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A

Testing Report

on

ERP (Enterprise resource planning)

submitted as partial fulfillment for the award of

BACHELOR OF TECHNOLOGY DEGREE

SESSION 2023-24

in

Computer Science

By

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Index

1. Introduction

The module undergoes manual testing. We obtained the requirements from our college's **COE** Team, who supplied us with various use cases to address in the software's development. We proceeded to build the software incrementally, conducting testing on each smaller module upon completion of its development to ensure its proper functionality. Subsequently, we integrated these smaller modules and performed another round of testing on the finalized module.

1.1. Scope

1.1.1 In The Scope

Generation Of Datesheet

The scheduling should be done according to the course, department, and semester, covering all departments and academic years. However, for the B.Tech 1st Year, it is necessary to create section groups based on alphabetic divisions, specifically A-L and M-X.
The generated Datesheet need to be forwarded with the respective HODs and notified through email notifications. Additionally, the Datesheet should be published to make it accessible to the students.

Add Infra

Incorporate the college's infrastructure to facilitate seat allocation for examinations. This entails including information about the buildings, the number of floors within each building, the quantity of rooms on each floor, and the seating capacity of each room. The system should also allow the option to block seats as needed for specific rooms

Generation of Seating Plan

Choose the rules that determine the allocation of examination seats for each course and department within specific rooms. Seating arrangements can be configured for single-sided or double-sided benches based on requirements.
After applying the rules, a preview will be generated to provide an overview of how the seats are assigned to students. Once confirmed, the seating plan can be submitted for final data storage.
Ensure that students with the same paper are not seated next to each other. The seating plan can then be made accessible to students through publication.

Invigilator Requirement for Roaster

The COE Team has offered various formulas for determining the invigilator requirements. One such formula dictates that for every 40 students, one invigilator is needed.
The invigilator allocation is evenly distributed among all the departments. Both the Exam Coordinator and the Head of Department (HOD) in each department will collaborate to

complete the invigilator roster.

Generation Of Invigilation Duty chart

- Duty chart is prepared by various rule such that :
- All the Professor's that are in roaster chart will be allotted first.
- Male and Female faculty combination is allotted to each room.
- There must be experience gap of 2 year those who are allotted in the same room.
- No two faculty of same department are in the same room.

Attendance Of Student & Invigilator

- Attendance of all the students will be marked by mobile app by scanning their college id card.
- If any student has lost his/her college id card then he/she has to get the hall ticket from the COE .

1.1.2 Out Of Scope

DateSheet

Generation of all the first year (B.Tech) Datesheet at the same time.

Seating Plan

Seating Plan need to generated for Applied science department and other department at the same time.

1.2. Quality Objective

Some objectives of my project testing are:

- Ensure the Application Under Test conforms to functional and non-functional requirements
- Ensure the software meets the quality specifications defined by the COE Team.
- Bugs/issues are identified and fixed before go live.
- To make the organization work paper less.
- To ease the process of COE Team.

1.3. Roles and Responsibilities

Developers: Avinash Kumar, Varun Kumar Tiwari and Sneha Aggarwal

Tester: Avinash Kumar, Varun Kumar Tiwari and Sneha Aggarwal

2. Test Methodology

2.1. Overview

We have opted the **Agile** methodology.

Reasons:

- It is a large project and it needed to be break down in smaller module.
- It makes the project more reliable and to meet the requirement.
- Better risk management.
- More cross-functional collaboration.
- We developed Datesheet module and tested it then we developed Seating Plan then we developed Invigilation Duty Chart.
- After the development of each sub module we have to test them and again gathered requirement if not understand.

2.2. Test Levels

Test Levels define the Types of Testing to be executed on the Application Under Test (AUT).
The Testing Levels primarily depends on the scope of the project, time and budget constraints.

Unit Testing :
After development of each sub module ,it is tested properly that it is satisfying the need of client or not.
If new functionality is added then it is also tested properly.

Integeration Testing:
After the development of each sub module it is integrated to existing module and tested wheather it follows the client requirement or not.

System Testing :
After the complete development and integration of each sub module. Complete flow is tested to verify that it satisfies the need of the client or not.

2.3. Suspension Criteria and Resumption Requirements

We have tested the sub module after their completion. If the sub module is not found to the mark then we stopped the further testing and again take the sub module for the development.

After fixing the bug in submodule we resume the testing where the test has failed.

2.4. Test Completeness

For instance, a few criteria to check Test Completeness is

- If 100% test coverage then we move to next sub module development.
- All Manual Test cases that are provided by the COE Team is executed and tested for its bug.
- All open bugs in previous test that are fixed are tested.
- If any bug is found in the test then it goes to development .
- If no any bug then it is released to the client.

3. Test Deliverables

Test Cases:

- **Student Registration for Exam:**

Function	Description	Expected Output	%TC Executed	%TC Passes	TC Pending	Priority	Remarks
Duplicate Registration	Attempt to register a student who is already registered for the same exam.	System detects the duplicate registration and notifies the user.	100	100	0	High	PASSED
Registration Date passed	Check whether the student can still register after registration date is passed	Notifies the student that the exam form fill date is passed.	100	100	0	High	PASSED

- **Datesheet Module:**

Function	Description	Expected Output	%TC Executed	%TC Passes	TC Pending	Priority	Remarks
No Exams Scheduled	When no exams scheduled there is no exams showing on student and faculty panel of old session	System provides a message indicating there are no exams to schedule.	100	100	0	High	PASSED
Empty Date Sheet	Attempt to create a seating plan for an exam with an empty date sheet	System prompts the user to schedule exams before creating a seating plan.	100	100	0	High	PASSED

- **Seating Plan Creation:**

Function	Description	Expected Output	%TC Executed	%TC Passes	TC Pending	Priority	Remarks
No Available Classrooms	Creating a seating plan when there are no available classrooms.	System notifies the user and prompts to add classrooms.	100	100	0	High	PASSED
Invalid Seating Capacity	Assigning a seating plan with a capacity exceeding the maximum classroom capacity.	System rejects the assignment and asks for a valid configuration.	100	100	0	High	PASSED

- **Invigilation Duty Chart:**

Function	Description	Expected Output	%TC Executed	%TC Passes	TC Pending	Priority	Remarks
Generate Duty Chart for Single Exam	Request to generate the invigilation duty chart for a single exam	System generates a duty chart with assigned invigilators for each session of the exam.	100	100	0	High	PASSED
Duty Chart for Multiple Exams	Request to generate the invigilation duty chart for multiple exams scheduled on the same day.	System creates a comprehensive duty chart considering all exams without conflicts.	100	100	0	High	PASSED
No Invigilators Available	Attempting to generate a duty chart when there are no available invigilators.	System prompts the user to assign invigilators before generating the duty chart.	100	100	0	High	PASSED
Overlapping Exam Sessions	Scheduling exams with overlapping sessions	System detects the overlap and prompts for resolution or adjustment before generating the duty chart	100	100	0	High	PASSED
Uneven Distribution of Invigilation	Requesting a duty chart for exams where invigilation duties are unevenly distributed	System attempts to distribute duties as evenly as possible and notifies if any imbalances occur	100	100	0	High	PASSED
Unavailability of Invigilator	Invigilator marked as unavailable for a specific time slot.	System accommodates the unavailability and assigns an alternative invigilator.	100	100	0	High	PASSED

Dynamic Changes in Invigilator Availability	Changes in invigilator availability after the duty chart is generated	System allows dynamic updates to the duty chart to reflect the changes in availability.	100	100	0	High	PASSED
Exceeding Maximum Hours for Invigilation	Attempting to assign an invigilator duties exceeding their maximum allowed hours.	System prevents the assignment and notifies about the limit breach.	100	100	0	High	PASSED

NAME	EMP ID	Designation	Gender	D.O.J
Prof. Neha Shukla	21005	Ass. Professor	Female	4-July-2019
Dr. Gaurav Dubey	21324	Professor	Male	8-July-2022
Ms. Akanksha	21131	Ass. Professor	Female	7-june-2021
Mr. Abhishek Goyal	21330	Ass. Professor	Male	18-july-2022
Arti Sharma	21004	Ass. Professor	Female	3-july-2019
Ms. Jyoti Srivastava	3670	Ass. Professor	Female	10-june-2018

- **Taking Attendance through Mobile App:**

Function	Description	Expected Output	%TC Executed	%TC Passes	TC Pending	Priority	Remarks
Offline Attendance Sync Failure	Attempting to sync offline attendance data with the main database when the data is corrupted	System detects corruption, logs the issue, and prompts for manual intervention.	100	100	0	High	PASSED
Check for detained student	Checking if the student is detained or not by comparison with detained criteria	System doesn't allow to mark the attendance of the detained student	100	100	0	High	PASSED

4. Resource & Environment Needs

4.1. Test Environment

Following **software's** are required in addition to client-specific software.

- Ubuntu 20.04 (linux os)
- VS Code
- Fedora 35

5. Terms/Acronyms

Terms or acronyms used in the project

TERM/ACRONYM	DEFINITION
API	Application Program Interface
AUT	Application Under Test

TERM/ACRONYM	DEFINITION
COE	Controller Of Examination
HOD	Head Of The Department

THANK YOU