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BCS Digital Industries Apprenticeship

Software Tester Project Overview

Version 1.1

November 2018

Change History

Any changes made to the project shall be clearly documented with a change history log. This shall include the latest version number, date of the amendment and changes made. The purpose is to identify quickly what changes have been made.

Version Number and Date	Changes Made
V1.0 December 2017	Document created.
V1.1 November 2018	Removed 'Apprentice Declaration' bullet point from Project Information and Equipment section.

Software Tester Synoptic Project A

Project Overview and Objectives

In this synoptic project, you are a newly employed member of SW Motors Ltd. You have been appointed the role of Test Analyst in the System Test team for the PMC Dealership project.

SW Motors Ltd (SW) has recently acquired dealership status with the Perfect Motor Company (PMC). To support this dealership, SW wants to introduce a new computerised system to:

1. Record sales of current production PMC models;
2. Record a history of maintenance to PMC vehicles carried out in the workshop;
3. Produce weekly and monthly sales figures;
4. Produce weekly and monthly service figures.

The new system will be delivered by the PMC Dealership project.

As the Test Analyst your main tasks will be to:

1. Conduct an informal review of the project's System Requirements Specification (SRS) referencing the PMC Dealership Risk Register and record your comments;
2. Conduct an informal review of the project's System Design Specification (SDS) and record your comments;
3. Perform the stage of Test Analysis producing functional and non-functional test conditions, applying black-box test design techniques where appropriate;
4. Perform Test Design and Implementation by creating test cases, test scripts and test data, applying black-box test design techniques where appropriate, to cover the test conditions;
5. Execute the test scripts in one System Test cycle;
6. Record the results of the tests and raise incident reports where appropriate.

Project Outputs and Deliverables

Once completed, to demonstrate completion of the tasks you will be asked to provide a series of outputs, that should be submitted together with the synoptic project declaration.

Deliverable	Output	Evidence
Review	<ul style="list-style-type: none">• Carry out an informal review of the System Requirement Specification, referencing the list of Product Risks recorded for the PMC Dealership project.• Record your review comments.• Carry out an informal review of the System Design Specification for the PMC Dealership project.• Record your review comments	Excel, Word or PDF Document
Analyse	<ul style="list-style-type: none">• Review updated System Design Specification • Review the PMC Dealership System Test Plan.• Perform test analysis on the test basis (SDS and PMC Dealership Risk Register) for the PMC Dealership project.• Further test conditions should be derived for the following quality characteristics (test types):<ul style="list-style-type: none">○ Security (access rights).	Excel, Word or

	<ul style="list-style-type: none"> ○ Testable feature – Performance. ○ Testable feature – Usability. ● Provide your rationale for how you have structured the test conditions. ● Record your test conditions. 	PDF Document
Design and Implementation	<ul style="list-style-type: none"> ● Perform test design for the PMC Dealership project and derive test cases that cover the testable features and test types addressed during the test analysis stage. ● Record any test design techniques used for their derivation. ● Perform test implementation for the PMC Dealership project. ● Record your test cases and scripts. ● Provide your rationale for the test scripts. 	Excel, Word or PDF Document
Test execution	<ul style="list-style-type: none"> ● Perform test execution for the PMC Dealership project, where the following activities should be performed for: <ul style="list-style-type: none"> ○ Execute test scripts. ○ Record test results. ○ Raise incident reports. ● Execute the test scripts created during test design and implementation. ● Record the results of each test and raise incident reports where appropriate. 	Excel, Word or PDF Document

Project Information and Equipment

To complete this project, you will need to review all the information specified below which can be found in the appendices, this will enable you to deliver the key outputs and deliverables for this:

- background information;
- business requirements;
- system design;
- test plan;
- test template.

In addition, you will be provided with access to a virtual platform or alternatively if a virtual platform is not available, your training provider and or employer will provide you with all resources required to complete your project.

To run the PMC dealership application for the test execution stage of the project, you will need:

- A Windows PC (not Mac).
- The application, which is Microsoft Access Runtime 2007 (this has a light footprint so a high specification PC is not required).
- To install the application, follow the 'Instructions for installing the PMC dealership application' in the relevant project Appendix.
- Please pay heed to the note about only having one instance of the application on the PC at any one time.
- For this Test Analyst project, you must install the TSG_Motors_Day_1 application (not Day 2).

Apprenticeship Competencies Covered

- Reviews software requirements and specifications for software functionality and security, and defines comprehensive tests and conditions.
- Designs and builds test cases, test scripts, and test procedures, with expected results.
- Develops and collects representative and realistic test data.
- Conducts a range of different software testing types (including Unit Testing, Integration Testing, Functional and Non- Functional Testing, System Testing, Stress Testing, Performance Testing, Usability Testing, Acceptance Testing, Regression Testing and Exploratory Testing); interpreting and executing sets of moderately complex test scripts using agreed methods and standards.
- Accurately records the outcomes of test activities and maintains accurate test records and reports.
- Assesses test results against expected results and acceptance criteria and through traceability to requirements.