

Web Application for Teachers and Students

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ABSTRACT: Education is the most valuable gift of mankind which is passed from one person to another. In today's world where we are facing a pandemic like Covid-19 where the whole world is in a lockdown and everything is closed like transportation, offices, gym, restaurant's etc including the most important part of society its educational institutes which helps in moulding the future of human kind. But thanks to the advancement in technology, we can continue this sharing and evolving of knowledge that in traditional time could only be passed from the teacher to the student by physically present. since some situations like the present Covid-19 where everyone is supposed to restrain their movement from one place to another to help restrict the spread of the virus. We all know that "The risk of closure of educational institutes exceeds the virus risk". So to solve this problem where the students could keep learning from the safety of their home we have developed an application for both the students and teachers can have an experience of college where they learn through the means of online E-Classes. This is a web application for both the teachers and students through which study materials can be exchanged between the educator and the learner. We mainly used PHP for backend and JavaScript, Ajax for frontend. This web application will help the students to upload and download study materials or lecture notes.

KEYWORDS: communication, testing, maintenance.

I. INTRODUCTION

Online education has gained significant popularity in recent years. These applications are extremely testing since they have enormous number of members, manage real time changes to member participation and adapt to the high transfer speed prerequisite. Load increases with the number of users in the conference as each faculty could generate and distribute educational material to their students.

1.1. AIM

The aim to make a web application through study and educational material can be shared by educator to their pupils.

1.2. SYSTEM OVERVIEW

We have made a web application that provides sharing educational content between teacher and multiple students over the internet. The application needs only a web browser or any other plug-in or software has to be installed, making the application O.S independent. Our application allows the user to create study material also edit it. These notes can be shared one to one faculty member and multiple pupils.

This project is an online portal between students and Teacher. This innovative system allows Teacher to share notes and study materials to student and other teachers as well. It consists of a both educator login along with pupil login. Teacher may upload e notes through their provided login also teacher may share study set using links.

II. LITERATURE REVIEW

There have been numerous researches that investigated the developing decisions for Internet communicate. We have analysed our work the listed research paper.

Below is some the research paper that we have studied.

1) The Effects of Collaborative Note-Taking in Flipped Learning Context's (Matthew Baldwin, Mik Fanguy, Jamie Costley):

In this paper the authors have used learning management system (LMS), Google Doc service to study about the benefits of shared note-taking during live lectures. They have also stated that the effects of shared note-taking in e-learning environments merit examination since such courses often characteristic asynchronous video lectures, allowing students to work together to construct notes over longer periods of the time.

2) Android Based Smart Learning and Attendance Management System. (Parvez Ahmed Ayub Ali Bhanbheru, Mahesh Pawar, Talha Sayed)

In this paper the authors have proposed an application by which the user would be able to communicate with other user through the chat application and also able to access number of books across the globe.

3) Note Taking and Note Sharing While Browsing Campaign Information (Scott Robertson, Ravi Vatrapu, George Abraham)

In this paper the authors have made an application that can help politicians to take notes and also share them while browsing.

4) ReactiveWebATN: Web-based Handwriting Note Sharing System for Distance Learning (Motoki Miura):

In this paper the author has developed a web-based handwriting note sharing system by using media tools and digital pencil-stylus.

III. METHODOLOGY:

This project is an online web application between students and Teacher. This innovative system allows Teacher to share notes and study materials to student and other teachers as well. It consists of a teacher login along with student login. Teacher may upload e notes through their provided login also teacher may share study set using links.

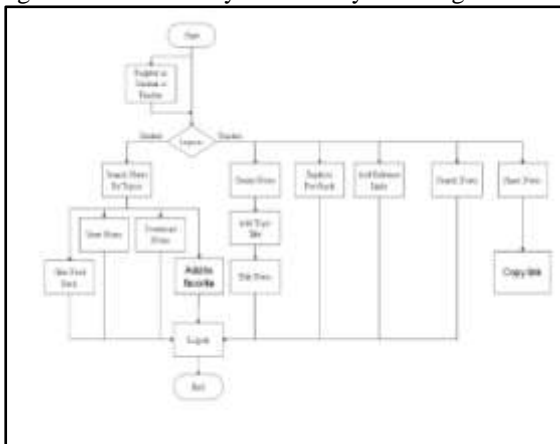


Fig 1: Project overview

3.1. SYSTEM DEVELOPMENT LIFE CYCLE:

The procedure of developing information systems through analysis, design and implementation is called the System Development Life Cycle. The System Development Life Cycle that is SDLC can also be known as Information Systems Development or Application Development.

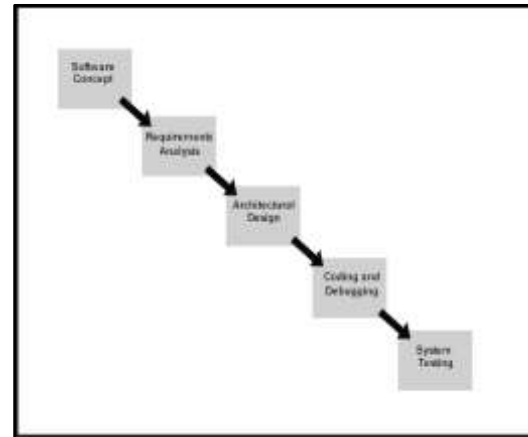


Fig 2: Development Life Cycle

Steps involved in the System Development Life Cycle are as follows:

Each phase within the overall cycle can be made up of multiple steps.

Step 1: Software Concept

The first step is to recognize a need for the new system. This will include decide whether an opportunity or business problem exists by conducting a feasibility study to examine if the proposed solution is cost effective.

Step 2: Prerequisite Analysis

The process of analysing the details needs of the end users, the organizational environment, and any system presently being used, developing the functional requirements of a system that can meet the needs of the users is called requirements analysis.

Step 3: Architectural Design

After the requirements are gathered, the necessary specifications for the hardware, software, data resources, and the information products that will satisfy the functional requirements of the proposed system will be determined.

Step 4: Coding and Debugging

Coding and debugging are nothing but creating the final system. This step is always done by the software developer.

Step 5: System Testing

To evaluate its actual functionality in relation to expected or intended functionality the system must be tested. During this stage converting old data into the new system data and training employees to use the new system takes place. End users will determine whether the developed system meets the intended requirements, and the extent to which the system is actually used.

Step 6: Maintenance

The system will need maintenance inescapably. Software undergoes changes once it is delivered to the customer while maintenance takes place. There are various reasons for changing the software. Changes could be done due to some unexpected variable within the system. In addition, the changes in the system could personally affect the software operations. The software should be developed to fit in with the changes that could take place during the post implementation period. Various software process models are as follows: -

- The Iterative Model
- Prototyping Model
- The Spiral Model
- The Waterfall Model
- RAD Model

3.2. FEASIBILITY STUDY:

Any system developing life cycle consists of the first step as preliminary investigation. The feasibility study is a major part of the first step. How beneficial and practical a development of any information system is, is checked by feasibility study. The feasibility of the development software is:

- Technical Feasibility.
- Motivational Feasibility.
- Operational Feasibility.
- Economic feasibility.

3.3. SYSTEM PLANNING AND SCHEDULING:

A bar chart that illustrates a project schedule is called a Gantt chart. They are potent to show visual timeline in project management. Gantt's shows the start date and the end date for each task that must be followed in order to successfully complete a project.

It includes a plan for the first half of the year. The plan includes - project title finalization, literature survey, business case, project charter, requirement gathering and user survey, implementation and testing of basic functionality, implementation and testing of GUI, implementation and testing of machine learning functionality, synopsis and report and final presentation.

3.4. TESTING TECHNOLOGY:

System testing is a condemnatory phase of implementation. Testing of the system involves debugging of the computer programs and testing information processing method. Testing can be done with the help of text data, which attempts to stimulate all feasible conditions that may arise during processing. If structured programming approach have

been used during coding, the testing proceeds from higher level to lower level of program section until the entire program is tested as unit. The testing methods adapted during the testing of the system were unit testing and integrated testing.

3.4.1. UNIT TESTING:

Unit testing focuses first on the phases to locate errors. This enables the tester to detect errors in coding and logical errors that is accommodated within that phase alone. The results from the interaction between modules are initially avoided.

3.4.2. INTEGRATION TESTING:

The integration testing can be known to be a systematic technique for building the program structure while at the same time to expose the errors associated with the interface. The aim is to take unit-tested phase and build a program structure that has been discovered by designing. It also tests to find the inconsistency between the system and its aims. Subordinate stubs are replaced one at a time in the definite phase. Tests were supervised at each phase after it was integrated. On completion of each set another stub was replaced with the real phase.

3.4.3. FUNCTIONAL TESTING:

Functional testing is an approach in which all the performances of the program are tested to check whether all the functions that were proposed during the planning stage were full filled. This is also done to check if all the functions proposed are working properly. This is further done in two phases:

- First, to see if they still work properly after they have been integrated to check if some functional similarity issues arise.
- Secondly, before the incorporation to see if all the unit components work properly.

3.4.4. PERFORMANCE TESTING:

Expected Result

- The user should connect to the server properly without any problems or difficulty.
- Details provided by the application should be correct and as per the user's need.

Observation

- Connection can be established easily provided that the server is on and the user has good internet access.
- The connection with the server will consume time as it uses Internet connection.
- Receiving data from the server also may take time.
- Information coming from the database will always be correct.

IV. EVALUATION:

System evaluation provides framework for categorizing scheme to recognize sets of similar systems. The framework amalgamates previous studies on software evaluation, productivity models, software, and total quality models. It also classifies details about software systems from the perspective of the project and the environment.

V. RESULTS AND DISCUSSION:

After completing the web application, the following results has been achieved:

- Web-based application was developed
- User can create an account on the portal
- Users can sign up as a teacher or a student
- Users can establish communication through feedback response.
- User who has registered as a teacher can create, edit, share and publish notes.
- The system reduces physical effort by using this this application instead of a real-life meeting.
- It provides easy and simple communicating and sharing files.
- User can use this application both on a computer as well as a mobile device



Fig 3: LOGIN PAGE



Fig 4: Registration Page



Fig 5: Teacher Home Page

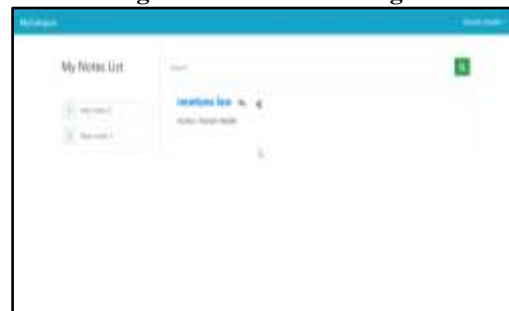


Fig 6: Students Home Page

VI. SUMMARY AND CONCLUSION:

- Thus, we are developing a website base notes and study material sharing web application on which student can easily search and view/download the study notes from teachers also teachers can share their created notes using links through email or any other platform.
- It will simply use the inbuilt document reader to view the study material. This application will be easy to navigate and help both teachers and students to coordinate in this today's world online learning and teaching.
- Thus, this application works on any web browser and does not need any proprietary software and minimal hardware requirements

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 - 5) High-level design by Johnson, Chadwick Hugh: The purpose of this High-Level Design (HLD) Document is to add the necessary detail to the current project description to represent a suitable model for coding