

# **Project Tracking with Plagiarism Checker**

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**Abstract:** “Project Tracking with a Plagiarism Checker”. This web application is specifically targeted towards TY students and teachers/project mentors who have just started working on their projects. As teachers get assigned to multiple groups of students as a mentor/supervisor, things might get hectic trying to handle every single aspect of a project, similarly, the students find it very stressful to be able to keep up with every stage of the project and forget some or the other aspect of the project. Hence this web application will be able to help students and teachers handle and track every single stage and aspect of a project. This web application will establish a structure under which the students will work on the parts of the project they have been assigned and under the allotted time for that part. Additionally, it also has a plagiarism checker intended to make an important part of the teacher’s task a bit easier. It is also a medium of communication between groups and group members.

**Keywords:** Plagiarism checker, project planning

## **I. INTRODUCTION**

### **A) Background**

Every project needs a person/entity to handle and manage it, in the cases of college projects the person is a teacher and to help them handle the project by tracking the progress is a very good method to keep everything under control so that the project is done on time, under estimated cost and intended quality. This web application provides all the necessary things to meet the above-mentioned goals. Plagiarism is a very important aspect when it comes to the project completion, hence needs to be taken care with more seriousness. This web application provides a means to the teacher to do the required in the same web application.

### **B) Objectives**

Students starting their project is always concerned whether his/her project will get completed on time and the main concern for an assigned teacher is that the students do not leave or forget any vital part of their projects. This web application helps the students get in a mindset of a proper project as they will assign task which should be completed in the time allotted for that task. This web application will provide students and the assigned teacher with a proper medium to execute and complete all parts of a project by giving the students and the teacher to track the progress of every single segment. This web application will also provide a medium for the students and teacher to communicate with the in-built chat option.

### **C) Purpose, Scope, Applicability**

#### **a) Purpose**

The purpose of this application is that the teacher can be informed of the progress faster and timely. The students can interact with the teacher better according to the requirement and it further helps them outside the college at their jobs. As there would be deadlines when working in a company, the students(employees) will be better aware of his/ her role and the amount of time it should take them to complete the assigned task.

**b) 1.3.2 Scope**

- It will help students and teachers to know their progress better
- It will help the students be aware of their project's current status
- There will not be any parts of the project left undone and everything gets done in the time allotted.

**c) Applicability**

It connects the students to the assigned mentor. Students can ask the teacher through the web application even if away.

**D) Technical Feasibility Study**

Here we studied the technical feasibility of the project; what kind of technical resources would be consumed in the execution of this project.

1. All programming languages used in the making of this website are open source.
2. Since there is no application of IOT in this project, gadgets are not required.
3. The website is only compatible with desktops
4. The website will be user friendly keeping both (Student & Teacher) in mind.

**E) Economic Feasibility Study**

Here we studied the economic feasibility of the project; the overall investment into the project was calculated

1. Since there is no application of IOT the cost of gadgets is zero.
2. Programming is done using open-source software/languages.

**F) Operational Feasibility Study**

Here we studied the operational feasibility of the project; how the project fares when actually put into practice.

1. By uniting the project planning and plagiarism checking features under one website, the overall reputation and likeliness of people using this website greatly increases.
2. The compatibility of the plagiarism checker and the project planner is much better compared to other websites since both were made while keeping the other in mind for better accuracy.

**II. SURVEY OF TECHNOLOGY**

In current times plagiarism is a growing problem, it is the theft of the intellectual property of a person or organization without giving due credit. Plagiarism leads to individuals coming up with original ideas to go unrecognized. To solve this problem the concept of 'Project Tracking and Plagiarism Tracker' has been brought forth.

**What's different about this from other websites?**

- While many websites for project tracking and plagiarism checker exist, the both of them have not been coupled together so far.
- The trouble of readjusting the format of the project to perform a plagiarism check on another website won't exist any longer, as both work hand in hand on this website.

**What kind of software will be implemented?**

**a) Front-End**

- **CSS 3** - Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

- **Why CSS 3?** - CSS3 is the latest evolution of the Cascading Style Sheets language and aims at extending CSS2.1. It brings a lot of new features and additions, like rounded corners, shadows, gradients, transitions or animations, as well as new layouts like multi-columns, flexible box or grid layouts.



- **HTML5** - is a markup language used for structuring and presenting content on the World Wide Web.



- **JavaScript** - often abbreviated as JS, is a programming language. Alongside HTML and CSS, JavaScript is one of the core technologies of the World Wide Web.



- **Bootstrap4** - is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.



- **jQuery** - is a JavaScript library designed to simplify HTML DOM tree traversal and manipulation, as well as event handling, CSS animation, and Ajax. It is free, open-source software using the permissive MIT License

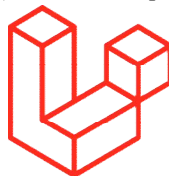


○ **Back-end:**

- **PHP** - is a general-purpose scripting language especially suited to web development.



- **Laravel** - is a free, open-source PHP web framework. intended for the development of web applications following the model-view-controller (MVC) architectural pattern and based on Symfony.



○ **Database:**

- **MySQL** - is an open-source relational database management system (RDBMS). A relational database organizes data into one or more data tables in which data types may be related to each other; these relations help structure the data .SQL is a language programmers use to create, modify and extract data from the relational database.



• **XAMPP/LAMP/WAMP -**

**What is XAMPP, LAMP and WAMP?**

XAMPP	LAMP	WAMP
XAMPP can be used for any operating system.	LAMP is used for Linux operating system only.	WAMP is used for Windows operating system only.
Its full form is x-os, Apache, MariaDB, PHP, and Perl.	Its full form is Linux, Apache, MySQL and PHP.	Its full form is Windows, Apache, MySQL and PHP.
It is free, open source, cross-platform web server solution pack and is developed by Apache Friends.	It is also an open source platform.	It is an open source platform.
It is simple, lightweight and easy to use for developers in creating local web server.	Relational database management system for LAMP is MySQL.	Relational database management system for WAMP is MySQL.

**What are the benefits of using project tracking?**

- By allowing creation of accounts, maintaining records and having constant supervision would be possible for both students and teachers as it would allow the teacher to monitor the project progress manually on a frequent basis.
- A timeline would help remind students which phase of the project must be completed in the allotted time as well as the final deadline of the project.
- Students during group project will be able to interact with each other using the chat bot to make sure everything proceeds smoothly.
- A plagiarism check would be allowed to perform at any phase of the project and the students and teachers will be provided with a plagiarism report.

**A) Surveys Conducted to Find User Needs**

People who have used project planning websites generally have to look around for plagiarism checkers online before submitting their projects, this is a very time consuming task as the project planning websites are not always compatible with the plagiarism checking websites and can often lead to an inaccurate plagiarism report.

- So, we asked people if they would prefer a website with or without a plagiarism checker

And this was the result:



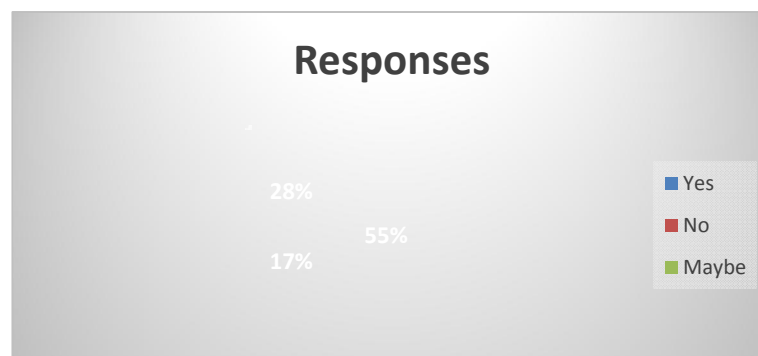
**Figure: Survey of Features**

According to the survey conducted the majority of the people preferred the idea of having a plagiarism checker in the same website along with the project planner. Those who said “No.” had already found project planning and plagiarism checking websites that suited their needs. Those who said “Maybe” were either not interested in any of the ideas or didn’t have any experience in using websites for assistance while working on projects.

#### Would you actually use the website?

Knowing their preference doesn’t answer the question, whether they would actually bother to use the website? so we presented them with this question. However, this question was only presented to those individuals who responded with a “Yes” or “Maybe” to the previous question because, the ones who responded with a “No” to the previous question had no interest in this question.

These were the responses we received:

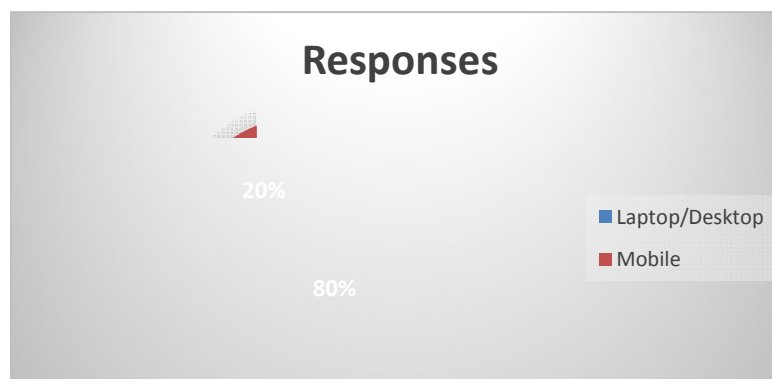


**Figure:** Survey of website use

As expected, the number of people who responded with a “Yes” decreased drastically, that is by 20%. Few who responded with a “Yes” or “Maybe” to the previous question responded with a “No” this time around. The number of people who became uncertain grew as well.

#### Which platform would you prefer to access the website on?

The people who replied “Yes” to using our website were lastly asked the above question. These were the responses we received:



**Figure:** Survey of Access Medium

According to the survey conducted we found out that more people were inclined to use Laptops/Desktops over mobile phones when it came to accessing the website. This was because project creation with the use of Microsoft tools like MS Word, MS Power point, MS Office, etc, was easier on Laptops/Desktops as compared to mobile phones thus making uploading documents to the website from Laptops/Desktops more convenient.

### III. REQUIREMENTS AND ANALYSIS

#### A) Problem Definition

As previously stated most websites which include project planners typically don't include a plagiarism checker which becomes inconvenient if you are short on time. This becomes an annoyance as people already facing a deadline have to now search for a compatible plagiarism checker before submitting their work. Even if they manage to find a compatible plagiarism checker the problem of accuracy of plagiarism report arises. Our website solves this problem, while not ending there and going forward and giving our users many more useful features like the project timeline and the chatbot.

#### B) Requirement Specification

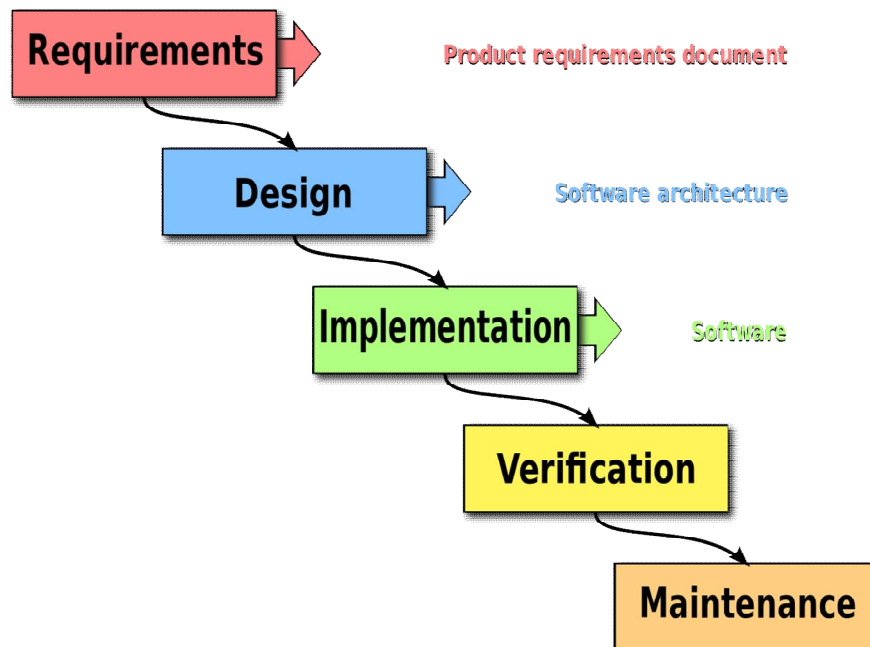
With the features of this website presented and elaborated upon the next big issue is the requirement specification. In other words the checklist you need to fulfill in order to use the website. Users will need access to a laptop or a desktop in order to fully utilize the features of this website without any technical difficulties.

An offline version does not exist since the project timeline will constantly be updated using internet time and while generating a plagiarism report the website will search for keywords and phrases across multiple websites which students and teachers generally use as their main sources of information (Eg- <https://www.wikipedia.org>).

While this website remains a minor project for the time being, if the possibility of it evolving into something bigger, no matter how slim exists, then we as the developers will come up with a mobile compatible version eventually. The survey we conducted shows low desire for a mobile version amongst our peers, so for now resources will not be wasted on a mobile version.

#### C) Planning and Scheduling

In the project we have resorted to using a waterfall model to depict each phase of our project making.



#### a) Requirements

In this phase, we conducted a survey to know the expectations users had of our website, as well as the requirements we the developers had to fulfill for the smooth progress of this project.

### **Activity Stream:**

A user requested more extension formats(like .docx) be made compatible with our website. A former teacher expressed doubt when it came to the project timeline and if students would bother keeping track of their project? We clarified to her that updating the status was not an option but a requirement that both students and teachers had to fulfill to keep using our website.

### **b) Design**

For the time being the UI of the website will be fixed for users and only be alterable by us, the devs. In the future we might allow users to make minor changes and some personalization to their accounts.

### **c) Implementation**

After we got to work on the portals we started providing them both with their shared features before adding unique ones. Unique features weren't a big concern during this phase so they ended up at the bottom of our priority list.

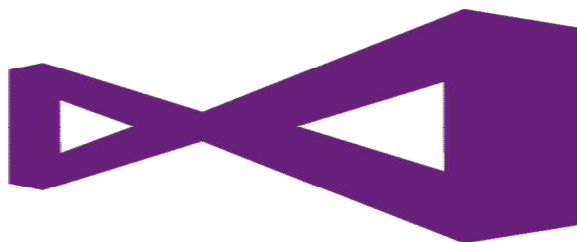
### **D) Software and Requirements**

#### **a) Platforms**

Access to the website will be through windows desktops/laptops since majority of people would prefer working on their projects through these devices.

#### **b) Visual Studio**

Microsoft Visual Studio is an integrated development environment(IDE) from Microsoft. The primary use for visual studio is to develop computer programs, as well as websites, web apps, web services and mobile apps. The community edition of visual studio is an open source software. It is a general-purpose, multi-paradigm programming language encompassing strong typing, imperative, declarative, functional, generic, object-oriented (class-based), and component-oriented programming disciplines. Visual studio supports 36 different programming languages plus other languages such as python, ruby and Node.js are also available with the use of plu-ins, making it the best tool for developing our website.



### **c) Preliminary Product Description**

Project planner is a essential tool not just for students and teachers but also for people who generally deal with a lot of projects. Project planner becomes a handy tool to have by your side when tasked with a project. When faced with time crunches and delays while working on a project, panic is generated that can be avoided through systematic planning but, often systematic planning can also be time consuming, in such cases a project planner is much simpler and efficient to use.

The issues that arise due to miscommunication between students and teachers while working on projects will no longer exist as the project timeline will constantly send updates to the teacher in charge of the project and if the students are uncertain about anything they can always use the chatbox to communicate with the teachers.

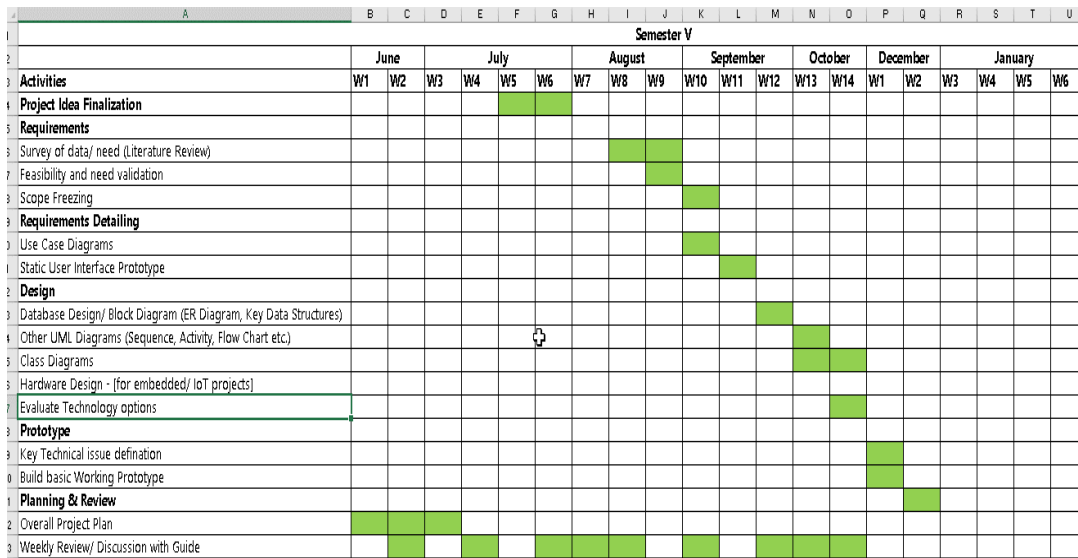
While the website aims to provide support to people working in educational institutes, people from business or other sectors who deal with projects daily will also find that this website can satisfy their needs.

#### IV. SYSTEM DESIGN

##### A) Basic Modules

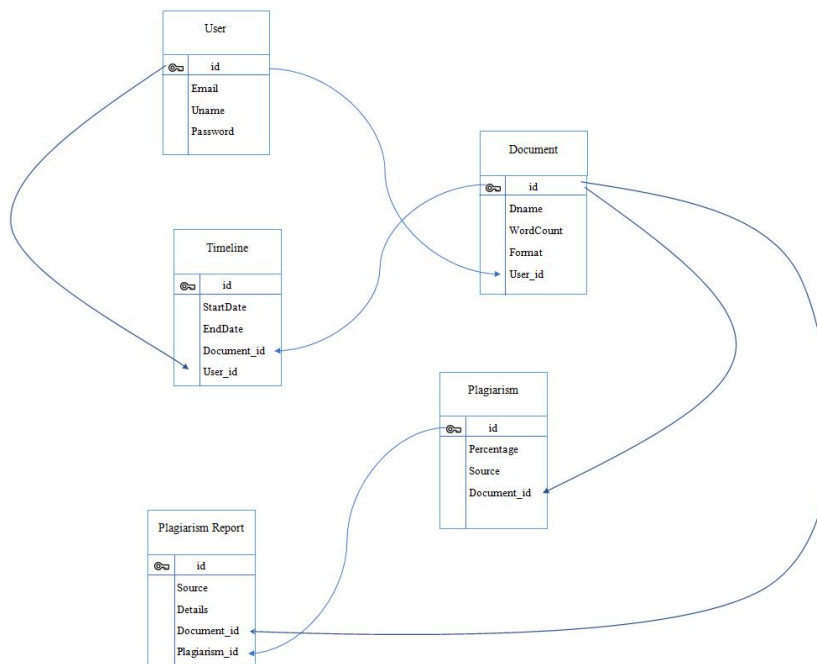
The website has a very simplified UI, making it user friendly for users with even little experience in project planners. The layout of the website is clutter free and to the point so that user aren't confused about how to use it for their select purposes. The features are listed as follows.

##### B) Gantt Chart



##### C) Data Design

###### a) Schema Design





**b) Data Integrity and Constraints**

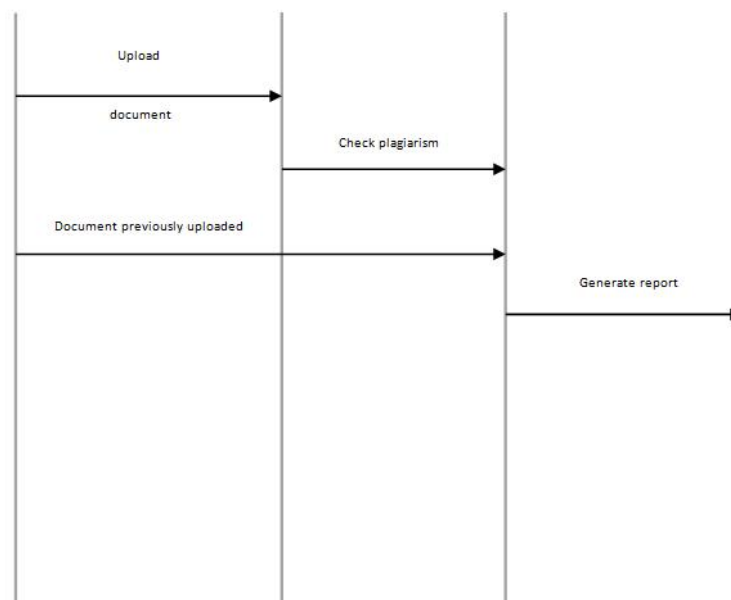
• **User Details**

Column name	Data Type	Size	Description	Constraint
User_id	Numeric	(5,0)	The id of the user	Primary Key
User_name	Varchar	(20)	The username of the user	Not null
Password	Varchar	(20)	The password of the account	Not null
Email	Varchar	(20)	The email address of the user	Not null

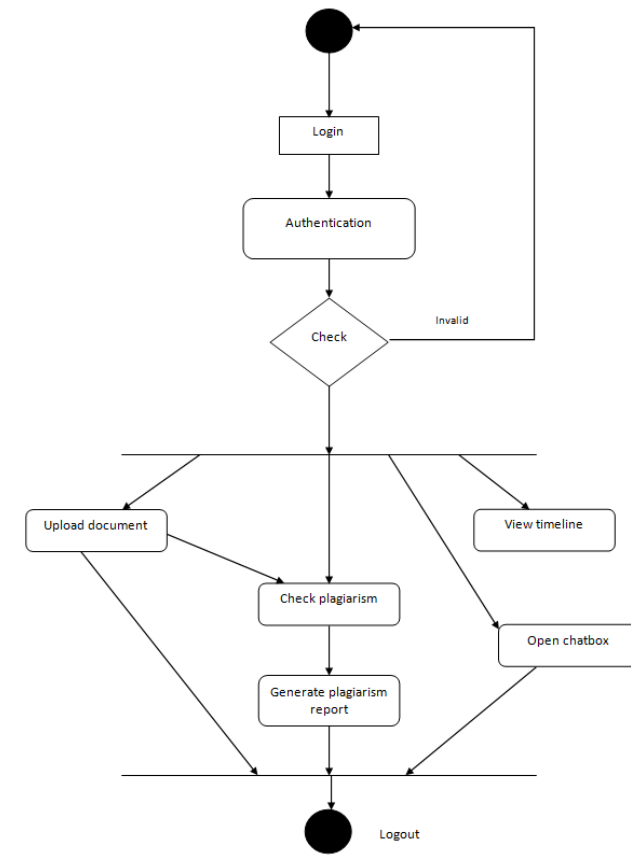
• **Document Details**

Column name	Data Type	Size	Description	Constraint
Document_id	Numeric	(5,0)	The id of the document	Primary Key
Document_name	Varchar	(20)	The name of the document	Not null
Document_format	Varchar	(10)	The format of the uploaded document	Not null

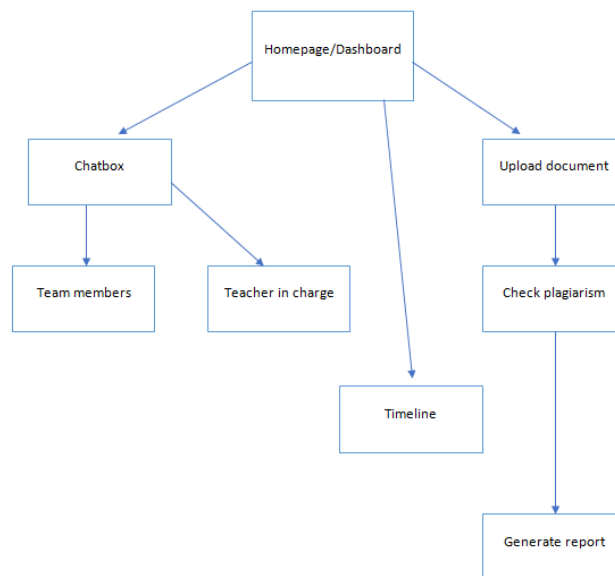
**c) Sequence Diagram**



**d) Activity Diagram**



**e) Menu tree**

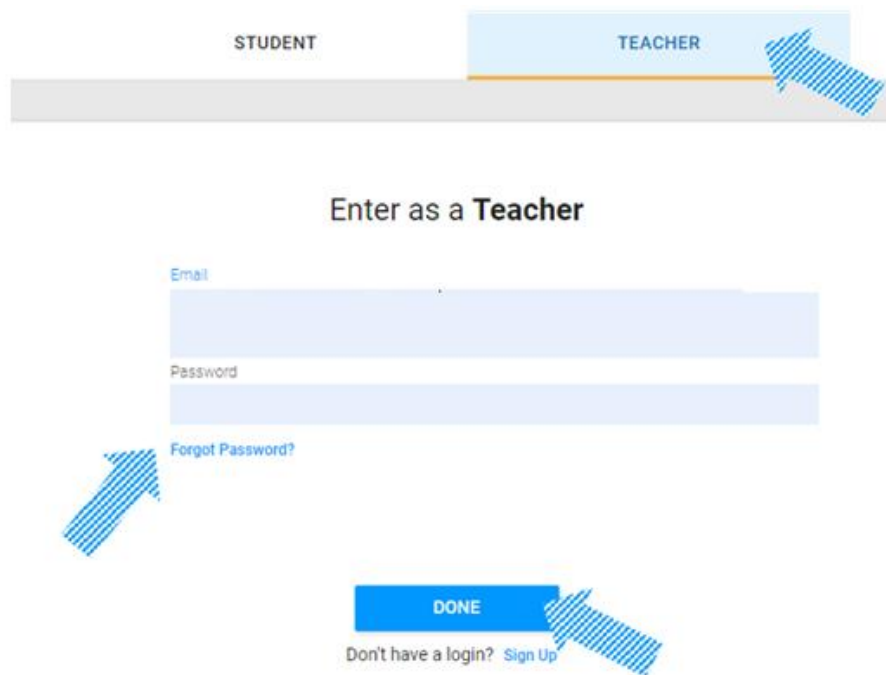


**f) Event table**

Event	Trigger	Initiator	Use case	Output	Recipient
User clicks on "Create new account"	Create new account	Student/Teacher	Create account	Account created	Student/Teacher
User clicks on "Login"	Access pre-existing account	Student/Teacher	Account Login	Logged into account	Student/Teacher
User clicks on "Upload project"	Upload project	Student/Teacher	Project begins uploading	Project uploaded	Student/Teacher
User clicks on "Check plagiarism"	Check plagiarism	Student/Teacher	Generate plagiarism report	Plagiarism report	Student/Teacher
User clicks on "View timeline"	View timeline	Student/Teacher	Timeline generated	Project progress	Student/Teacher
User opens "Chatbox"	Chatbox	Student/Teacher	chat	Chatbox opened	Student/Teacher

**g) User Interface Design**

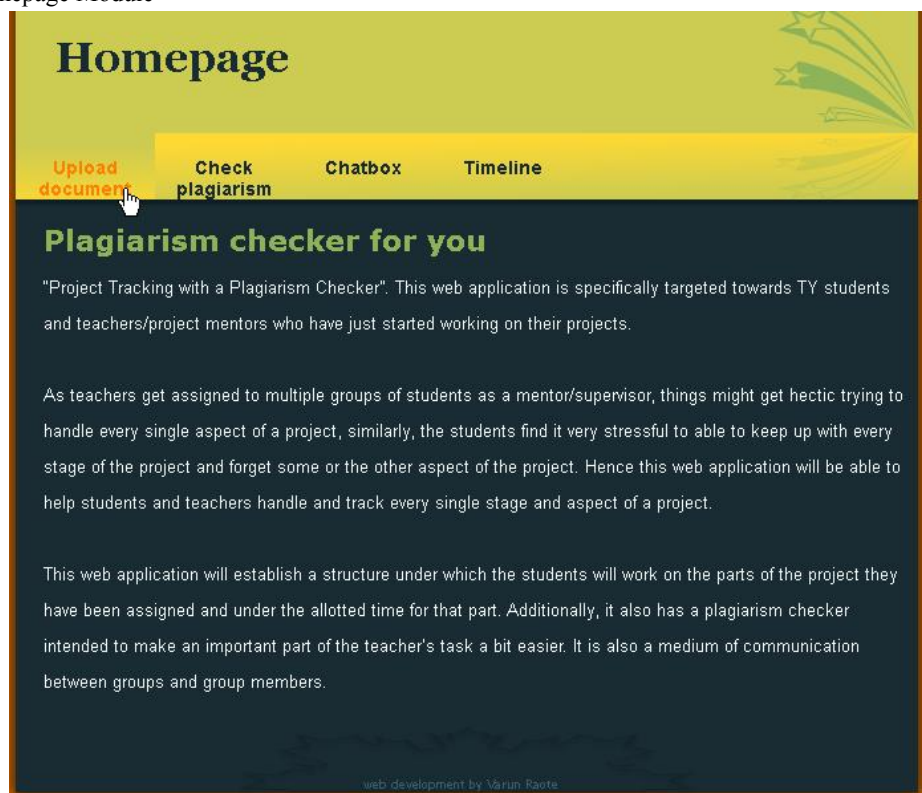
- Sign-in Module



The diagram illustrates a sign-in module for a system. At the top, there are two tabs: "STUDENT" and "TEACHER". The "TEACHER" tab is selected, indicated by a blue arrow pointing to it. Below the tabs, the text "Enter as a Teacher" is displayed. Underneath, there are two input fields: "Email" and "Password". To the left of the "Forgot Password?" link, there is a blue arrow pointing to it. At the bottom, there is a blue button labeled "DONE". Below the button, there is a link that says "Don't have a login? Sign Up" with a blue arrow pointing to it.

(The above is only an example of what the page could look like)

- Homepage Module



#### h) Security Issues

When it comes to performing tasks that require the internet there is always a security concern that arises. Websites that provide features like project planners and Plagiarism checkers for free, typically don't have a robust security system and when you upload a document to the website, you are also uploading it to the internet so, the risk of data leak or data theft always exists. This website similarly suffers this issue. The Chatbox available to both student and teacher accounts also holds the risk of being compromised since it isn't secured with end-to-end encryption. While using the plagiarism checker to crosscheck with reference sources the data provided by the user is most vulnerable to data leaks.

#### i) Test Cases Design

Inspection Check	Pre-Condition	Test Data	Priority
Login Modules	User should click on student or teacher portal to proceed	A page asking for sign-in or sign-up details will load	High
Homepage Module	User should either sign-in or sign-up irrespective of account type	The main page displaying features of the website will load	High
Chatbox module	User should click on "chatbox" from homepage	A dialog box will appear displaying names of team members and teachers.	Medium
Project planner	User should click on "Plan project/Project planner"	A prompt to upload a document will appear	High
Timeline	User should click on "Timeline"	A timeline with the start and end date(deadline) of the project will appear	Medium

Plagiarism checker	User should click on “Check plagiarism/Generate plagiarism report”	A prompt to upload a document will appear/A plagiarism report for previously uploaded document will be displayed	High
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#### **SUMMARY**

Plagiarism is presenting someone else’s work or ideas as your own, with or without their consent, by adding it into your work without giving credit to the origin. All published and unpublished material, whether in manuscript, printed or electronic form, is covered under the basic definition of plagiarism. Plagiarism may be intentional or unintentional or maybe even reckless. Under the regulations for examinations, intentional or reckless plagiarism is a disciplinary offence and is frowned upon.

The best way of avoiding plagiarism is to learn and enforce the principles of good academic practice from the beginning of your university career. Avoiding plagiarism isn’t simply a matter of making sure your references are all correct, or changing enough phrases so the examiner will not notice your paraphrase; it is about deploying yourself learned academic skills to make your work as best as it can be.

#### **BIBLIOGRAPHY**

- [1]. <https://www.wikipedia.org/> (To gather basic definitions of programming languages used)
- [2]. <https://www.youtube.com/playlist?list=PLGgbWId6zgaWZkPFI4Sc9QXDmmOWa1v5F> (To relearn the basics of HTML 5 and CSS)
- [3]. <https://paiza.io/en/projects/new?language=mysql> (To practice MySQL)
- [4]. <https://www.w3schools.com/php/DEFAULT.asp> (To study PHP)
- [5]. <https://stackoverflow.com/> (To get ideas from programmers online)
- [6]. <https://code.visualstudio.com/docs/introvideos/basics> (To study visual studio)
- [7]. <https://www.w3schools.com/bootstrap4/> (To study bootstrap4)

#### **PLAGIARISM REPORT**

Plagiarized content is present in the following parts of the document

- **CHAPTER 2 SURVEY OF TECHNOLOGY**  
(The programming languages used in the making of this website have been defined with the help of Wikipedia)
- **CHAPTER 3 REQUIREMENTS AND ANALYSIS -> 3.4 Software and Requirements -> 3.4.2 Visual Studio**  
(Information about visual studio has been gathered from the internet. Plagiarism: 40%)
- **SUMMARY**  
(Plagiarism: 43%)  
[Overall the document has less than 10% of plagiarized content]