Indian Institute of Technology Kharagpur
Department of Computer Science and Engineering

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Project – Submission of test plan and test cases

TEST PLAN

ONLINE CLASSROOM MANAGEMENT SYSTEM (OCMS)

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1) Test Plan Identifier:-

- OCMS_TEST_PLAN
- Group name-DevSomeNew
- This test plan represents a Master plan.

Revision History

Version	Date	Author(s)	Reason for changes
1.0.0	28/03/2023	Hunny Chandra,Saket Jha,Harsh Sharma	Started with master test plan documentation
1.1.0	29/03/2023	Hunny Chandra,Saket Jha,Harsh Sharma	Written important points like test cases to features, classes,etc
2.0.0	3/04/2023	Hunny Chandra,Saket Jha,Harsh Sharma	Completed the document and all essential test cases.

2) References:-

- IEEE Test Plan
- SRS submitted as a part of Project part 1 submission
- Project Description

3) Introduction:-

- This is the Online Class Management System Test Plan (OCMS). This strategy will handle the testing of all items and elements that are directly or indirectly relevant to the OCMS. The project will include unit testing.

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- Each test's specifics are covered in its own section.

4) Test Items:-

A. Student Class

- name- string
- roll_no -int
- Department -string
- Bio-string

- Email - string
- Phone - int
- Student_profile_pic- file(png, jpg)

a. Student Sign Up

The ability to create an account will be made available through this feature. Students must fill out some sections, some of which are essential and others of which are optional, when they click the sign-up button, which opens the sign-up form.

b. User Login

This function has the facility to help the user to login into the student interface.

c. User Logout

This function has the facility to help the user to log out from the Student interface.

d. Student Profile View

This function will open the user profile. Through this, the student can view his/her profile.

f. Student Update View

The students can update any of their user profile information through this function.

g. Student Activity

This feature allows Student to look his activities like chats he did in his classrooms .This will help him to get his doubts into a single page.

h. Class Notice

Through this function the student can see all the notices given by their teacher.

i. Join Class

Through this feature student will able to join the course or class room created by professor through the class code .After entering code and submit ,The course or class will automatically appear in his class room section

j. Classrooms

In this section ,all classrooms that the student joined through code will appear ,then he need to enter inside the particular classroom.Inside classroom there will be a new interface

k . All Students List

The student can view the list of all the students in the class. With details like Name,email,roll no .

B. Teacher Class

a. Teacher Sign Up

The ability to create an account will be made available through this feature. The sign-up form will open if the instructor hits the sign-up button, and there will be several areas that must be filled out, some of which are essential and some of which are not.

b. User Login

This function has the facility to help the user to login into the teacher interface.

c. User Logout

This function has the facility to help the user to log out from the Student interface.

d. Teacher Profile View

This function will open the user profile. Through this, the teacher can view his/her profile.

f. Teacher Update Profile

The teachers can update any of their user profile information through this function.

g. Classrooms

In this section ,all classrooms that the Professor created will appear ,then he need to enter inside the particular classroom.Inside classroom there will be a new interface

h.Create Room

The function will help the teacher to add or create new course or classroom with specifying important details and also specifying unique id or class code. Through this class code student can join created class

g.Professor list

The function will help the teacher to see all professor ids whom are using the OCMS

h.All Students List

The function will help the teacher to see all students ids whom are using the OCMS for smart learning

C.Classroom Class

a.Class brief description

Time when class was created will appear,class creater name and brief description with class icon

b.General Chat

This option facilitate both student and professor to have chat among them .Student can have healthy discussion and professor can also clear their doubts through this feature

d.Files

This option facilitate professor to upload Notes and important files for students .student can’t upload them but can download and benefit themselves

e.Lectures

This option facilitate professor to upload recorded lectures for students .student can’t upload them but can download and benefit themselves

5) Software Risk Issues:-

- In the future, it's possible that the third-party APIs we're utilising for our web application won't be able to synchronise.
- The functioning of the web application may change in the future if the libraries being used undergo version upgrades, hence routine maintenance is necessary.
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- The local login, accounts, and databases need to be carefully examined during backup and recovery.
- An essential component of an application's dependability is the capacity to restart it in the middle of a task. This is especially true for database files, which need to be locally safeguarded.
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- For files exchanged between Account holders and Interfaces, in particular, database security and access must be specified and confirmed.
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6) Features to be Tested:-

Signup Interface: -

The validation of information is done in the constructors of the User class and its children.

The following scenarios are checked for while considering the signup functionality:

1. Signup of new user with a new name,email -Id ,rollno (for student),username ,department and password in some category (Student, Teacher)
2. Signup of a new user with the same name,email -Id ,rollno (for student),username ,department in some different category in which the user has not registered before.
3. Signup of a new user with the same name,email -Id ,rollno (for student),username ,department in some category the user has already registered for before.

Login Interface: -

The following scenarios are checked for while considering the login functionality:

1. Checking username
2. Checking password (tests the verify password() of User class)

User Profile Interface: -

This interface will fetch the details from the sqlite3 database and show them.

User Update Profile Interface: -

This interface will allow user to enter data manually that also change previous data of database

Upload Files Interface: -

This point of interaction will open a structure that will permit the educator to set the to **Upload Files**

Upload Lectures Interface: -

This point of interaction will open a structure that will permit the educator to set the to **Upload Lectures**

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Class student list interface:-

This interface will show the list of students present in a particular class taken by the professor.

Class room interface:-

This interface will show classrooms joined by students and for the professor the classrooms that he created.

Activity interface:

This interface will help the teacher and Student to see the list of chat that they did in general chat of classes

Professor list interface:-

This interface will help the Professor to see List of all professors using OCMS.

General chat interface:-

This interface facilitate both student and professor to have chat among them .Student can have healthy discussion and professor can also clear their doubts through this feature

Enroll student interface:-

Through this interface, the students and professor will be able to see enrolled students in particular classrooms.

Create interface:-

Through this interface, the professor will be able create new classes or courses with specifying unique class code

Join Class interface:-

Through this interface, the student will be able join new classes or courses by submitting unique class code

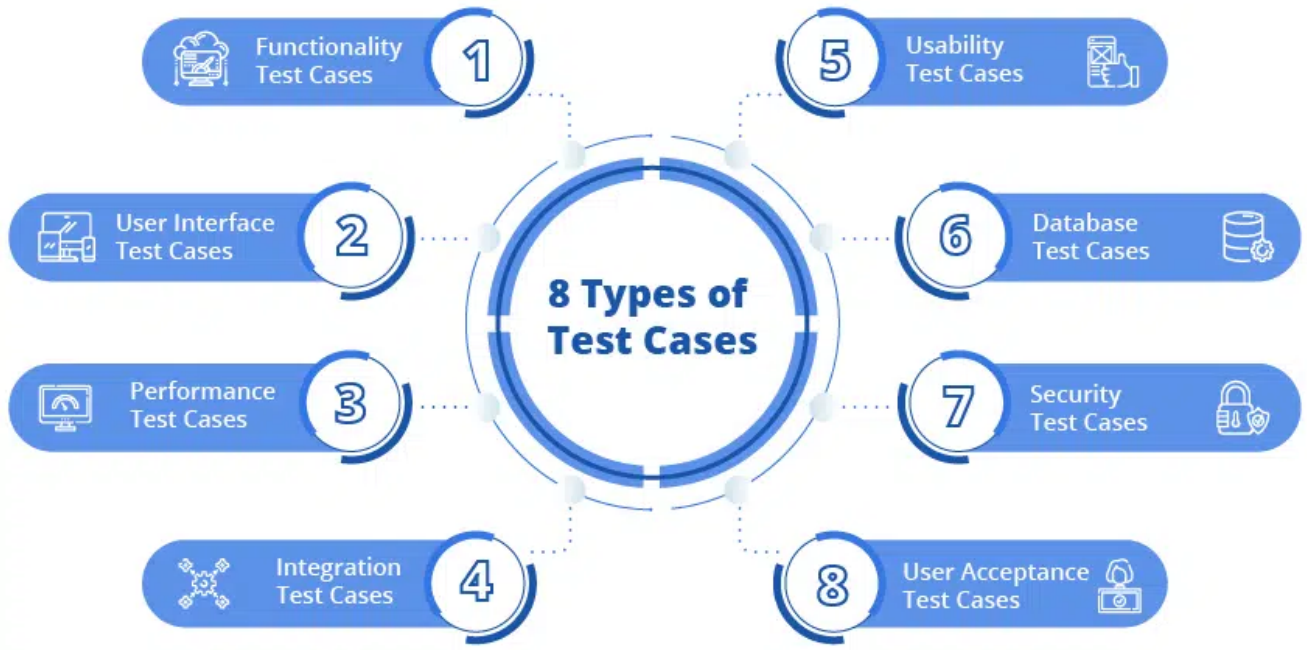
7) Features not to be Tested:-

- The database deployed via Sqlite3 would NOT be tested.
- The server-side code written using Django would NOT be tested.

- The feature of the live class will NOT be tested.
- The feature of the remainder will NOT be tested.

The features provided by 3rd party APIs will NOT be tested.

8) Approach (Strategy):-



As a result, the method utilised is analytical in line with the requirements-based strategy, where planning, Test Plan 4 estimating, and test design are all based on an analysis of the requirements specification. Exploratory testing will result in the creation of test cases. The Test Strategy specifies each test type. To make advantage of testers' abilities, intuition, and prior expertise with related technologies or applications, the team must also apply experience-based testing and error guessing. Weekly iterations are being used in an agile project management style. The criteria chosen for that iteration will be given to the team and tested at the conclusion of each week.

9) Item Pass/Fail Criteria:-

Every unit tests will have "golden outputs" that must match in order for the test to be regarded "Passed"; otherwise, the test would be deemed to have "Failed."

10) Suspension Criteria and Resumption Requirements:-

1. In the event of any of the following, the test is said to be suspended:

2. The programme freezes

3. The output from the programme is inaccurate.

4. It is not necessary to test additional features if some of them are depending on one another since doing so will waste resources if one of them fails.

5. The programme produces the Output more slowly than anticipated.

6. The build has several major flaws that will either hinder or seriously affect testing.

7. Substantial changes to the specifications that the client has recommended.

8. Hardware and software issues.

11) Test Deliverables:-

- Acceptance test plan
- System/Integration test plan
- Unit test plans/turnover documentation
- Test records and turnover statistics

12) Remaining Test Tasks:-

- The feature of the live class will be tested when it will be implemented.

- The feature of the remainder will be tested when it will be implemented.

13) Environmental Needs:-

- Within the reassigned project, the following components are necessary to support the entire testing effort at all levels:
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- For regulating the production/testing environment on both production and development systems, access to the master control tables (databases).
- entry to the backup/recovery procedure.
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Support level (browsers):

1. Windows 8: Edge, Chrome (latest), Firefox (latest), Safari (latest)

2. Mac OS X: Chrome (latest), Firefox (latest), Safari (latest)

3. Linux: Chrome (latest), Firefox (latest)
4. Windows 7: IE 9+, Chrome (latest), Firefox (latest), Safari (latest)
5. Windows XP: IE 8, Chrome (latest), Firefox (latest), Safari (latest)

14) Staffing and Training Needs:-

This is a small training course to improve the skills of resources in the project to achieve the desired goals.

Pre-Requisites:

Install Git Version Control

Install Python Latest Version

Install Pip (Package Manager)

Alternative to Pip is Homebrew

Installation

1. Create a folder where you want to save project

2. Create a Virtual Environment and Activate

Install Virtual Environment First

$ pip install virtualenv

Create Virtual Environment

For Windows

$ python -m venv venv

For Linux/Mac

$ python3 -m venv venv

Activate Virtual Environment

For Windows

$ venv/scripts/activate

For Linux/Mac

$ source venv/bin/activate

Install Requirements from 'requirements.txt'

$ pip install -r requirements.txt

Now Run Server

Command for Windows/Linux/Mac:

$ python manage.py runserver

Create Super User (ADMIN)

$ python manage.py createsuperuser

Then Add Email, Username, and Password.

15) Responsibilities:-

Role	Member Name	Responsibilities
Project Manager	Hunny Chandra,Saket Jha,Harsh Sharma	1. First point of contact for the development and QA teams. 2.In charge of the project's overall performance and its timeline . I
QA Lead	Hunny Chandra,Saket Jha,Harsh Sharma	1. Involvement in the process of creating and updating the project plan. 2. Inform the project manager of the status of your work assignments. 3. Work together with QA analysts and engineers to resolve any issues that arise during testing. 4. Scheduling and coordination of the release's test procedure.
QA	Hunny Chandra,Saket Jha,Harsh Sharma	1. Understand requirements 2. Writing and executing Test cases

		3. Defect reporting and tracking 4. Retesting and regression testing 5. Bug Review meeting 6. Preparation of Test Data 7. Work with the QA Lead to resolve any difficulties that arise during test planning, execution, or defect handling. .

16) Schedule:-

The project plan includes the following testing activities. The specific dates and times for each task are listed in the project plan timetable.

1. The construction of Inventory classes, sub-classes, and objectives by test team members after reviewing the requirements document in cooperation with other team members.
2. Development of a master test plan by the test manager and testing, with time allotted for at least two plan reviews.

3. The System design document is examined by members of the testing team. The team will be able to further define the Inventory classes, sub-classes, and objectives as a result of having a clearer understanding of the application's organizational structure.

4. Development of System/Integration and Acceptance test plans.

5. Unit test time within the development process.

6. Time allocated for both System/Integration and Acceptance test processes.

17) Planning Risks and Contingencies:-

- inadequate tools, such a bad internet connection, right before testing is supposed to start.

- inadequate accessibility to required tools, data, or software.

- alterations to the initial requirements or designs.

18) Approvals

Prof. Abir Das	
Prof. Sourangshu Bhattacharya	
TA Ashish Gour	

19) Glossary

- **OCMS -** online class management system
- **IEEE -** Institute of Electrical and Electronics Engineers
- **PNG -** Portable Network Graphics
- **Jpg -** Joint Photographic Experts Group
- **QA -** Quality Assurance