

A Web-Based Platform for Efficient Team Task Coordination and Progress Monitoring


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ABSTRACT

Collaborative learning is a part of education these days especially in higher education institutions where students often have to work together on assignments, research projects and presentations. Working in groups helps students develop thinking skills learn how to communicate with each other and get some teamwork experience. Managing group assignments can be tough because of problems like people not working together some students not doing their share, poor communication and missing deadlines. A lot of students still use ways to organize their work like writing notes by hand using messaging apps or making informal lists of things to do. These methods do not help students keep track of their tasks and see how their work is going which can cause confusion and delays. It is also hard for the person in charge of the group to see what each member is doing or how the project is coming along. To fix these problems we made Collab Track, a web-based system for managing group projects. Collab Track is designed to help students work together and manage their tasks better. It has features like creating groups assigning tasks, tracking progress sharing files and sending reminders about deadlines. These features help students work together smoothly and make sure everyone does their part. We built Collab Track using a step-by-step approach to software development

including looking at what we needed designing the system putting it together and testing it. We used web technologies and database systems to make the platform work so students can collaborate with each other. When we tested the system we found that it does what it is supposed to do and gives students a way to manage their group work. Using Collab Track shows that web-based systems for working can make group projects more efficient by giving students a central place to manage their tasks improve communication and track their progress automatically. Collab Track can really help students, with their group projects and collaborative learning.

Keywords - Web-Based Application, Task Management System, Group Collaboration, Project Management, Workflow Management, Team Productivity, Real-Time Task Tracking, Web Technologies, Team Communication, Collaborative Systems.

INTRODUCTION

Collaborative learning is an important way of learning in schools and universities these days. Schools and universities often give students group work to do so they can learn to work and be more active in their learning. When students work together on projects they

can share their ideas split up the work and solve problems as a team. Working in groups is good for students because it helps them talk to each other think critically and get better at solving problems. When students work together they can learn from each other. Develop skills that they will need when they are working in a real job. Also group projects are like what happens in the world, where people have to work together to get things done. Even though group work is good it can be hard to do. One of the problems is getting everything organized and making sure everyone knows what they have to do. Without the tools students can struggle to divide up the work and keep track of how the project is going. Often students just use messaging apps, email or social media to talk to each other. These tools are not very good, for managing projects. Another problem is that some students do not pull their weight. Some students might do a lot of work while others do not do much. If there is no way to keep track of who's doing what it is hard to make sure everyone is contributing equally. Also students often have trouble keeping track of deadlines and doing tasks at the same time. If they forget when something is due or do not prioritize their tasks they might not get everything done on time. To make these problems easier to deal with a lot of organizations use tools to manage projects and work together. Most of these tools are designed for people who are already working not for students. So this project is proposing something called Collab Track, which's a website that is just for students to use on group projects. Collab Track is a place where students can go to organize their work keep track of progress and talk to each other. It is designed to help students work together effectively on Collab Track, their group projects and make it easier to use Collab Track for their school work.

LITERATURE REVIEW

Collaborative learning has been widely studied as an effective teaching method. According to Johnson and Johnson (2014), collaborative learning improves student engagement and encourages knowledge sharing among group members. Students working together in groups can achieve better learning outcomes compared to individual learning methods.

Research by Ferdous and Karim (2019) emphasized the importance of equal participation in group work. Monitoring individual contributions helps ensure that all members actively participate in the project.

Task management systems are essential tools for organizing and tracking project activities. Kerzner (2017) explained that task management systems enable users to plan, prioritize, and monitor tasks throughout the project lifecycle. These systems improve productivity by providing clear visibility of responsibilities and deadlines.

Web-based collaboration tools have become increasingly popular in educational environments. According to Alsadoon (2018), web applications allow multiple users to interact and collaborate through a centralized platform accessible from any location.

Hao et al. (2017) highlighted that effective collaborative platforms should include features such as communication tools, team management, task tracking, and progress monitoring. These features help users coordinate their activities and maintain project organization.

Despite the availability of various collaboration tools, many platforms are designed primarily for corporate project management rather than academic use. As a result, there is a need for a system specifically designed to address the requirements of student group projects.

PROBLEM STATEMENT

Group assignments are really common in schools and colleges. A lot of students have a hard time managing these projects with their friends. One big problem is that there is no system for keeping track of what needs to be done. Students usually use things like notebooks or notes on their phone to remember tasks. This is not a good way to do it. These methods are not very organized. It is easy to lose information or forget to tell someone something. Another issue is that it is hard to see how the group is doing. A lot of times students do not know what work their friends have done. This makes it hard to figure out if the project is going well and what needs work. It is also hard for group members to talk to each other and make sure everyone knows what is going on. When people talk about the

project in places like over email or in person it can be hard to keep track of what was said and what needs to be done. Group projects also have a problem with people missing deadlines. If there is no way to remind people when something is due they might. Not do the important things first. All these problems show that we need a website or tool that helps students manage their group projects talk to each other and see how everything is going. Group projects need a system, like this to work better.

RESEARCH OBJECTIVES

This research is, about creating a website that helps students work together on group projects.

The main goals are:

- To figure out what problems students have when they work on group projects.
- To make a website where students can form groups and assign tasks to each other.
- To add features that let users see how their project is going and what tasks are done.
- To make a system that reminds students when their assignments are due.
- To test the website to see if it really works for students.

PROPOSED SYSTEM

The Collab Track system is a website that helps students work on group projects. It is a place where users can make groups give each tasks see how things are going and get reminders about when things are due.

The Collab Track system is made up of three parts:

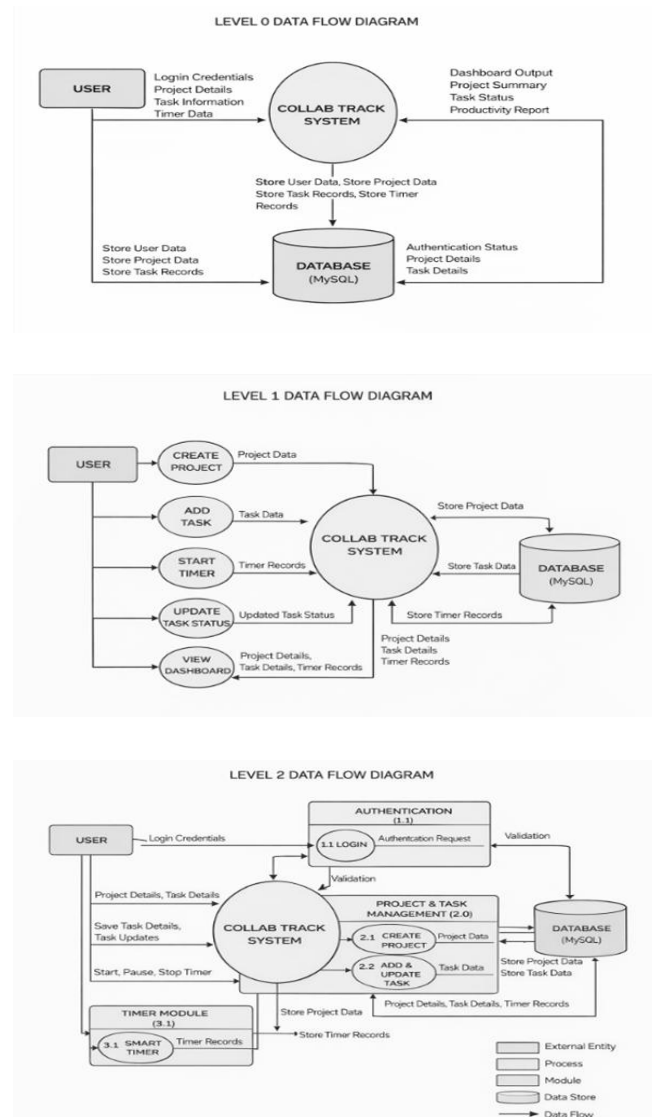
- User Interface Layer
- Application Logic Layer
- Database Layer

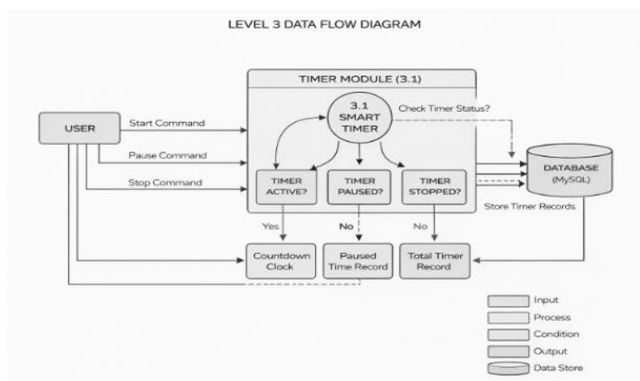
The User Interface Layer is where users can do things like make groups give tasks and look at how projectsre going. The Application Logic Layer is what makes the system work it does what the user asks for. The Database Layer is where all the information is kept, like user information, groups, tasks and how projects are going.

The Collab Track system has three types of users:

- Administrator
- Group Leader
- Group Member

The Administrator is, in charge of user accounts and how the system is set up. The Group Leader makes groups gives tasks and keeps an eye on how projectsre going. The Group Member does the tasks they are given and uploads files for the project. The Collab Track system is used by these users to work on group projects. The Collab Track system helps the Group Leader and Group Member to work.





7.5 Notification System

The Collab Track system sends reminders when tasks are almost due. This helps people finish their tasks on time. The Collab Track system has a notification system that does this.

ADVANTAGES OF THE PROPOSED SYSTEM

The proposed system has benefits compared to old ways of managing group projects:

- It has a place where tasks are managed.
- Team members work better together.
- It is easier to keep track of how the project's going.
- The team is less likely to miss deadlines.
- Everyone can see what each person is contributing.

SYSTEM FEATURES

The Collab Track system has a lot of features that help people work together in a group.

7.1 Group Management

People can make groups. Ask others to join their project. The person in charge of the group makes sure everything is okay. Watches what is going on with the project. The group leader is like a boss for the group. The Collab Track system is used for this.

7.2 Task Assignment

You can give tasks to people in the group. Each task has some details like what to do when it's due and if it is done or not. The task assignment feature of the Collab Track system is very useful.

7.3 Progress Monitoring

The Collab Track system can calculate how much of the task is finished and show how the whole project is going. This helps the group see how they are doing. The Collab Track system does this for the group.

7.4 File Sharing

People can share documents and files with the group. This is helpful, for the tasks they are working on. The Collab Track system allows users to upload files.

RESULTS AND DISCUSSIONS

After we implemented the system we did some testing to see how well it worked and if it was reliable. The results show that all the system features are working properly. Users could create groups give tasks to each other upload files and keep track of project progress without any issues. The notification system also worked well sending alerts to users when deadlines were near. Compared to ways of managing group assignments the Collab Track system is a more organized and efficient way to do things. The single interface makes it clearer what's going on and who is responsible, within the group.

FUTURE SCOPE

The new system is really good for people working in groups. There are some things that can be done to make the system even better in the future. Some things that can be done later include making an app for the system that people can use on their phones. This will make it easier for people to use the system. The system can also have things, like chat and video calls so people can talk to each other away. The system can also have tools to look at how well people are doing on projects and how well the projects are going. The system can be used to look at how each person is doing and how well the whole project is doing.

CONCLUSION

This study was about creating a Collab Track to help teams work together better. A lot of teams have trouble managing tasks because they do not communicate well are not transparent. Do not track responsibilities properly. Traditional ways of doing things like assigning tasks by hand using spreadsheets and talking informally often lead to missed deadlines, duplicated work and confusion about who's doing what. To fix these problems we made a website that lets team members manage tasks easily while keeping everyone in the loop. The Collab Track system lets users create, assign, update and track tasks in time so everyone can see how the project is going. Features like assigning tasks, managing deadlines, tracking progress and sending notifications help team members work together better and make sure everyone knows what they are supposed to do. One of the goals of this study was to show how a digital system for managing tasks can make workflows better and reduce communication problems within teams. By giving teams a way to assign and track tasks the Collab Track system makes sure everyone knows what they have to do and when it is due. Real-time updates let users track progress easily and make changes as needed while the project is happening. The Collab Track system also helps make teams more transparent and accountable. By tracking tasks and progress project managers and team members can quickly see what has been done what still needs to be done and if there are any delays. This helps teams make decisions and fix problems before they affect the whole project. The study also shows how important it is to make the system easy to use and accessible. The Collab Track system has an interface that lets users of all skill levels use it easily. Since it is on the web team members can use it from anywhere on any device, which's great for

[7] Project Management Institute, *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, 7th ed. Newtown Square, PA, USA: PMI, 2021.

modern teams that work remotely or in hybrid environments. Using a system for managing tasks also reduces administrative complexity by putting all task-related activities in one place. This means teams do not have to use tools and it is easier for them to share information, which ultimately makes them more productive and better at managing their time. In short this study found that the Collab Track system can really improve how teams work together how efficient they are and how well they can see what needs to be done. The system provides a way to manage team activities, in both academic and professional settings. By improving communication, accountability and workflow organization the Collab Track system helps teams work together efficiently and complete projects successfully.

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