Kulliyyah of Information and Communication Technlology

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PROJECT MANAGEMENT IN INFORMATION TECHNOLOGY

USER ACCEPTANCE TEST OF MAAHAD TAHFIZ ABU QASIM SYSTEM DEVELOPMENT

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1. Purpose

The Maahad Tahfiz Abu Qasim website project's User Acceptance Test (UAT) Plan serves as a summary of the features, functions, applications, and system that will be put to the test during the UAT phase. The specifications, design documentation, and requirements provide comprehensive information. The plan and tests will guarantee that the website operates as expected and is prepared for deployment, giving management, employees, and the user community peace of mind.

In order to verify the following for the Maahad Tahfiz Abu Qasim website, the UAT Plan supports the following goals and objectives:
- All website functionalities, features, and items are to be tested.
- The testing approach to be employed.
- The website's ability to support the required educational and administrative functions and processes under conditions that closely mirror the live environment.
- The website performs correctly as planned, without errors.
- The website's performance meets acceptable standards.
- All requirements have been met, ensuring traceability from the documented requirements to the UAT scripts.

This comprehensive testing process will ensure that the Maahad Tahfi Abu Qasim website is robust, reliable, and ready for use by students, staff, and the broader community.

1.1 Background

In the realm of software development, the practice of using test cases to validate system functionality has been a cornerstone since the early days of computer programming, spanning over five decades. Despite the advancements in technology and methodologies, the challenge of identifying which processing events should be converted into test cases remains significant. Historical evidence suggests that attempting to test every possible scenario within an application is not only impractical but also uneconomical, as the Return on Investment (ROI) does not justify the extensive effort required. Empirical data supports the notion that most testing exercises typically cover less than half of the total instructions within a system. Consequently, the strategic selection of the most critical processing events is essential to ensure effective and efficient test coverage.

Our project involves the development of a comprehensive website for Maahad Tahfi Abu Qasim, an esteemed educational institution. In line with best practices in User Acceptance Testing (UAT), our focus will be on creating a robust set of test cases that prioritize the most significant processing events. This approach aims to maximize the efficiency of our testing efforts while ensuring that the website meets the high standards of functionality, reliability, and user satisfaction required by the institution. By carefully selecting and thoroughly testing these critical events, we aim to deliver a website that not only meets but exceeds the expectations of Maahad Tahfi Abu Qasim and its stakeholders.

1.2 Building Test Cases for Maahad Tahfiz Abu Qasim Website

1. Identify test resources
For the website project of Maahad Tahfi Abu Qasim, ensure the allocated time and budget for testing are clearly understood. Optimize the use of available resources to cover the critical functionalities of the website.

2. Identify Conditions to be Tested
Develop a testing matrix to cover all possible test conditions. Below is a sample matrix to identify the conditions to test across different pages and functionalities of the website.

3. Rank Test Conditions
Rank the identified test conditions based on their importance and priority. Focus first on high-priority conditions such as navigation and functionality on the homepage and academic pages.

4. Select Conditions for Testing
Based on the ranking, select the test conditions to ensure that the most critical aspects of the website are tested first. Document these in a detailed test matrix.

5. Determine Correct Results of Processing
Before creating test transactions, determine the expected results for each test condition to ensure accuracy. Assign unique identifiers to each test case.

6. Create Test Cases
Convert each test condition into a format suitable for testing. Below is an example set of test cases for the Maahad Tahfi Abu Qasim website:

Test Case Document
Homepage Test Cases

Test Case ID: TC_HM_01
Test Condition: Verify homepage loads correctly
Expected Result: Homepage should load within 3 seconds, all elements (logo, menu, banner, footer) should be visible and correctly formatted.

Test Case ID: TC_HM_02
Test Condition: Verify navigation links
Expected Result: Clicking on each navigation link (Academic, School, About, etc.) should redirect to the correct page.

Test Case ID: TC_HM_03
Test Condition: Verify homepage banner functionality
Expected Result: Banner should rotate images every 5 seconds without any lag.

Academic Page Test Cases

Test Case ID: TC_AC_01
Test Condition: Verify academic page content
Expected Result: Academic page should display a list of courses and their details correctly.

School Page Test Cases

Test Case ID: TC_SC_01
Test Condition: Verify school page information
Expected Result: School page should display information about different school programs accurately.

About Page Test Cases

Test Case ID: TC_AB_01
Test Condition: Verify about page content
Expected Result: About page should display the institution's mission, vision, and history correctly.

Other Pages Test Cases

Test Case ID: TC_OT_01
Test Condition: Verify additional services page
Expected Result: Additional services page should list all services provided by the institution correctly.

7. Document Test Conditions
Document all test cases, their conditions, expected results, and actual results in a comprehensive testing document.

8. Conduct Tests
Run the application using the identified test conditions. This can be done in a test environment or a pseudo-production environment.

9. Verify and Correct
Verify the results of the tests against the expected outcomes. Document any bugs or issues found, correct them, and re-execute the test cases to ensure the issues are resolved.

2. User Acceptance Test Description

This section provides the UAT goals and objectives, entrance and exit criteria, and what will be tested for the Maahad Tahfiz Abu Qasim website project.

2.1 Test Goals and Objectives Specifics

- Verify that the homepage, academic page, school page, about page, and other pages load correctly and all elements (text, images, links) function as intended.
- Ensure navigation between pages is seamless and without errors.
- Check that forms (if any) on the website submit data correctly and securely.
- Validate that user data and institutional data remain secure and private.
- Confirm that the website complies with relevant legal and regulatory requirements, including accessibility standards.

2.2 Entrance Criteria Specifics

Before performing UAT for the website:
- Website requirements, design, and specifications must be approved.
- The UAT Plan for the website must be approved.
- Unit testing and system testing of the website must be completed.
- UAT test scripts for each page (homepage, academic page, school page, about page, and others) must be written and reviewed.

2.3 Exit Criteria Specifics

To complete UAT for the website:
- All test scripts for each page must be executed, reviewed, and approved.
- All issues identified during UAT must be logged and resolved.
- Regression testing must be performed for all resolved issues to ensure no new issues have been introduced.

2.4 Test Deliverables Specifics

The following documents will be delivered for the UAT of the website:
- The User Acceptance Test Plan for the website.
- Test scripts for each page (homepage, academic page, school page, about page, and others) with supporting documentation (e.g., tester, test dates, results, incidents, logs).
- UAT Traceability Matrix for the website (if applicable).
- The UAT Summary Report for the website.

3. UAT Test Approach

This section outlines the user acceptance testing (UAT) environment and approach for the Maahad Tahfiz Abu Qassim website. The UAT environment should closely replicate the production environment to ensure that testing results are accurate and reflective of the live site. UAT testing will be conducted based on predefined test scripts derived from the website's requirements, design, and specifications documentation.

3.1 Scope of UAT Testing

The scope of UAT testing for the Maahad Tahfiz Abu Qasim website includes verifying the functionality of all main navigation links and menus, ensuring the correct display and accuracy of content on pages, testing the submission and validation of the contact form. Additionally, it covers performance testing for page load times and responsiveness across different devices, ensuring consistency in the user interface design, and verifying the accuracy of any reporting or analytics data presented on the site.

3.2 Test Categories

Category	Description
Functionality	- Test that all links and navigation menus function correctly and lead to the intended pages - Verify that all content (text, images, videos) is displayed properly and accessible.
Security and Access Control	- Verify that the website is secured and has a valid certificate - Check for any login functionality (if applicable) and ensure that unauthorized access is prevented.
Boundaries	- Check that input fields (such as forms) enforce constraints (e.g., required fields, input length, format validation).
Audit Trail	- Verify if the website tracks any user actions (such as form submissions, registrations) and ensure these are logged correctly (if applicable). - Check if there are any logs for administrative changes to the website content.
Error Conditions	- Test that appropriate error messages are displayed for invalid form submissions (e.g., missing required fields, invalid email format). - Ensure that users receive confirmation messages for successful actions (e.g., form submissions).
Performance	- Measure page load times to ensure they meet acceptable performance standards. - Test website responsiveness across different devices and screen sizes to ensure quick and smooth navigation.
External Interfaces	- Verify that external links (such as social media, Google Maps) work correctly and open the intended destinations.
User Interface	- Check that the website's design and layout are consistent across all pages. - Ensure that the website is easy to navigate and that the user interface elements (buttons, links, forms) work as described.

3.2 Test Cases:

3.2.1 Login WP-Admin, Test Case-1 (Client)

TEST CASE	
Test Case ID: Group 2_02	Test Designed by: Omar
Test Priority (Low/Medium/High): High	Test Designed date: **07.04.2024**
Module Name: Log In	Test Executed by: Hakim
Test Title: Verify **Login with Admin Email and Password**	Test Execution date: **13.05.2024**
Description: **Test the Login as Admin Operation**	Pre-conditions: User has a valid web hosting email address
Technique: Equivalence partition – valid partition	Dependencies:**Test REQ-Login_wp_admin-001**

	Fill in by test case **author**			Fill in by **Tester**		
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	Navigate to the login page or Wordpress.	Link: maahadtahfizabuqasim.com/wp-admin	Login page display.	Login page displayed.	Pass	
2	Click Login button	log in button	login page display	Login page displayed.	Pass	
3	Provide WP ADMIN Email	Email: maahadtahfizabuqasim@gmail.com	Client enters his email address.	Email address entered.	Pass	
4	Provide a password (as users wish)	Password:12344	Client enters a password	Password entered.	Pass	
5	Click Login Button	“Log In” button	Wordpress verification display	Final verification page displayed and entered the admin page dashboard	Pass	

Post-conditions:

1. Client is validated with the web hosting provider and successfully Log In.
2. The dashboard displayed the Admin Dashboard page of the system.

3.2.2 Navigate Websites, Test Case-2 (User)

TEST CASE	
Test Case ID: Group 2_02	Test Designed by: Omar
Test Priority (Low/Medium/High): Very High	Test Designed date: **07.04.2024**
Module Name: Navigate Website and Checking Functions	Test Executed by: Hakim
Test Title: **Functional Checking in the Websites By Users**	Test Execution date: **13.05.2024**
Description: **Access and Navigate the websites for functional checking and bugs**	Pre-conditions: User must has a valid web address
Technique: Equivalence partition – valid partition	Dependencies:**Test REQ-Navigate_Sites-002**

	Fill in by test case **author**			Fill in by **Tester**		
Step	Test Steps	Test Data	Expected Result	Actual Result	Status (Pass/Fail)	Notes
1	User enters the website for UAT by Admin request	Getting approved from client to navigate as user	Having the correct link from admin	Get valid link	Pass	
2	Navigate to the websites	Link: maahadtahfizabugasim.com	Home page display	Home page displayed.	Pass	
3	Checking other functions I	Utama, Akademik, Tentang Sekolah etc	Users may be able to check it all easily.	User checked successfully	Pass	
4	Provide Feedback	Websites navigation and check the functional output	User should be satisfied with navigation	User satisfied with the website.	Pass	
5	User check final functions to review	Website	Should be successful	Review successful	Pass	

Post-conditions:

3. User is validated with the admin request for UAT.
4. The UAT should be successful with good reviews.

4.0 Functional Testing

Functional testing for Maahad Tahfiz Abu Qasim (MTAQ) involves assessing the primary activities, techniques, and tools used to evaluate the institution's offerings. This includes ensuring that the Quranic and academic programs meet educational standards, that the residential facilities are adequate and comfortable, and that effective communication channels exist between parents and teachers.

4.1 Functionality included

- Evaluate the effectiveness of Quranic teaching methods through student comprehension tests and feedback.
- Assess academic performance and progress in core subjects via standardized testing.
- Inspect residential facilities for safety, comfort, and adequacy.
- Review parent-teacher engagement mechanisms for efficiency and effectiveness.

4.2 Functionality Excluded

- Testing of non-core extracurricular activities that do not directly impact the core educational and residential program.
- Evaluation of external collaborations and partnerships not related to the core curriculum and residential life.

5.0 Test Environment

The test environment for maahadtahfizabuqasim.com website should actively mirror the production environment in other words **the live website users will see** as closely as possible.

This allows our team to identify and indicate and fix the issues that might come due to differences in hardware or software configurations. As we try to make it user friendly and convenient for the public that is why we didn't require any specific hardware and software for the site. Below we provides a breakdown of the key factors of our website test environment:

5.1 Hardware

Hardware is a physical component of the computer where we may be able to build blocks of a computer and do so many things. Hardware is directly connected with the PC's BIOS on ROM which stored data for the basic configuration of our PC. and so many things which can't be described in only words. It's one of the major components of the PC.

In User Acceptance Testing (UAT) for Maahad Tahfiz Abu Qasim Org,There's no specific hardware required for the website testing. The main agenda was to focus on maahadtahfizabuqasim.com functioning properly for the users and for any further development the assurance has been confirmed for any hardware such as laptop, pc, M2 chip etc.

- **UAT Hardware Devices:** Users can perform UAT on various devices like laptops, desktops, or even smartphones and tablets. As long as they have a web browser and internet connection, they can access your website. No specific hardware required for testing the websites.

5.2 Software

Software is the set of instructions that tells the hardware what to do it's like a basic or primary ai for the hardware. Both are connected very deeply to complete each other. But there are two types of software we will find which is:

System software: System Software manages the computer's hardware which allows other software to run. The operating system (like Windows or macOS) is an example of system software.

Application software: This allows users to perform specific tasks, like browsing the web browser, writing documents, editing photos, visiting websites or editing websites or building applications and so many other things.

- **UAT Software:** In our UAT, we need the Application software to text our sites. As our goal is to make a website which must be **user friendly for the users**, Therefore, we don't provide or recommend any software so that user or the client may connect or visit the maahadtahfizabuqasim.com from anywhere anytime so easily. As an example, the software web browser like Google Chrome, Firefox, Safari, Microsoft edge, Brave browser etc will be **enough to navigate and test our website.**

5.3 Test Environment Tools

Test environment tools are software applications which are mainly designed to help manage and configure the environments **where software applications and websites will be tested.** These environments are **separate** from the live **website** that users access and are used to **identify and fix bugs or issues** before they impact the real users.

5.3.1 Cloud-Based Test Environment Tools:

Exabytes: Exabytes provide web hosting services and domain services for any particular website. Exabytes offer services that allow us to create and manage test environments in the cloud. This is a scalable and cost-effective option for us and our client.

It fits our website's needs and also which was very helpful to conduct the UAT with clients successfully. Exabytes web hosting service provides to build a **successful UAT by ensuring your website is**:

- **Reliable:** Exabytes' servers are reliable and have minimal downtime to facilitate smooth UAT testing. Which is very user friendly according to our client.
- **Accessible:** Our website needs to be accessible from various devices and internet connections for testers to participate in UAT effectively which is also successful in Exabytes.

5.3.2 Cloud-Based Storing Tools:

Plesk: Plesk is a web hosting control panel. Plesk helps us to design and simplify the management of websites, applications, and servers. Plesk is the tool where we conduct one of our UAT. The client logIn with **PLESK** and went to the wordpress to get the control and to see the final version of the website which was successful with the client user and if necessary for any editing for the users which can be done.

- **Storing Tools:** To containerize or to store our websites documents, important contacts, information and contents. We choose the web hosting plan where we create a Database which is Mahad_Tahfiz and there we will be storing the websites important files, updates and the other relevant content which have been scaled for testing.

6.0 Test Plan Schedule:

Task Description	No of Days	Start Date	End Date
1. Define Test Cases	1	8/5/24	9/5/24
2. Identify Testers & Send Invites	1	9/5/24	10/5/24
3. Testers Review Test Cases & Provide Feedback	1	10/5/24	11/5/24
4. Conduct UAT Testing	1	11/5/24	12/5/24
5. Compile & Analyze Test Results	1	11/5/24	12/5/24
6. Fix Priority Bugs	1	12/5/24	13/5/24
7. Finalize UAT Report	2	13/5/24	15/4/24

6.1 Roles and Responsibilities

Role	Responsibility Description	Assigned to
Project Manager	Plan and assist with user acceptance testing. Prepare User Acceptance Plan.	**SOHAN**
Test Manager	Responsible for System Testing. Identifies resources to assist in test case and test script selection and preparation.	**WAN**
System Analyst	**i).** Perform analysis and prepare requirements Documentation. **ii).** Provide an overview and demonstrate the websites to client and support users. **iii).** Assist staff and UAT Testers with resolutions to problems and implement required system related modifications. **iv).** Prepare UAT Plan and requirements as appropriate. **v).** Finalize and publish test script(s). Train testers on the UAT execution, problem reporting, andresolution processes and so on.	**OMAR**
User Acceptance Tester (Client/User)	Execute the UAT script(s) and assist in the preparation of discrepancy reports or problem logs. Log test results. Submits UAT defects discovered. Validate accuracy of User Guide & Organisations Procedures. Participate in resolution of problems.	**Client & Users**
Database Administrator	Ensure test data is managed and maintained. Perform data restoration to refresh data before UAT.	**HAKIM**

7.0 TESTING MATRIX

7.1 Assumptions, Pre-Conditions, Risks

Assumptions:	1. Clients successfully login into Exabytes account. 2. Clients successfully access the Plesk account. 3. Client successfully accesses to the WordPress Dashboard via Plesk.
Pre-Conditions:	1. Client already registers and created account with Exabytes.
Risks:	1. Client cannot enter the security code (2 Factor Authentication). 2. Client could not access the Plesk and the WordPress Dashboard

7.2 Test Instructions

Entrance Criteria:	1. Login into Google Mail (Gmail)
Exit Criteria:	1. Close the WordPress Dashboard, log out account Exabytes and Plesk.

A. LOGIN INTO EXABYTES ACCOUNT

Step	Test Instructions	Expected result	Pass/Fail	Comments
1.	Open web browser.	Client opens the web browser.	Pass	
2.	Go to Exabytes website.	Client sees the main page of the website.	Pass	

3.	After that, client will log in in his/her account by clicking the ‘Client Login’.	Client will redirect to login page.	Pass	
4.	Client will login into the Exabytes account via Google Mail (Gmail).	Client redirect to security page.	Pass	
5.	Client enters six digits of code (2FA)	Client enters the code and will be redirect to the main page of his/her account	Pass	
6.	Client successfully login	Client can access the main page	Pass	

B. LOGIN INTO PLESK ACCOUNT

Step	Test Instructions	Expected result	Pass/Fail	Comments
1.	After login into Exabytes, the client will see the main page	Client will see the main page	Pass	
2.	After that, client will click the ‘Services’ to proceed with the next step.	Client will redirect to service page	Pass	
3.	The page will show the hosting plan that the client had purchase in this project the client purchases the Exabytes WordPress Hosting WP 13 Beginner.	The system will display the list services he/she purchases from Exabytes	Pass	
4.	Scroll down until the client found the ‘Action’ button. Go to that button	The system will redirect the client to Plesk account.	Pass	

	and click ‘manage my hosting’			
5.	Client successfully logs in to the Plesk	Client sees the main page of the Plesk.	Pass	

C. LOGIN INTO WORDPRESS DASHBOARD

Step	Test Instructions	Expected result	Pass/Fail	Comments
1.	Client will see the main page of Plesk	The client redirects into the main page.	Pass	
2.	On the left side of the main page client need to click the ‘WordPress’.	The main page will redirect to WordPress setting page.	Pass	
3.	Client clicks to the ‘Login’ button.	Client clicks the button and other windows will pop up to show the WordPress Dashboard.	Pass	
4.	Successfully login to the WordPress Dashboard	Client sees the main page of the dashboard.	Pass	
5.	If want to see the preview of his/her website, the client needs to click the ‘Visit Site’.	Client accesses the preview of the website	Pass	
6.	Client can access the website	Client can access the website for Maahad Tahfiz Abu Qasim.	Pass	

7.3 Associated Defects

Total number of defects opened during testing	0
Number of defects fixed during the testing.	0
Number of defects to be fixed after the system implementation	0
Number of other defects that will not be fixed or will be dropped	0

8.0 Appendix