TESTING MATRIX DOCUMENT
for
Hall Management Software

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Introduction:

This document provides a testing matrix for the Hall Management Software. The significant features of this document are:

Test Suite Tables:

Detailed tables outlining various test scenarios, test cases, and expected outcomes for different functionalities of the software. These tables provide a structured approach to testing, covering areas such as user authentication, complaint management, financial transactions, and more.

Such a tabular representation allows for a quick glance at the testing quality and potential for the system. It can be a very helpful tool in tailoring development since there is a structured visualization of the scenarios and cases which enables structured thought process.

Table Description for User Roles:

The tables for User Roles and their Functionalities have the following columns:

Test Scenario : Includes the Interface features for a particular user

Test Case : The Code for a particular test case

Case Description : The description of the test case, briefly telling what the case aims to test

Input Parameter : The required fields of input for a particular scenario

Expected Outcome : The outcome expected out of the software

Actual Outcome : The outcome that is received when tested

Case Type : Positive (P) or Negative (N). Negative Testing Type refers to the practice of feeding a system with unexpected or invalid inputs.

Conventions for the columns:

Test Cases:

For the cases that involve "View" functionalities – there are certain Views that provide an option to Generate PDFs. These Views are made **Bold** (E.g. **VSP** – View Student Passbook)

Expected Outcome:

S	Successful Outcome
S (Error)	Successful Outcome for invalid inputs (that is, proper display of error)
F	Failure

Actual Outcome:
Either Matches the Expected Outcome (S) or is Not Covered.

The case may not be covered because the developers had a different initial purpose to fulfil and did not emphasize much on those "not covered" scenarios.

Implications (for Expected-Actual Outcome Values):

S-S implies software works as expected and confirms correctness

F-S implies an issue in the development and needs to be taken care of

Not Covered Cases are ideally F-S cases but as mentioned before, they are not part of the purpose and plan while delivering an initial version.

Authentication and User Profile Management

The Authentication and Profile Management Features are made from the existing functionalities of Django and are very robust.

For all test cases of Password and User-ID (Stakeholder ID), the actual outcome matches the expected outcome and hence the system provides a secure authentication system. Moreover, it also provides options to change password or handle the cases of forgotten passwords securely.

User Role	Authentication Features	Can Manage Profile Of	Profile Management Options
Chairman	Login, Forget Password, Change Password	Warden	Register/Delete/Update
Warden	Login, Forget Password, Change Password	Hall Manager Mess Manager	Register/Delete/Update
Hall Manager	Login, Forget Password, Change Password	Student Employees	Register/Delete/Update
Student	Login, Forget Password, Change Password	-	-
Mess Manager	Login, Forget Password, Change Password	-	-

Chairman:

Test Scenario	Test Case	Case Description	Input Parameter	Expected Outcome	Actual Outcome	Case Type
Allot Grants	AG1.1	Grant within a defined limit	Grant Amount, Password	S	S	P
	AG1.2	Grant outside defined limit		S (Error)	S	N
	AG1.3	Grant format invalid		S (Error)	S	N
	AG1.4	Grant input negative		S (Error)	S	N
	AG1.5	AG1.1-AG1.3 - with incorrect password		S (Error)	S	N
Add Hall to system	AH1.1	Non-zero floors, rooms and rents (for each room type)	Name, Floor, Rooms, Rent	S	S	P
	AH1.2	Zero Floors and Rooms, Non-zero Rent		S (Indicates provision to build rooms later)	S	P
View Halls	View Halls	View the list of halls (with capacity and current occupancy)	None	S	S	P

Warden:

Test Scenario	Test Case	Case Description	Input Parameter	Expected Outcome	Actual Outcome	Case Type
View Student Details	VSL	-	NA	S	S	P
View Employee Details	VEL	-	NA	S	S	P
View Hall Occupancy	VHO	-	NA	S	S	P
View Complaints	**VC**	-	NA	S	S	P
Generate Hall/Mess Fees	GF1.1	Amount in defined upper limit	Amount, Password	S	S	P
	GF1.2	Wrong Password, Valid amount		S (Error)	S	N
	GF1.3	Amount outside limit		S (Error)	S	N
	GF1.4	Amount format invalid		S (Error)	S	N
Pay Salaries	PS1.1	Correct Password	Password	S	S	P
	PS1.2	Incorrect Password		S (Error)	S	N
Allot Budget	AB1.1	Amount in defined upper limit	Amount, Password	S	S	P
	AB1.2	Amount format invalid		S (Error)	S	N
	AB1.3	Amount exceeds Grant		S (Not Implemented) (System of Emergency Allocation OR Maintaining Balance Sheet)	S	P/N
View Warden Passbook	**VWP**	-	NA	S	S	P
View Hall Passbook	**VHP**	-	NA	S	S	P
View Mess Passbook	**VMP**	-	NA	S	S	P

Hall Manager:

Test Scenario	Test Case	Case Description	Input Parameter	Expected Outcome	Actual Outcome	Case Type
View Hall Occupancy	VHO	-	NA	S	S	P
View Student List	VSL	-	NA	S	S	P
View Employee List	VEL	-	NA	S	S	P
Approve Leaves	AL1.1	Valid Inputs	Employee ID, Start/End Dates, Supporting Doc	S	S	P
	AL1.2	Start date after End date		F (Shouldn't Allow)	S	N
	AL1.3	Invalid Employee ID		S (Error)	S	N
View Complaints	**VC**	-	NA	S	S	P
Issue ATR	IR1.1	Assign Employee	No employee exists at present	F (Should Self-Assign duty)	Not Covered	N
	IR1.2	Assign Employee	Assigned Employee Exists	S	S	P
	IR1.3	Content doesn't match Image/Category	Implementation Missing (Beyond Scope)	S (Manager Student communication required)	Not Covered	N
Issue Notice	IN1.1	Relevant inputs	Title, Content, Image	S	S	P
View Hall Passbook	**VHP**	-	None	S	S	P

Student:

Test Scenario	Test Case	Case Description	Input Parameter	Expected Outcome	Actual Outcome	Case Type
View Passbook	**VSP**	-	NA	S	S	P
View Menu	VM	-	NA	S	S	P
Make Complaint	MC1.1	With relevant field inputs	Title, Content, Category, Image	S	S	P
	MC1.2	With irrelevant content and category/image	E. g. Content - Mess, Category - Maintenance	Some communication required with Hall Manager	Not Covered	N
View Complaints	**VC**	-	NA	S	S	P

Mess Manager:

Test Scenario	Test Case	Case Description	Input Parameter	Expected Outcome	Actual Outcome	Case Type
Make Mess Menu	MM	-	Menu Details for each day and time (Food names)	S	S	P
View Menu	VM	-	None	S	S	P
View Passbook	VMP	-	None	S	S	P
Add Ration	AR1.1	All Valid Inputs	Ration Details	S	S	P
	AR1.2	Negative Rate of Ration		F (Shouldn't Allow)	S	N