EXPERIMENT - 5

Software Testing and Quality Assurance

Abstract

Create a test plan document for Library Management System.

Syeda Reeha Quasar
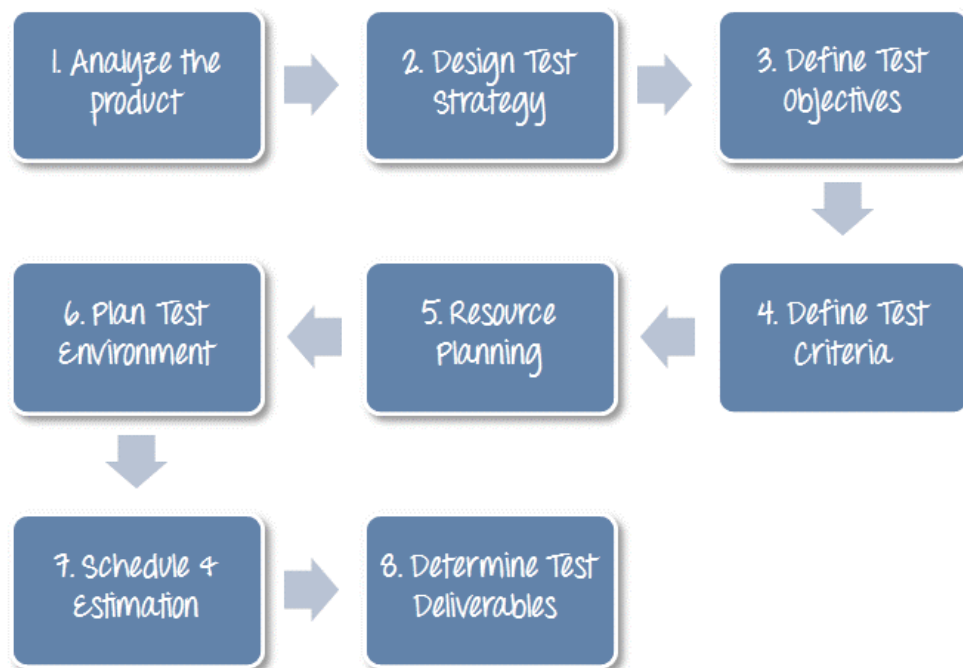
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EXPERIMENT – 5

Aim:
Create a test plan document for Library Management System.

Theory:
A Test Plan is a detailed document that describes the test strategy, objectives, schedule, estimation, deliverables, and resources required to perform testing for a software product. A test Plan helps us determine the effort needed to validate the quality of the application under test. The test plan serves as a blueprint to conduct software testing activities as a defined process, which is minutely monitored and controlled by the test manager.

How to write a test plan:

Solution:

What are the requirements of the library management system?

- Users can register and log in.

- The user can search for the added books and check in or out.

- The user can pay the fine or extend the duration of the borrowed period.

- The user can change the password and other profile details.

- The user can add books.

- The user can place the holds and modify existing holds.

- The user can manage the inventory of the books.

These are some of the common features expected from the library management system. So you have to write a test case for library management system to check for. In addition to these test scenarios, you have GUI-based software to check for bugs, usability, and functionality.
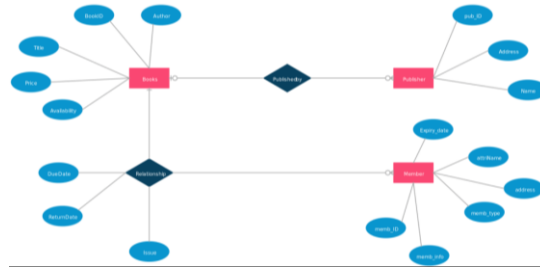
- Test Scenario For Hospital Management System

- Test Case For HR Payroll System

- Test Case For Computer Keyboard

- Test Case For Mouse

- Test Case For New Folder

- Test Case For Notepad

What is Library Management System?

The purpose of a library management system is to operate a library with efficiency and reduce costs. The system is entirely automated and streamlines all the tasks involved in the operations of the library. The activities of book purchasing, cataloging, indexing, circulation recording, and stock checking are done by the Library Management System software. Such software eliminates the need for repetitive manual work and minimizes the chances of errors.

The library management system software helps in reducing operational costs. Managing a library manually is labor intensive and an immense amount of paperwork is involved. An automated system reduces the need for manpower and stationery. This leads to lower operational costs.

The system saves time for both the user and the librarian. With just a click the user can search for the books available in the library. The librarian can answer queries with ease regarding the availability of books. Adding, removing, or editing the database is a simple process. Adding new members or canceling existing memberships can be done with ease.

Testing:

Test Unit: Admin Component

- **Adding Login page**

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If we are not enter the valid roll no or LOGIN ID.	LOGIN ID or Roll no	Please fill out this field.	SUCCESSFUL
2.	If we only put the valid roll no or LOGIN ID and after pressing the login button.	Your password	Please fill out this field.	SUCCESSFUL
3.	If we are putting the correct user name and wrong password and after selecting the valid login credential.	Select the user type	Kindly select the status	SUCCESSFUL

- **Adding Registration form:**

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1	If we are not selected any field.	Select Course	Kindly select the fields.	SUCCESSFUL
2	If we are not entered the name.	Name	Please enter the name.	SUCCESSFUL

3	If we are not entered the valid roll no.	Roll no	Please enter the valid roll no.	SUCCESSFUL
4	If we are not entered the valid password.	Enter Password	Please enter the valid password.	SUCCESSFUL
5	If the password is not same as previous password.	Confirm password	Please enter the valid password once again.	SUCCESSFUL
6	If we are not entered the valid emailid.	Email id	Kindly insert the emailid.	SUCCESSFUL
7	If we are not suppose to enter contact no.	Contact no.	Please enter the contact no.	SUCCESSFUL
8	If we are not suppose to add any image files on the choose File.	Choose file	Kindly upload Image.	SUCCESSFUL

- o **Adding admin/branch**

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If we are not enter the branch name.	Branch name	Please fill out this field.	SUCCESSFUL
2.	If the branch description not to entered.	Branch description	Please fill out this field.	SUCCESSFUL
3.	If we not selected any status	Branch status	Kindly select the status	SUCCESSFUL

- o **Admin/book:**

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks

1.	If you are not selected category.	Book category	Please fill out this field.	SUCCESSFUL
2.	If we are not enter the book name.	Book name	Please enter book name.	SUCCESSFUL
3	If we are not enter the book cost fields.	Book cost	Please enter book cost.	SUCCESSFUL
4	If we are not enter book author fields.	Book author	Please enter book author.	SUCCESSFUL
5	If we not selected any status.	Book status	Kindly select status.	SUCCESSFUL
6	If we are not suppose to add any image files on the choose File.	Book Image	Kindly upload Image.	SUCCESSFUL
7	If we are not enter book description.	Book description	Book description should not be empty.	SUCCESSFUL

- o **Admin/Book category:**

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If we are not enter the valid book category.	Book category	Please fill out this fields.	SUCCESSFUL
2.	If we are not suppose the book description.	Book description	Book description should not be empty..	SUCCESSFUL
3.	If we are not selected status.	Book status	Kindly select status	SUCCESSFUL

- o **Admin/Course:**

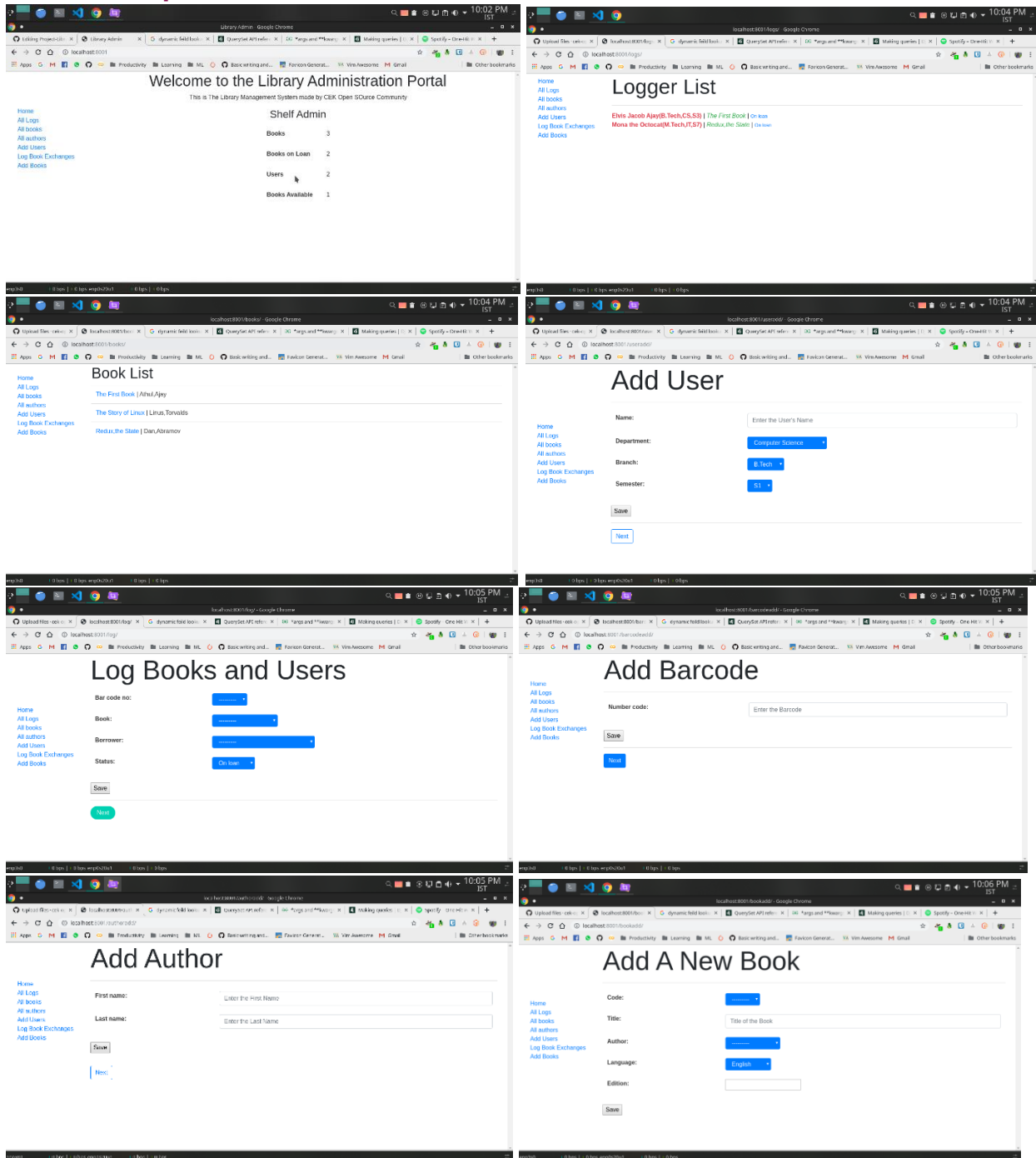| Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1.	If you are not select the branch	Select branch.	Please enter the valid fields.	SUCCESSFUL
2.	If the course name not entered.	Course	Please enter the course.	SUCCESSFUL
3.	If the course note did not entered.	Course note	Please You should fill out course note.	SUCCESSFUL
4.	If we are not selected status.	Course status	Kindly select the status.	SUCCESSFUL

o **Admin/Librarian:**

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1	If we are not entered the name.	Name	Please enter the name.	SUCCESSFUL
2	If we are not selected the type.	Type	Please select the type.	SUCCESSFUL
3	If we are not entered the valid login id	Login id	Enter the valid Login id.	SUCCESSFUL
4	If we are not entered the password field.	Password	Enter the valid password.	SUCCESSFUL
5	If we are not entered the same password.	Confirm password	Enter the valid password once again.	SUCCESSFUL
6	If we are not selected any status.	Status	Kindly select the status	SUCCESSFUL

○ **Admin/Student:**

Serial No.	Condition To be Tested	Test Data	Expected Output	Remarks
1	If we are not selected any course.	Course	Please fill out the fields.	SUCCESSFUL
2	If we are not entered the student name.	Student name	Please enter the student name.	SUCCESSFUL
3	If we are not entered the valid roll no.	Roll no	Please enter the valid roll no.	SUCCESSFUL
4	If we are not entered the valid password.	Password	Please enter the valid password.	SUCCESSFUL
5	If the password is not same as previous password.	Confirm password	Please enter the valid password once again.	SUCCESSFUL
6	If we are not entered the valid emailid.	Email id	Kindly insert the emailid.	SUCCESSFUL
7	If we are not suppose to enter contact no.	Contact no.	Please enter the contact no.	SUCCESSFUL
8	If we are not selected status	Status	kindly select status.	SUCCESSFUL
9	If we are not suppose to choose the image file.	Student image	Kindly upload the image.	SUCCESSFUL

Screen Snaps:

Result:
Test plan for Library management system was created and verified.

Viva Questions

Q1. What is IEEE Test Plan Template?

IEEE 829 Test Plan Template:

• Test Plan Identifier

• Introduction

• References

• Test Items

• Features To Be Tested

• Features Not To Be Tested

• Approach

• Item Pass/Fail Criteria

• Suspension Criteria And Resumption Requirements

• Test Deliverables

• Testing Tasks

• Environmental Needs

• Responsibilities

• Staffing And Training Needs

• Schedule

• Risks And Contingencies

• Approvals

Q2 What are the reference documents for Test Planning?

Reference Documents for Test Planning stage:

Requirements

Project Plan

Test Strategy

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Design docs

Process guidelines docs

Corporate standards docs

Q3. What is Software Test Process?

The fundamental test process comprises test planning and control, test analysis and design, test implementation and execution, evaluating exit criteria and reporting, and test closure activities.

Q4. What is Function Point Analysis?

A Method aiming to measure the size of the functionality of an information system. The measurement is independent of the technology. This measurement may be used as a basis for the measurement of productivity, the estimation of the needed resources, and project control.

Q5: What is the Entry criteria and Exit criteria in Test Plan?

The set of generic and specific conditions for permitting a process to go forward with a defined task, e.g. test phase. The purpose of entry criteria is to prevent a task from starting which would entail more (wasted) effort compared to the effort needed to remove the failed entry criteria.

The set of generic and specific conditions, agreed upon with the stakeholders, for permitting a process to be officially completed. The purpose of exit criteria is to prevent a task from being considered completed when there are still outstanding parts of the task which have not been finished. Exit criteria are used to report against and to plan when to stop testing.