

Classroom Management System

Scope Definition Phase

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1. Objective

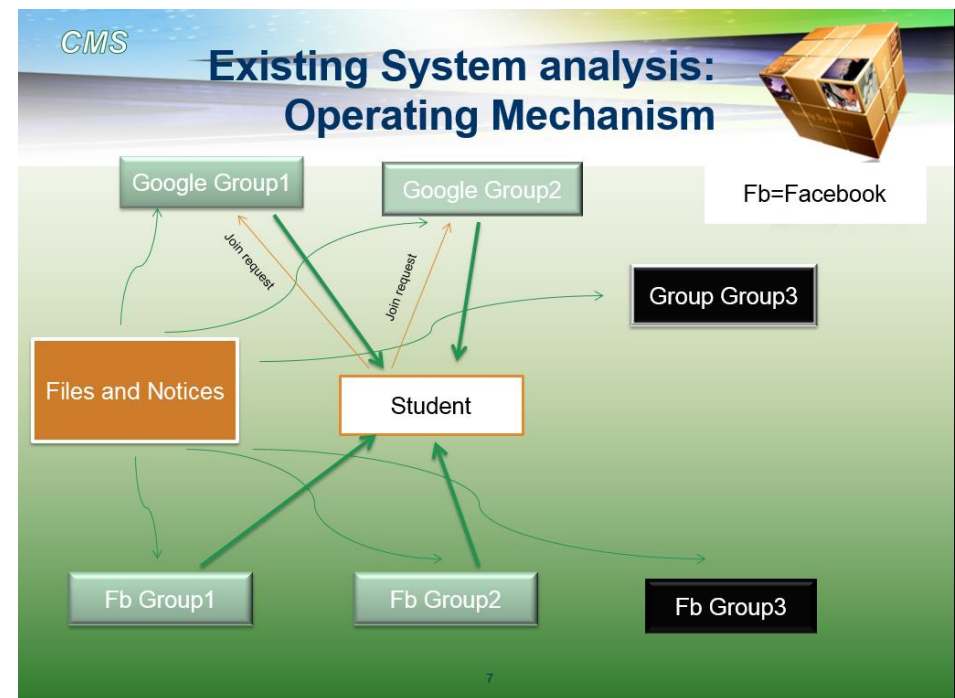
Our main objective is to –

- ❖ Analyse a university's classroom/coursework related system and any existing automation it might have.
- ❖ Realise the problems and find out what shortcomings the system might have.
- ❖ Propose an automated, better performing system.

2. Existing System Analysis

2.1 Operating Mechanism

- ❖ Teachers open different groups for different courses using platforms like Facebook, Google, and Piazza.
- ❖ All students join the groups to stay updated about the related course.
- ❖ They need to monitor every group regularly to keep up-to-dated.
- ❖ After finishing the courses the groups become invalid.
- ❖ Again new groups are created for new courses and the process continues perpetually.



2.2 Problem and Automation Status

Problems of the current system	Automation status
Different groups are opened in different platform specially Facebook.	Manual
Many teachers use some other platform (e.g. Google groups) to form groups and give updates.	Partially- automated
Other teachers give updates in class.	Manual
Students have to join several groups each term.	Manual
They have to check the groups regularly for updates.	Manual
Teaches have to discuss about CT schedule in classroom and knows his/her colleagues CT schedule from discussion.	Manual
Class materials are manually ordered.	Manual
Discussion being difficult in lack of proper platform.	Partially- automated
Does not have archive system - archives are only managed on a personal level.	Manual

Inefficient process of keeping track of class tests' , online, off-line, assignment schedule.	Manual
Course material uploaded in an irregular basis.	Partially- automated
Taking attendance	manual

3. Problem Statement

Project: Classroom *Management System*

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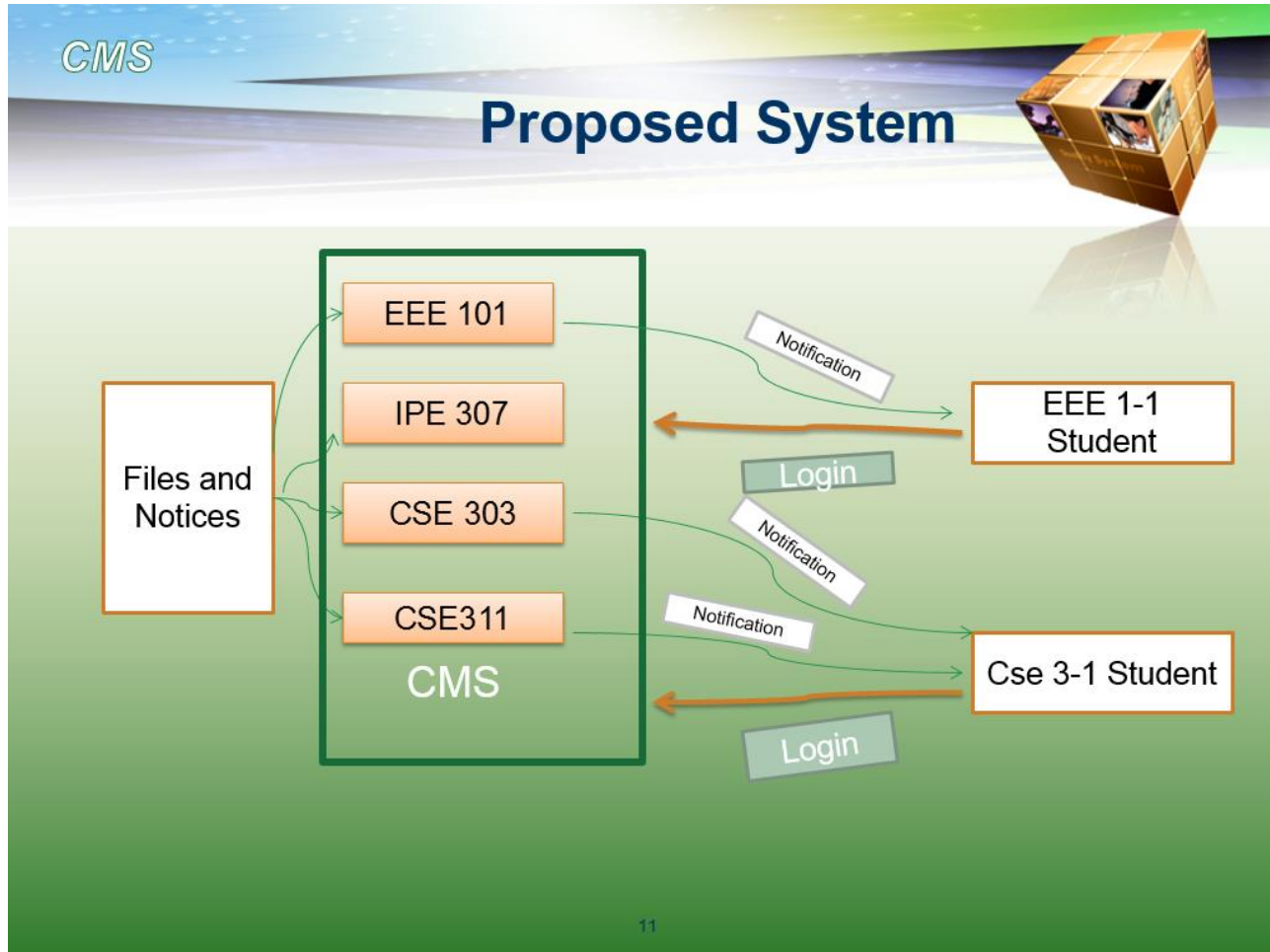
Brief statement of problems opportunities and directives	Urgency	Visibility	Benefit	Priority of Rank	Proposed Solution
Numerous groups to maintain.	High	High	*****	1	Make a new system with all functionality of presently working groups.
No common platform.	High	High	*****	1	Make a common system for all
Course syllabus or outline are not in one place make it harder for a student to manage his/her study.	Medium	High	****	2	Make a course management system.
No easy way to make or update course outline for a teacher.	Medium	Medium	***	2	Make a course management system.
Teacher cannot give any emergency notice. He/she have to call CR's, post in FB groups.	High	Medium	*****	1	Make a notification system.
Hard to keep track of any new updates for a student.	High	High	****	1	Make a notification system.
No common discussion forums	Low	Low	***	3	Make a discussion forum
A teacher does not know about his/her colleague's CT schedule.	Medium	Low	***	3	Make a dynamic routine.

Teacher cannot schedule his/her class test without discussion.	Low	Medium	***	2	Make a scheduler to manipulate the dynamic routine to schedule a test.
No archive system	Medium	Low	****	2	Make a archive system
Scattered study materials	High	High	*****	1	Make an automated ordering and classification system.
No common mailing system	Low	Low	**	3	Make an intrauniversity mailing system.
No automated warning system	Low	Low	**	3	Make an automated warning system.
No exam management system	High	High	*****	1	Make an exam management system.
No sessiona/projectI sub grouping system	Low	Low	**	3	Make subgrouping system
No online course offering system	Low	Low	**	3	Make a online course system
No online exam system	Low	Low	**	3	Make an online exam system

4. Opportunity

- ❖ An omnipresent, universally synchronized information system accessible to all students and teachers of a university can solve almost all the problems of the current system.

5. Proposed System



6. Scopes of Development

1. Account management system:

- ❖ Log-in, log-out for both teacher and students.
- ❖ Redirect students to an appropriate semester page.
- ❖ Redirect teachers to course pages instructed by him/her.

2. Personal database system:

- ❖ Course material upload by teachers and class representatives.
- ❖ Archive all course material after course ends. Previous archives will be available to current students. (E.g. CSE-307 archive of 10 batch, 09 batch and so on will be available to 11 batch when they take the course.)

3. Course management system:

- ❖ Course syllabus
- ❖ Course outline.

4. Communication system:

- ❖ Discussion forum.
- ❖ Mailing system.

5. Warning system:

- ❖ Warn the students with lower attendance by teacher
- ❖ Warn any member voiding group rules and regulation by admin.

6. Notification system:

- ❖ Show new updates.

- ❖ Notice board.

7. Exam management system:

- ❖ Class test and quiz syllabus, assignment and offline topic.

- ❖ Class test, online, offline, assignment, quiz marks.

8. Online Exam system:

- ❖ Taking and evaluation online exams.

9. Online course system:

- ❖ Offering online courses.

10. Interactive routine system:

- ❖ Dynamic routine indicating scheduled class tests', assignments' or off-lines' deadline.

- ❖ Assign class test in a particular time by any course teacher.

11. Sub grouping system:

- ❖ Sessional subgroups.

- ❖ Project subgroups.

7. Our Working Arena

We are going to working on:

- ❖ Account management system

- ❖ Personal database system

- ❖ Notification system

- ❖ Course management system
- ❖ Exam management system
- ❖ Interactive routine system
- ❖ Warning system

8. Outside Our Working Arena

We are not going to working on:

- ❖ Online exam.
- ❖ Online course
- ❖ Discussion forum(communication system)
- ❖ Sessional subgroup system

9. Should We Do the Project


Now the burning question is whether the system should be implemented or not. This project may have its costs and requirements, but it also have its benefits. In this section we shall try to clear its implementation feasibility:

- Required tools & Resources: In the implementation of this project we shall need some kind of common hosting platform where this system will be implemented for all users. This will certainly cost some money.
- People involved in development: It will not take many of us to develop this system within predicted time period. Five or six will be sufficient. So cost on this side is pretty small.
- Legal approval: It does not need any legal or compliance approval. So no headache there.

- **Efficiency:** The system certainly is going to make life easier for both teachers and students. So teacher and students are much likely to use such a system.
- **Popularity:** If we manage to make such a sweet platform for students and teachers, it's going to be a certain hit among teachers and students.
- **Revenue:** This system is not actually build for commercial purposes. So it may not have that much revenue. But later in the phase, when it will be popular among students and teachers, we can introduce some advertising in the system if we want to profit from it.
- **Maintenance:** The system should be assessed to ensure it does not become obsolete. This is also where changes are made to initial software. It involves continuous evaluation of the system in terms of its performance and user requirements. So may be someone will need to look over this project from time to time.

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Assessment of project's worthiness: Is the System worth implementing



Requirement	Cost
Tools & resources	Medium
Man power	Low
Legal approval	Not needed
Maintenance	Medium

Benefit	Benefit
Popularity	High
Revenue	Low
Efficiency	High
Time Value	High

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From the above we can see that, this project is not going to cost much and it is needed from current point of view. There is much opportunity for this project to go bigger and help both students, teachers in their academic process and may be go commercial one day.

10. Baseline Schedule

10.1 System Analysis:


The system analysis phase requires **4 weeks** of working time. Here is the time scheduling for this phase:

- **Problem Statement:** To find the useful and urgent system required for the present circumstances, allocated time for this work is **1 week**.
- **Scope Definition:** To find out whether the project is worth looking or not according to baseline problem(urgency ,visibility, priority, possible solution, benefits), Negotiating baseline scope(which part will be implemented), accessing baseline project worthiness ,developing baseline scheduling and communicating the project plan estimated time allowance is **1 week**.
- **Problem Analysis:** The estimated time for problem analysis phase is **1 week**. At this phase we have to find the problem domain, analyze the problem and opportunities, analyze business process, establish system improvement objectives, update or refine project plan and communicate findings and recommendations.
- **Requirement Analysis:** To identify and express system requirements, prioritize system requirements and communicate the requirement statement the estimated time period is **1 week**.

10.2 Logical Design:

The estimated time for logical design of the project is **4 weeks**. At this phase the following work has to be done:

- **Structure functional requirements:** It means using agile methods we have to draw or update one or more system models to illustrate the functional requirement. Estimated time is **1 week**.
- **Prototype Functional Requirements:** For prototyping functional requirements time allowance is **1 week**.
- **Validate Functional Requirements:** To validate both the model and the prototype estimated time is **1 week**.
- **Define Acceptance Test Case:** Defining acceptance according to the result of the previous section estimated time is **1 week**.



Baseline Schedule	
Phase	Estimated Time
System Analysis Phase	4 weeks
Logical Design	4 weeks
Decision Analysis	2 weeks
Implementation	12 weeks
Testing	2 weeks

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10.3 Decision Analysis Phase:

To identify candidate solutions, analyze candidate solutions, compare candidate solutions, update project plan and finally recommend a system solution estimated time is **2 weeks**.

10.4 Implementation:

According to the design (finally suggested at the decision analysis phase) the whole project we have time estimation of about 12 weeks. The implementation process includes a series of actions that will be performed during this period of time.

10.5 Testing:

Finally, after the implementation phase there will be a testing phase of about **2 weeks** to find out whether the system is running accordingly or not at a real platform.

11. Roadblocks and Solutions

11.1 System initiation :

- ❖ Problem: Collecting and coordinating all info's about courses and departments.
- ❖ Solution: Admin does it once after launching the system.

11.2 Retaking any course:

- ❖ Problem: Enrolling in the system for retaking course.
- ❖ Solution: Manually keeping track of these.

11.3 Maintenance:

- ❖ Problem: Need of periodic maintenance.
- ❖ Solution: Periodic monitoring.

11.4 Configuring system when new batch enters.

- ❖ Solution: Admin approves all new account opening by himself.

11.5 Some teachers are reluctant to use modern technology.

- ❖ Solution: Class representative can do some works of him/her.

11.6 Internet connectivity:

- ❖ Problem: Lack of internet connection to all.
- ❖ Solution: Can be solved in personal level.