010 Debug mode | Debug mode for visual studio 2010 is required do unit testing |  |
|  | I.E 7 | Default browser for standard window systems |  |
|  | OPTIPLEX 990 | RAM 4GB, 64Bit windows 7 Professional |  |

Data requirements

* Testing Local Microsoft Access Database
* Perquisites of database have entries already entered In database prototyping phase
* Local copy of Access Copy

Resources and Skills requirements

* Asp.net skills resolve any defects
* SQL skills
* Internet technologies understanding

Testing tools

|  |  |
| --- | --- |
| Process | Tool |
| Test case creation | Microsoft word |
| Test case tracking | Microsoft |
| Test case execution | Manual |
| Test case Management | Microsoft Excel |
| Defect management | Microsoft Excel |
| Test scripts | Visual Studio 2010 |
| Automated Testing | Visual Studio 2010 |
| Test Script results | XML/Output log (Visual Studio 2010) |

Test Cases

Test cases are provided in zip

Unit testing

Testing backend methods for functionality requiring security is being tested using white box testing & test scripts. Unit testing for webpages handled in test cases. Manual testing regards to black box style of testing only dealing with what client sees.

Test Method

Test method is feature within visual studio 2005 and up, it is testing tool that allows for testing programs within another project, it uses features that allows it automate testing process for a program. Test method declares method to test particular unit testing. A single test method should only include single unit testing. However, sometimes similar group of methods need be pre-requisites for a method function correctly. Within automation testing it’s done manually instead relying on functionality of another method. This will eliminated any dependencies required for any existing functionality. It would slow down process for creating test scripts for individual connected functions however it will allow for testing of individual functions not it’s interactions between other functions. This will allow for final testing when individual function fails doesn’t bring false negatives for other dependant methods.

Mock objects will be used instead of actual object required for functionality. An example would be datatable from a database. You would need test and connect to actual database that needs pre planning and setting up if test is to pass. So instead create mock object where, has same functions regarding retrieving pre-defined table. This allows function unit testing run independent from actual database or any other related requirements. A mock object simply mimics one of functions regarding an external object from method or required input.

Assertions

Assertion is method for running the test condition for behaviour of program. You execute a method with static inputs and compare them to expected result. If code doesn’t meet or fails execute code with given inputs it will fail the test. Assertions can come in many forms, ranging from checking if something exists to checking if it returned & did nothing.

Build & test environment checklist  
Checklist are provided in zip

Test summary report

Defect log

Defect log are provided in zip