

TEST PLAN DOCUMENT

FOR

HOCAM NEREDE



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Revision and Signoff Sheet

Document History

Version	Date	Author	Description of Change
1	10/05/2019	Egehan Tütüncü	Draft - Reviewed

Approvers List

Name	Role	Approval / Review Date
Egehan Tütüncü	Test, development, Analyst	10/05/2019
Emre Dönmez	Test, development, Analyst	10/05/2019
Ercan Kot	Test, development, Analyst	10/05/2019

Reference Documents

Version	Date	Document Name
1.0		Hocam Nerede System Design Document

Table of Contents

1. INTRODUCTION.....	3
1.1. Purpose.....	3
1.2. Project Overview	3

1.1. Audience	3
2. TEST STRATEGY	4
2.1. Test Objectives	4
2.2. Test Assumptions.....	4
2.3. Test Principles.....	5
2.4. Data Approach	5
2.5. Scope and Levels of Testing.....	5
2.5.1. Exploratory	5
2.5.2. Functional Test	6
TEST ACCEPTANCE CRITERIA	6
TEST DELIVERABLES	7
MILESTONE LIST	7
2.5.3. User Acceptance Test (UAT).....	7
2.6. Test Effort Estimate	8
3. EXECUTION STRATEGY	8
3.1. Entry and Exit Criteria	8
3.2. Test Cycles	9
3.3. Validation and Defect Management	10
3.4. Test Metrics	11
3.5. Defect tracking & Reporting	11
4. TEST MANAGEMENT PROCESS	12
4.1. Test Management Tool.....	12
4.2. Test Design Process	13
4.3. Test Execution Process	13
4.4. Test Risks and Mitigation Factors	14
4.5. Role Expectations	15
4.5.1. Project Management.....	16
4.5.2. Test Planning (Test Lead)	16

4.5.3. Test Team	16
4.5.4. Test Lead	16
4.5.5. Development Team	16
5. TEST ENVIRONMENT.....	17
6. APPROVALS.....	17

1. INTRODUCTION

1.1. Purpose

This test plan describes the testing approach and overall framework that will drive the testing of the Hocam Nerede application. The document introduces:

- Test Strategy: rules the test will be based on, including the givens of the project (e.g.: start / end dates, objectives, assumptions); description of the process to set up a valid test (e.g.: entry / exit criteria, creation of test cases, specific tasks to perform, scheduling, data strategy).
- Execution Strategy: describes how the test will be performed and process to identify and report defects, and to fix and implement fixes.

1.2. Project Overview

Hocam Nerede is an application that allows teachers to easily create and manage their courses and creates meeting with students who want to take private course. Hocam Nerede was designed for all of the Turkish citizens at the first. The students can comment their teacher after the course and in this way, if the teacher does not a good teacher, the students will be understood that the teacher is a bad teacher.

1.1. Audience

- Project team members perform tasks specified in this document, and provide input and recommendations on this document.
- Project Manager Plans for the testing activities in the overall project schedule, reviews the document, tracks the performance of the test according to the task herein specified, approves the document and is accountable for the results.

- Technical Team ensures that the test plan and deliverables are in line with the design, provides the environment for testing and follows the procedures related to the fixes of defects.
- Business analysts will provide their inputs on functional changes.

2. TEST STRATEGY

2.1. Test Objectives

The objective of the test is to verify that the functionality of Hocam Nerede application works according to the specifications.

The test will execute and verify the test scripts, identify, fix and retest all high and medium severity defects per the entrance criteria, prioritize lower severity defects for future fixing via CR.

The final product of the test is twofold:

- A set of stable test scripts that can be reused for Functional and UAT test execution.

2.2. Test Assumptions

Key Assumptions

- Production like data required and be available in the system prior to start of Functional Testing

General

- Exploratory Testing would be carried out once the build is ready for testing
- Performance testing is not considered for this estimation.
- All the defects would come along with a snapshot JPEG format
- The Test Team assumes all necessary inputs required during Test design and execution will be supported by Development/BUSINESS ANALYSTs appropriately.
- Test environment and preparation activities will be owned by Dev Team
- Dev team will provide Defect fix plans based on the Defect meetings during each cycle to plan. The same will be informed to Test team prior to start of Defect fix cycles
- BUSINESS ANALYST will review and sign-off all Test cases prepared by Test Team prior to start of Test execution
- The defects will be tracked through Hocam Nerede FTS only. Any defect fixes planned will be shared with Test Team prior to applying the fixes on the Test environment
- Project Manager/BUSINESS ANALYST will review and sign-off all test deliverables
- The project will provide test planning, test design and test execution support

- Test team will manage the testing effort with close coordination with Project PM/BUSINESS ANALYST
- There is no environment downtime during test due to outages or defect fixes.

Functional Testing

- During Functional testing, testing team will use preloaded data which is available on the system at the time of execution
- The Test Team will be perform Functional testing only on Hocam Nerede application.

2.3. Test Principles

- Testing will be focused on meeting the business objectives and quality.
- There will be common, consistent procedures for all teams supporting testing activities.
- Testing processes will be well defined, yet flexible, with the ability to change as needed.
- Testing activities will build upon previous stages to avoid redundancy or duplication of effort.
- Testing environment and data will emulate a production environment as much as possible.
- Testing will be a repeatable, quantifiable, and measurable activity.

2.4. Data Approach

- In functional testing, Hocam Nerede application will contain pre-loaded test data and which is used for testing activities.

2.5. Scope and Levels of Testing

2.5.1. Exploratory

PURPOSE: the purpose of this test is to make sure critical defects are removed before the next levels of testing can start.

SCOPE: First level navigation, dealer and admin modules

TESTERS: Testing team.

METHOD: this exploratory testing is carried out in the application without any test scripts and documentation

TIMING: at the beginning of each cycle.

2.5.2. Functional Test

PURPOSE: Functional testing will be performed to check the functions of application. The functional testing is carried out by feeding the input and validates the output from the application.

Scope: The below excel sheet details about the scope of Functional test. Note: The scope is high level due to changes in the requirement.

User	Scenarios	Sub Levels	Complexity	No. of Test cases	Negative Test Cases	Expecting Additional Test Cases
Teacher	Login Page	Login	Medium	1	1	
Teacher	Profile information	Add info	Complex	2	1	1
		Delete info	Complex	2	1	
		Alter info	Medium	2		
Teacher	Add Profile Photograph	Add photograph	Complex	1	1	1
		Replace	Complex	2	1	
Teacher	Course creation	Add course	Medium	1		
		Performance	Complex	3		
		Accessibility	Complex	2		
		Image display	Medium	2		
Teacher	Search	Course Search	low	1		
		Teacher Search	low	1		
Teacher	QR code	QR code generation	low	1		
Teacher	Display	Display homepage	low	1		
		Display teachers	Medium	1		
		Display Courses	Medium	1		
		Display Categories	Medium	1		

TESTERS: Testing Team.

METHOD: The test will be performed according to Functional scripts.

TIMING: after Exploratory test is completed.

TEST ACCEPTANCE CRITERIA

1. Approved Functional Specification document, Use case documents must be available prior to start of Test design phase.
2. Test cases approved and signed-off prior to start of Test execution
3. Development completed, unit tested with pass status and results shared to Testing team to avoid duplicate defects
4. Test environment with application installed, configured and ready to use state

Sign-off

Readiness

Hocam Nerede Test Plan

- Approved Functional Specification Document
- Approved Use cases
- Approved Test cases

- Development completed & unit tested
- Application deployed and system ready for testing on Test environment
- Production like data is available to test all functionalities.
- Defect fixes planned based on Defect triage (Unit Testing) and evaluation criteria

TEST DELIVERABLES

S.No.	Deliverable Name	Author	Reviewer
1.	Test Plan	Test Lead	Project Manager/ Business Analyst's
2.	Functional Test Cases	Test Team	Business Analyst's Sign off
3.	Test Closure report	Test Lead	Project Manager

MILESTONE LIST

The milestone list is tentative and may change due to below reasons

- Any issues in the System environment readiness
- Any change in scope/addition in scope
- Any other dependency that impacts efforts and timelines

Functional	Start Date	End Date	Available time
Test Execution	5 Mayıs 2019 Pazar	10 Mayıs 2019 Cuma	(5 working days)
First navigation, Employee module(Cycle 1)	5 Mayıs 2019 Pazar	7 Mayıs 2019 Salı	
Development team 1 Day	7 Mayıs 2019 Salı	9 Mayıs 2019 Perşembe	
Retest	9 Mayıs 2019 Perşembe	10 Mayıs 2019 Cuma	

2.5.3. User Acceptance Test (UAT)

PURPOSE: this test focuses on validating the business logic. It allows the end users to complete one final review of the system prior to deployment.

TESTERS: the UAT is performed by the end users.

METHOD: Since the business users are the most indicated to provide input around business needs and how the system adapts to them, it may happen that the users do some validation not contained in the scripts.

TIMING: After all other levels of testing (Exploratory and Functional) are done. Only after this test is completed the product can be released to production.

2.6. Test Effort Estimate





















QA Group Estimate :			
	QA Activities	Effort (Man hours)	Comments/Remarks
	Test case design Phase		
	Existing application familiarization /Orientation/KT for the team	8	
	Requirement Analysis	3	
	Test Plan / Test Strategy	5	
	Test Environment setup	5	
	Ad hoc testing	5	
Functional	Test case development including Peer review and updates	4	
	Test lead/Coordination/status reporting efforts	3	Industry standard 10%
	Total Design Efforts	33	
	Execution		
	Test execution (Cycle 1)	96	
	Defect logging (Cycle 1)	3	
	Final defect round to meet exit criteria	27	Assumed 1 days approx for defect testing by 1 resources. Any pending open defects based on exit criteria and stability of the product
	Sub total Execution effort	126	
	Test lead/coordination effort	13	Industry standard 10%
	Total Execution Efforts	139	
	UAT	24	
	UAT Support	24	Interacting with End Users and supporting.
	Contingency factor 25%	43	since its highlevel and not full scope known on scenarios etc, Hence considered 25% as per TCOE process
	Post Production support	24	
	Training to support team	2	
	Total Efforts (hours)	289	
	Total Efforts in Man days	24	Assumed 12 hours/ day

3. EXECUTION STRATEGY

3.1. Entry and Exit Criteria

- The entry criteria refer to the desirable conditions in order to start test execution; only the migration of the code and fixes need to be assessed at the end of each cycle.
- The exit criteria are the desirable conditions that need to be met in order proceed with the implementation.

- Entry and exit criteria are flexible benchmarks. If they are not met, the test team will assess the risk, identify mitigation actions and provide a recommendation. All this is input to the project manager for a final “go-no go” decision.
- Entry criteria to start the execution phase of the test: the activities listed in the Test Planning section of the schedule are 100% completed.
- Entry criteria to start each cycle: the activities listed in the Test Execution section of the schedule are 100% completed at each cycle.

Exit Criteria	Test Team	Technical Team	Notes
100% Test Scripts executed			
95% pass rate of Test Scripts			
No open Critical and High severity defects			
95% of Medium severity defects have been closed			
All remaining defects are either cancelled or documented as Change Requests for a future release			
All expected and actual results are captured and documented with the test script			
All test metrics collected based on reports from Hocam Nerede SDD			
All defects logged			
Test Closure Memo completed and signed off			
Test environment cleanup completed and a new back up of the environment			

3.2. Test Cycles

- There will be one cycle for functional testing. Cycle will execute all the scripts .
- The objective of the cycle is to identify any blocking, critical defects, and most of the high defects.
- UAT test will consist of one cycle.

3.3. Validation and Defect Management

- It is expected that the testers execute all the scripts in the cycle described above. However it is recognized that the testers could also do additional testing if they identify a possible gap in the scripts, when the Business analyst's join the TCOE in the execution of the test, since the BUSINESS ANALYSTs have a deeper knowledge of the business processes. If a gap is identified, the scripts and traceability matrix will be updated and then a defect logged against the scripts.
- The defects will be tracked through Hocam Nerede SDD only. The technical team will gather information on a daily basis from Hocam Nerede SDD, and request additional details from the Defect Coordinator. The technical team will work on fixes.
- It is the responsibility of the tester to open the defects, link them to the corresponding script, assign an initial severity and status, retest and close the defect; it is the responsibility of the Defect Manager to review the severity of the defects and facilitate with the technical team the fix and its implementation, communicate with testers when the test can continue or should be halt, request the tester to retest, and modify status as the defect progresses through the cycle; it is the responsibility of the technical team to review Hocam Nerede SDD on a daily basis, ask for details if necessary, fix the defect, communicate to the Defect Manager the fix is done, implement the solution per the Defect Manager request.

Defects found during the Testing will be categorized according to the bug-reporting tool, and the categories are:

Severity	Impact
1 (Critical)	<ul style="list-style-type: none"> ✦ This bug is critical enough to crash the system, cause file corruption, or cause potential data loss ✦ It causes an abnormal return to the operating system (crash or a system failure message appears). ✦ It causes the application to hang and requires re-booting the system.
2 (High)	<ul style="list-style-type: none"> ✦ It causes a lack of vital program functionality with workaround.
3 (Medium)	<ul style="list-style-type: none"> ✦ This Bug will degrade the quality of the System. However there is an intelligent workaround for achieving the desired functionality - for example through another screen. ✦ This bug prevents other areas of the product from being tested. However other areas can be independently tested.
4 (Low)	<ul style="list-style-type: none"> ✦ There is an insufficient or unclear error message, which has minimum impact on product use.
5(Cosmetic)	<ul style="list-style-type: none"> ✦ There is an insufficient or unclear error message that has no impact on product use.

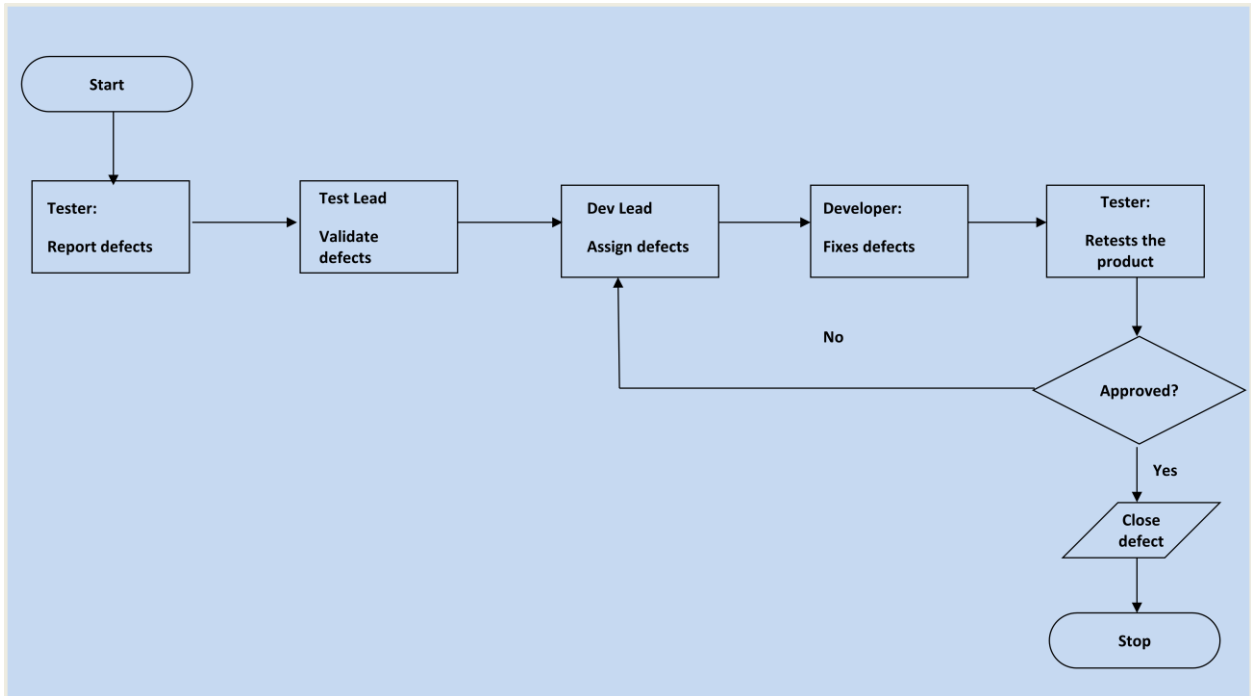
3.4. Test Metrics

Test metrics to measure the progress and level of success of the test will be developed and shared with the project manager for approval. The below are some of the metrics

Report	Description	Frequency
Test preparation & Execution Status	To report on % complete, %WIP, % Pass, % Fail Defects severity wise Status – Open, closed, any other Status	Daily
Daily execution status	To report on Pass, Fail, Total defects, highlight Showstopper/ Critical defects	Daily
Project Weekly Status report	Project driven reporting	Daily

3.5. Defect tracking & Reporting

Following flowchart depicts Defect Tracking Process:



4. TEST MANAGEMENT PROCESS

4.1. Test Management Tool

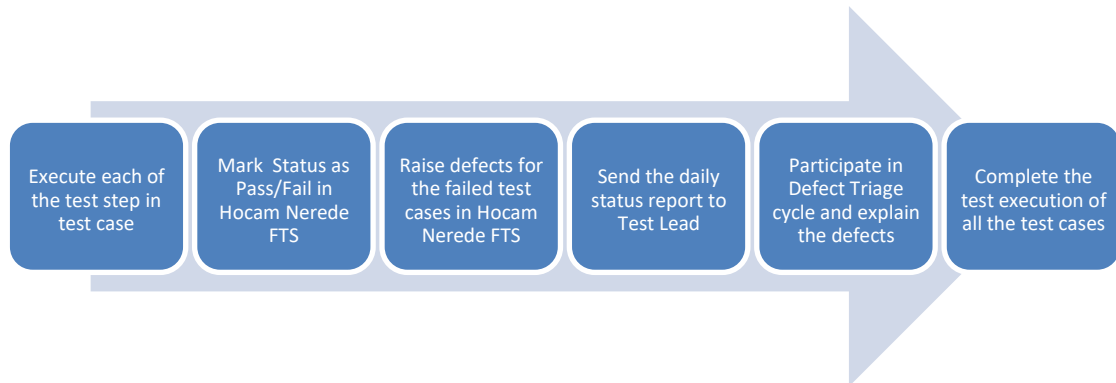
Hocam Nerede Application Lifecycle Management is the tool used for Test Management.

- Each resource in the Testing team will be provided with Read/Write access to add/modify Test cases in FTS.
- During the Test Design phase, all test cases are written directly into Hocam Nerede FTS. Any change to the test case will be directly updated in the Hocam Nerede FTS.
- Any defect encountered will be raised in Hocam Nerede FTS linking to the particular Test case/test step.
- During Defect fix testing, defects are re-assigned back to the tester to verify the defect fix. The tester verifies the defect fix and updates the status directly in Hocam Nerede FTS.
- Various reports can be generated from Hocam Nerede FTS to provide status of Test execution. For example, Status report of Test cases executed, Passed, Failed, No. of open defects, Severity wise defects etc.

4.2. Test Design Process

- The tester will understand each requirement and prepare corresponding test case to ensure all requirements are covered.
- Each Test case will be mapped to Use cases to Requirements as part of Traceability matrix.
- Each of the Test cases will undergo review by the BUSINESS ANALYST and the review defects are captured and shared to the Test team. The testers will rework on the review defects and finally obtain approval and sign-off.
- During the preparation phase, tester will use the prototype, use case and functional specification to write step by step test cases.

4.3. Test Execution Process



- Once all Test cases are approved and the test environment is ready for testing, tester will start a exploratory test of the application to ensure the application is stable for testing.
- Each Tester is assigned Test cases directly in Hocam Nerede FTS.
- Testers to ensure necessary access to the testing environment, Hocam Nerede FTS for updating test status and raise defects. If any issues, will be escalated to the Test Lead and in turn to the Project Manager as escalation.
- Each tester performs step by step execution and updates the executions status. The tester enters Pass or Fail Status for each of the step directly in Hocam Nerede FTS.
- Daily Test execution status as well as Defect status will be reported to all stakeholders.
- Testing team will participate in defect triage meetings in order to ensure all test cases are executed with either pass/fail category.
- If there are any defects that are not part of steps but could be outside the test steps, such defects need to be captured in Hocam Nerede FTS and map it against the test case level or at the specific step that issue was encountered after confirming with Test Lead.

- This process is repeated until all test cases are executed fully with Pass/Fail status.
- During the subsequent cycle, any defects fixed applied will be tested and results will be updated in Hocam Nerede FTS during the cycle.

As per Process, final sign-off or project completion process will be followed

4.4. Test Risks and Mitigation Factors

Risk	Prob.	Impact	Mitigation Plan
SCHEDULE Testing schedule is tight. If the start of the testing is delayed due to design tasks, the test cannot be extended beyond the UAT scheduled start date.	High	High	<ul style="list-style-type: none"> • The testing team can control the preparation tasks (in advance) and the early communication with involved parties.
DEFECTS Defects are found at a late stage of the cycle or at a late cycle; defects discovered late are most likely be due to unclear specifications and are time consuming to resolve.	Medium	High	Defect management plan is in place to ensure prompt communication and fixing of issues.
SCOPE Scope completely defined	Medium	Medium	Scope is well defined but the changes are in the functionality are not yet finalized or keep on changing.
Natural disasters	Low	Medium	Teams and responsibilities have been spread to two different
Risk	Prob.	Impact	Mitigation Plan
			geographic areas. In a catastrophic event in one of the areas, there will resources in the other areas needed to continue (although at a slower pace) the testing activities.

Non-availability of Independent Test environment and accessibility	Low	High	Due to non availability of the environment, the schedule gets impacted and will lead to delayed start of Test execution.
Delayed Testing Due To new Issues	Low	High	There are defects that can be raised during testing because of unclear document specification. These defects can yield to an issue that will need time to be resolved. If these issues become showstoppers, it will greatly impact on the overall project schedule. If new defects are discovered, the defect management and issue management procedures are in place to immediately provide a resolution.

4.5. Role Expectations

The following list defines in general terms the expectations related to the roles directly involved in the management, planning or execution of the test for the project.

	Roles	Name
1.	Project Manager	Emre Dönmez,Egehan Tütüncü, Ercan Kot
2.	Test Lead	Egehan Tütüncü
3.	Business Analyst	Egehan Tütüncü
4.	Development Lead	Emre Dönmez
5.	Testing Team	Egehan Tütüncü, Emre Dönmez, Ercan Kot
6.	Development Team	Egehan Tütüncü, Emre Dönmez, Ercan Kot
7.	Technical Lead	Emre Dönmez

4.5.1. Project Management

- Project Manager: reviews the content of the Test Plan, Test Strategy and Test Estimates signs off on it.

4.5.2. Test Planning (Test Lead)

- Ensure entrance criteria are used as input before start the execution.
- Develop test plan and the guidelines to create test conditions, test cases, expected results and execution scripts.
- Provide guidelines on how to manage defects.
- Attend status meetings in person or via the call line.
- Communicate to the test team any changes that need to be made to the test deliverables or application and when they will be completed.
- Provide functional (Business Analysts) and technical team to test team personnel (if needed).

4.5.3. Test Team

- Develop test conditions, test cases, expected results, and execution scripts.
- Perform execution and validation.
- Identify, document and prioritize defects according to the guidance provided by the Test lead.
- Re-test after software modifications have been made according to the schedule.

4.5.4. Test Lead

- Acknowledge the completion of a section within a cycle.
- Give the OK to start next level of testing.
- Facilitate defect communications between testing team and technical / development team.

4.5.5. Development Team

- Review testing deliverables (test plan, cases, scripts, expected results, etc.) and provide timely feedback.
- Assist in the validation of results (if requested).
- Support the development and testing processes being used to support the project.

- Certify correct components have been delivered to the test environment at the points specified in the testing schedule.
- Keep project team and leadership informed of potential software delivery date slips based on the current schedule.
- Conduct first line investigation into execution discrepancies and assist test executors in creation of accurate defects.
- Implement fixes to defects according to schedule.

5. TEST ENVIRONMENT

Hocam Nerede's servers will be hosted at Hetzner company's site.

Web Site: A windows environment with Internet Explorer, and with Firefox, as well as Google Chrome.

Mobile Application: IOS 11 and Android 4.1 or higher.

6. APPROVALS

The Names and Titles of all persons who must approve this plan.

Name:	Egehan Tütüncü
Role:	Test, development, Analyst
Date:	10.05.2019

Name:	Emre Dönmez
Role:	Test, development, Analyst
Date:	10.05.2019

Name:	Ercan Kot
Role:	Test, development, Analyst
Date:	10.05.2019