

Assignment1 – Create a business case for a test department

Semester 1 – 2023

Total Mark: 100

Weight: 30%

Learning Outcomes: 1 and 2

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ISCG7413 – Testing and Quality Assurance Management

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Assignment 1

1 Learning Outcomes

This assignment will assess you against the following learning outcomes:

1. Discuss the role of the Quality Assurance Manager.
2. Manage the test process, test execution and defect tracking.

2 Assignment Instructions

You will be provided with a given scenario, and you will play a role of Test and Quality Assurance Manager to manage the test process, test execution and defect tracking. This is a group assignment. You will work in a team of two. You need to complete four given tasks to pass the assignment.

2.1 Scenario

A software technology solution company has a plan to develop an online software for a financial management. The new proposed software will allow customers to apply for a home loan online and evaluate the house cost, which they want to buy. The company has appointed you as a Test Manager for this project. Your testing team includes 5 people, who have various roles (an automation software test analyst, a database test analyst, and testers). Your team is interacting with a team of 12 developers who are developing the online software. Your responsibility is to manage all system test related activities to support the development, in accordance with the business requirements as per [Appendix A](#).

2.2 Task List

Task 1: Document your role and responsibilities as a Test Manager in this project. (10 marks)

Task 2: Develop a master test plan for the given project. Use the test plan template provided in [Appendix B](#) to develop your plan. While developing the plan consider the Online System Requirements provided in [Appendix A](#). (60 marks – refer to Appendix B for mark distribution)

Task 3: Write two Use Cases (10 marks – 5 marks per each use case)

- a) How customers can apply online for a finance package, and the system will outline all steps in the process.
- b) Mortgage calculator.

Task 4: Develop two sets of test cases that will help the company to confirm requirements Use Cases (3a and 3b). Each set should have a minimum 5 test cases. (20 marks – 2 marks per each test case)

3 Assignment Submission Instructions

This is a group assignment. This means, only one of the team members should submit the final document.

Documentation must be professionally presented in an MS Word/Google Doc document; however, you need to save the final submission in PDF format.

The softcopy of the document (PDF format) must be submitted via the Moodle page on Turnitin link before the due date.

4 Late Submission

Assignments submitted after the due date and time without having received an extension through Affected Performance Consideration (APC) will be penalised according to the following:

- 10% of marks deduction if submitted within 24 hrs of the deadline,
- 20% of marks deduction if submitted after 24 hrs and up to 48 hrs of the deadline,
- 30% of marks deduction if submitted after 48 hrs and up to 72 hrs of the deadline,
- No grade will be given for an assignment that is submitted later than 72hrs after the deadline.

4.1 Affected Performance Consideration

A student, who due to circumstances beyond his or her control, misses a test, final exam or an assignment deadline or considers his or her performance in a test, final exam, or an assignment to have been adversely affected, should complete the Affected Performance Consideration (APC) form available from the Student Central.

When requesting APC for an assignment, the APC must be submitted (along with work completed to date) within the time frame of the extension requested, i.e., if the Doctor's certificate is for one (1) day, then the APC all work completed all work up to this day must be submitted on an application day.

5 Academic Integrity

Students themselves can be an excellent resource to assist the learning of fellow students, but there are issues that arise in assessments that relate to the type and amount of assistance given by students to other students. It is important to recognise what types of assistance are beneficial to another's learning and what types of assistance are unacceptable in an assessment.

5.1 Beneficial Assistance

- Study Groups
- Discussion
- Sharing Reading Material
- Reading the available online and library resources

5.2 Unacceptable Assistance

- Working together on one copy of the assessment and submitting it as own work
- Giving another student your work
- Copying someone else's work, this includes work done by someone not on the course
- Changing or correcting another student's work
- Copying from books, the Internet etc. and submitting it as own work; anything taken directly from another source must be acknowledged correctly; show the source alongside the quotation.

For the purposes of academic integrity, students who haven't demonstrated progress work in the class time can be asked to demo/test their work and explain logic to the lecturer individually after assignment submission.

6 Assignment – Marking Scheme

Task	Criteria	Descriptions	Marks
1	Excellent	Full role descriptions are provided in detail. The description includes all the duties, responsibilities and day-to-day challenges are identified. Student has correctly identified all the important steps to ensure quality of this project. The systematic approached for quality assurance is established. However, minor errors in the steps or duties of manager are identified.	8 – 10 marks
	Good	Full role description is provided. The description includes a most of the duties and responsibilities and day to day challenges are identified. Student has correctly identified most of the important steps to ensure quality of this project. The quality assurance is considered in description. Some minor errors in the steps or duties of manager are identified.	6 – 7 Marks
	Satisfactory	Role description is provided in brief. The description includes a some of the duties and responsibilities and day to day challenges. Student has correctly identified few steps to ensure quality in the project. The systematic approached for quality assurance is missed. Number of errors in the descriptions and steps are identified.	4 – 5 Marks
	Poor	Role description is provided in brief, with some error. The description includes a some of the duties and responsibilities. A day-to-day challenge are missed. Steps for ensure quality in the project are missed. Number of errors in the descriptions are identified.	0 – 3 Marks
2	Excellent	Student has used the test plan template format provided in appendix A to create Master Test plan. For each section, a step-by-step description are provided. Each section is written to the point, and concise. However, there might be minor errors in description.	50 – 60 Marks
	Good	Student has used the test plan template format provided in appendix A to create Master Test plan. For each section, a step-by-step description are provided. Some minor errors are in the description.	40 – 49 Marks
	Satisfactory	Student has used the test plan template format provided in appendix A to create Master Test plan. Few sections are missing. For each section description are provided. Number errors in description are exist.	20 – 39 Marks
	Poor	Student has used the test plan template format provided in appendix A to create Master Test plan or don't use it at all. Essential sections are missing. For each section description are provided, but some of them missing number of details. Or some descriptions are meaningless. Number errors in description are exist.	0 – 19 marks

3	Excellent	Develop two use case that will help the company to confirm requirements However, there might be minor formatting errors.	8 – 10 marks
	Good	Develop two use case that will help the company to confirm requirements. One Use-case are not identified properly. Some formatting errors are identified.	6 – 7 marks
	Satisfactory	Develop two use case that will help the company to confirm requirements. One Use-case are not identified at all. Number of formatting errors are identified.	4 – 5 marks
	Poor	Develop two use case that will help the company to confirm requirements. Use-case is not identified properly. Number of formatting errors are identified.	0 – 3 marks
4	Excellent	Develop two sets of test cases that will help the company to confirm requirements. Each set has as minimum 5 test cases. However, there might be minor formatting errors.	15 – 20 marks
	Good	Develop two sets of test cases that will help the company to confirm requirements. Some errors are identified, or number of test cases is less, than required	10 – 14 Marks
	Satisfactory	Develop two sets of test cases that will help the company to confirm requirements. Many errors are identified, and number of test cases is less, than required	5 – 9 marks
	Poor	A few test cases developed. Many errors are identified, and number of test cases is less, than required	0 – 4 marks
Total			100

Appendix A – Online System Requirements

Finance Website System

Possible example to get idea about existing Finance Website System:

<https://virginmoney.com.au/>

<https://www.ubank.com.au/>

Functional – Requirements for the Proposed Website

Primary components and modules required to build a Finance Website System

1. Advice inquiry Web Form - The form will be available on landing page. The form enables visitors to inquire about different finance packages, cost, and finance options.
2. Mortgage calculation page – to help potential clients make easy estimation for finance.
3. User login form
4. User able to do online application for his/her finance. This form allows users to apply and evaluate finance cost and length.
5. On landing page should be a place for dynamically loading and instantly updating the most finance deals for the users. The information can be updated/added by administrator.
6. Other components - Other optional components may include, reviews/testimonial page, recent banks rates page and a contact page. The process for adding these features is outside the scope of this guide. However, you can access the instructions for working with blogs, announcements, and other related features by searching this help system.

Features Checklist

- Online application page for user, to have an option to apply for different finance packages.
- Client Database
- Contact Management
- Email Marketing
- Flyer / Catalogue Printing
- Website Management

Non- Functional Requirements

Security

Security is the feature of the system which ensures that system must be protected from the unintentional or malignant harm; unauthorized access to the data is not permissible. For the safety purpose the data must be backed up after certain period of time say 24 hours and the backed-up data must be stored in a secure location.

Performance

The term performance alludes to the capacity of the system or software to process as many as transactions per second as submitted to it without failure. The online Software is a multi- user system, which implies distinctive clients can access the system simultaneously and the system will work accurately and proficiently.

Usability

As online system is carried by various types of clients i.e., whether they have knowledge of computers or not so the application designed must be easy to use and enable the client to manage different

search, set up preferences, support client communications with simplicity. The application must have graphical user interface and it must have the ability to provide informative error messages.

Availability

The online software should be available round the clock. It means for how long the system is available for its users or clients and for how long the system will be operational.

Confidentiality

The data entered by the client is not accessible to other clients using online software. As far as the confidentiality is concerned it means to maintain the secrecy as online system is round the clock. It is important that the software provide the facility to maintain the secrecy of the clients and the clients should have their own passwords and usernames and these must be automatically become inaccessible to the person who so ever wants to have the unauthorized access to the account.

Reliability

Reliability reflects the capacity of the software to maintain its performance over the time. It implies how well the system performs in peak hours. A robust system is one which has the capacity to handle the bugs without failure i.e., how effortlessly it handles the bugs because of data or handling, surprising conditions while working conditions furthermore the software imperfections, and if the system is robust it is reliable also. The application must self-contained, consistent, and complete with in itself.

Operability

It is concerned with the how well the software will work in distinctive environment. The online software application must have the capacity to operate on any gadget i.e., hand-held gadgets or desktops or laptops without failure the change in the environment ought not to hamper the operability of the software. The online software ought to be operational on any hand-held gadgets and it ought to have the capacity to show the different types of currencies used in distinctive nations.

Traceability

Traceability refers to the capability for tracing the status of the transaction and login activity on account.

Recoverability

Recoverability implies the ability to restore your software to the point when failure occurred. The ability to recoup quickly from a system failure depends not simply on having backup of the data, also on having a predefined plan for recuperating that information. The online system must have the capacity to recover itself from the failures which may happen due to internet problem or because of some other reason. The online system ought to have the capacity to recover the influenced information after failure.

Visibility

The online software should empower the client to set up an extensive search, to login to own account and be able to set the configuration of the online software application as his/her desire. As the customer is dealing with his or her accounts online the application must be composed in such a way, that every single feature of the application is obvious to the client as the client logins. All the features of the application must be visible and easy to understand and use.

References:

<http://www.ijcat.com/archives/volume4/issue4/ijcatr04041002.pdf>

Appendix B – Test Plan Template

1. Overview (2 marks max)
2. Bounds (6 marks max – 2 marks per each sub-session)
 - a) Scope
 - b) Definitions
 - c) Setting
3. Quality Risks (5 marks max)
4. Proposed Schedule of Milestones (5 marks max)
5. Transitions (6 marks max – 2 marks per each sub-session)
 - a) Entry Criteria
 - b) Continuation Criteria
 - c) Exit Criteria
6. Test Development (5 marks max)
7. Test Configurations and Environments (5 marks max)
8. Test Execution (12 marks max – 2 marks per each sub-session)
 - a) Resources
 - b) Test Case and Bug Tracking
 - c) Bug Isolation and Classification
 - d) Test Release Management
 - e) Test Cycles
 - f) Test Hours
9. Risks and Contingencies (5 marks max)
10. Change History (3 marks max)
11. Referenced Documents (3 marks max)
12. Frequently Asked Questions (3 marks max)