

LearnAbit

**A PROJECT REPORT
for
Mini Project (KCA353)
Session (2023-24)**

Submitted by

**TANYA TYAGI
(2200290140158)
TARUN KUMAR
(2200290140159)**

**Submitted in partial fulfilment of the
Requirements for the Degree of**

MASTER OF COMPUTER APPLICATION

**Under the Supervision of
Dr. ANKIT VERMA
(Assistant Professor)**



Submitted to

**DEPARTMENT OF COMPUTER APPLICATIONS
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Uttar Pradesh-201206**

(JANUARY 2024)

CERTIFICATE

Certified that **TANYA TYAGI (2200290140158), TARUN KUMAR (2200290140159)** have carried out the project work having “LearnAbit-An E-learning website” (**Mini Project-KCA353**) for **Master of Computer Application** from Dr. A.P.J. Abdul Kalam Technical University (AKTU) (formerly UPTU), Lucknow under my supervision. The project report embodies original work, and studies are carried out by the student himself/herself and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

Date:

TANYA TYAGI (2200290140158)

TARUN KUMAR (2200290140159)

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

Date:

Dr. ANKIT VERMA

<Designation>

**Department of Computer Applications
KIET Group of Institutions, Ghaziabad**

Dr. Arun Tripathi

Head

**Department of Computer Applications
KIET Group of Institutions, Ghaziabad**

LearnAbit

Tanya Tyagi, Tarun Kumar

ABSTRACT

In an age where digital transformation is reshaping every facet of our lives, the realm of education is no exception. This abstract introduces an innovative e-learning website poised to revolutionize the way we learn. With a commitment to accessible, engaging, and effective learning experiences, this platform is designed to cater to the diverse needs of learners across the globe.

Our e-learning website offers a comprehensive array of courses spanning various disciplines. Learners can access a vast library of high-quality, multimedia-rich content that is curated by experts and educators. Interactive quizzes, questions, and peer-to-peer discussions foster an environment of active learning, ensuring that knowledge retention and practical application are at the forefront of the educational journey.

One of the website's distinguishing features is its adaptability. Learners can customize their learning paths, and keep updates on their progress report. Furthermore, the platform employs advanced analytics and artificial intelligence to provide an AI generated chat bot which provides user support to overcome with their queries.

The e-learning website aims to break down geographical and financial barriers, making education accessible to all. With mobile-friendly design with which learning becomes more flexible, empowering people from all walks of life to embark on a journey of knowledge and skill development.

In summary, our e-learning website represents a change in thinking in education. By offering a rich, interactive, and personalized learning experience, it brings the world of knowledge to your fingertips, ensuring that the pursuit of education is not just a privilege but a right for everyone. Join us on this exciting journey as we reshape the future of learning.

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Fortunately, I have many understanding friends, who have helped me a lot on many critical conditions and my team partner to develop the entire project alongside. Finally, my sincere thanks go to my family members and all those who have directly and indirectly provided me with moral support and other kinds of help. Without their support, completion of this work would not have been possible in time. They keep my life filled with enjoyment and happiness.

Tanya Tyagi

Tarun Kumar

AIM OF THE PROJECT

The primary aim of our E-Learning Website is to establish a comprehensive and user-centric digital platform that seamlessly connects teachers and learners, fostering an enriching educational experience. The platform seeks to revolutionize the conventional learning paradigm by integrating a diverse range of features, including courses, content modules, and video lectures, to create an engaging and effective virtual learning environment.

1. Facilitate Dynamic Course Creation:

- Empower teachers to create and manage courses easily, providing them with intuitive tools to organize content, assessments, and multimedia elements.
- Foster a collaborative space where educators can share their expertise, curate resources, and continuously adapt course materials to meet evolving educational standards.

2. Enhance Learning Engagement through Multimedia Content:

- Prioritize the integration of video lectures as a central component of the learning experience, recognizing their effectiveness in conveying complex concepts and sustaining learner engagement.
- Offer a diverse range of multimedia content, including text, images, and interactive elements, to cater to varied learning preferences and enhance overall comprehension.

3. Create a User-Centric Experience:

- Develop user interfaces that are intuitive, accessible, and responsive, ensuring an optimal experience for both teachers and learners across devices.
- Implement personalized dashboards for learners, providing a central hub for course navigation, progress tracking, and communication.

PURPOSE

The purpose of our E-Learning Website is to revolutionize the education landscape by providing a dynamic and accessible platform that connects teachers and learners in a virtual learning environment. The platform is designed to serve multiple key purposes, catering to the diverse needs of both educators and students in the digital era:

1. Global Accessibility:

- **Purpose:** To break down geographical barriers and provide access to high-quality education globally.
- **How:** By offering an online platform accessible from anywhere, learners can access courses and content, fostering an inclusive and borderless educational community.

2. Enhanced Learning Experience:

- **Purpose:** To create an engaging and interactive learning experience that goes beyond traditional methods.
- **How:** Through the integration of multimedia elements, including video lectures, interactive assessments, and collaborative learning tools, the platform aims to enhance comprehension and retention for learners.

3. Flexible Learning Paths:

- **Purpose:** To accommodate diverse learning preferences and schedules.
- **How:** Offering a range of courses with flexible content formats, learners can choose their preferred learning paths, accessing content at their own pace and convenience.

4. Data-Driven Education:

- **Purpose:** To leverage data analytics for continuous improvement and personalized learning experiences.
- **How:** By collecting and analysing user data, the platform aims to enhance course effectiveness, identify areas for improvement, and tailor recommendations to individual learner

CHAPTER 1

INTRODUCTION

1.1 OVERVIEW

The purpose of this project report is to outline the development and implementation of an E-Learning Website. The project aims to create a user-friendly platform that provides educational content through digital means. With the increasing demand for online education, this E-Learning Website intends to bridge the gap between traditional learning and modern technology.

1.2 Description of project

The system makes it possible for the students to access all learning materials from home. The system provides a vast digital library for providing learning materials for the users. The students can access notes on any subject. Notes are available for the students of all branches and semesters. Students can download all notes, if they want to. There are also videos available for the preferred subjects. These videos can be viewed by all registered users of the system.

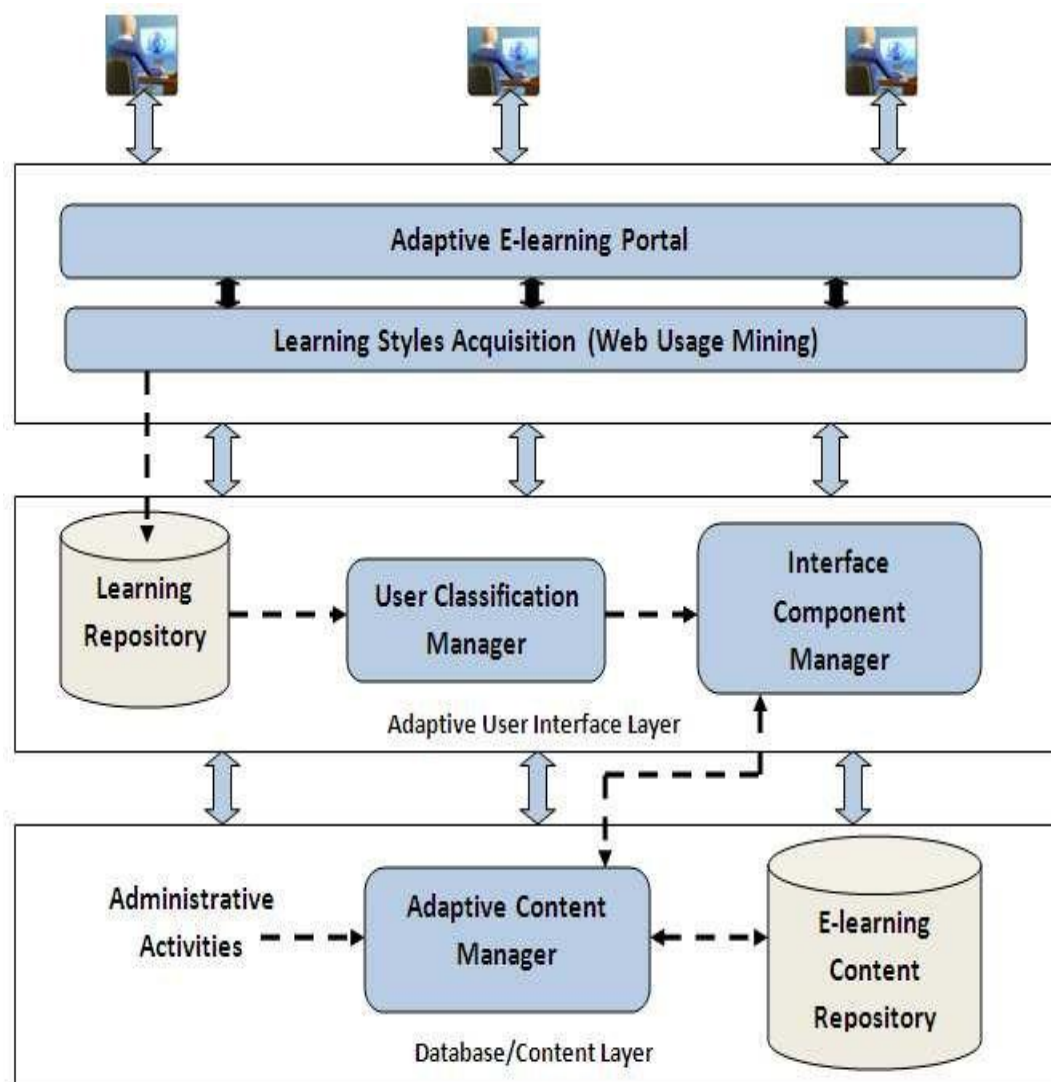


Fig. 1.1 Basic Architecture of User Interface E-learning System

Fig 1.1 represents the basic architecture of the User Interface system in which the user will interact with the system and will select courses and then access its learning material. Then it would download all information related to that course, user will select needed and then it will be downloaded in the form of pdf.

1.3 User Interface Flowchart

This is a user interface which is used for users where users interact with this facility like when he/she was registered and login successfully then he will interact with home page then he/she will select many pages which is:

Courses based on categories, learning materials, videos for user support.

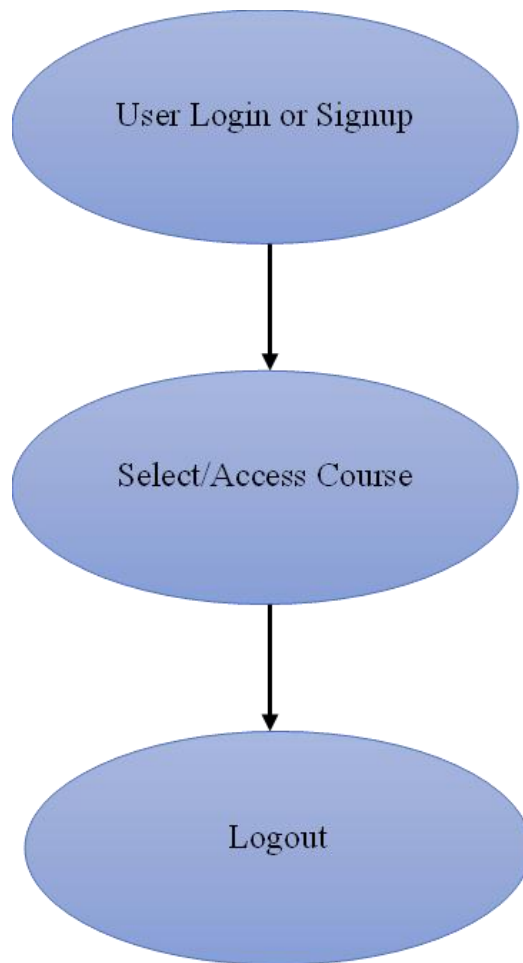


Fig. 1.2 User Interfaces

Fig 1.2 represents the basic flow of the User Interface system in which the user will interact with the system

1.3.1 User Registration Flow:

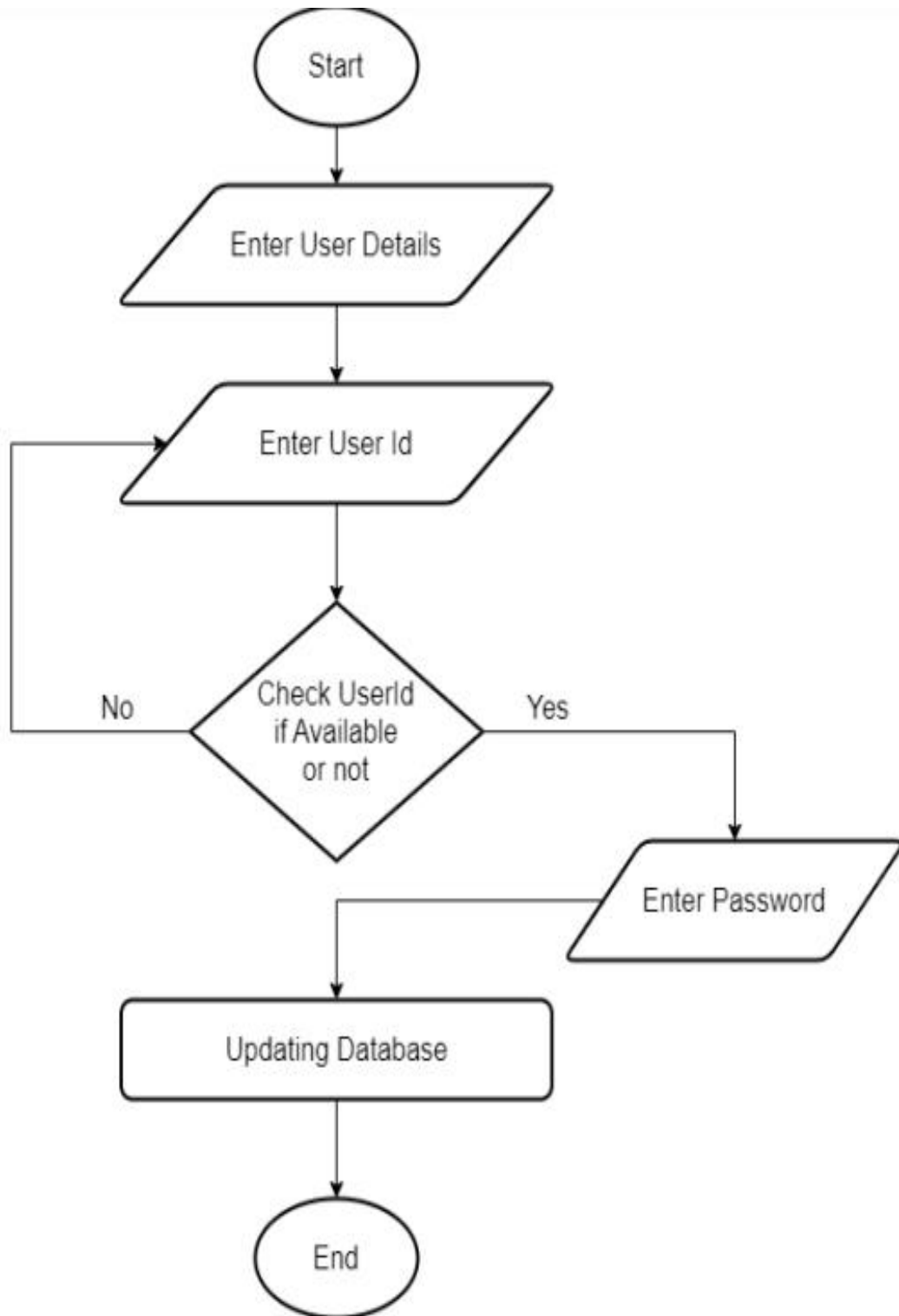


Fig 1.3 User Registration

1.3.2 User Login Flow:

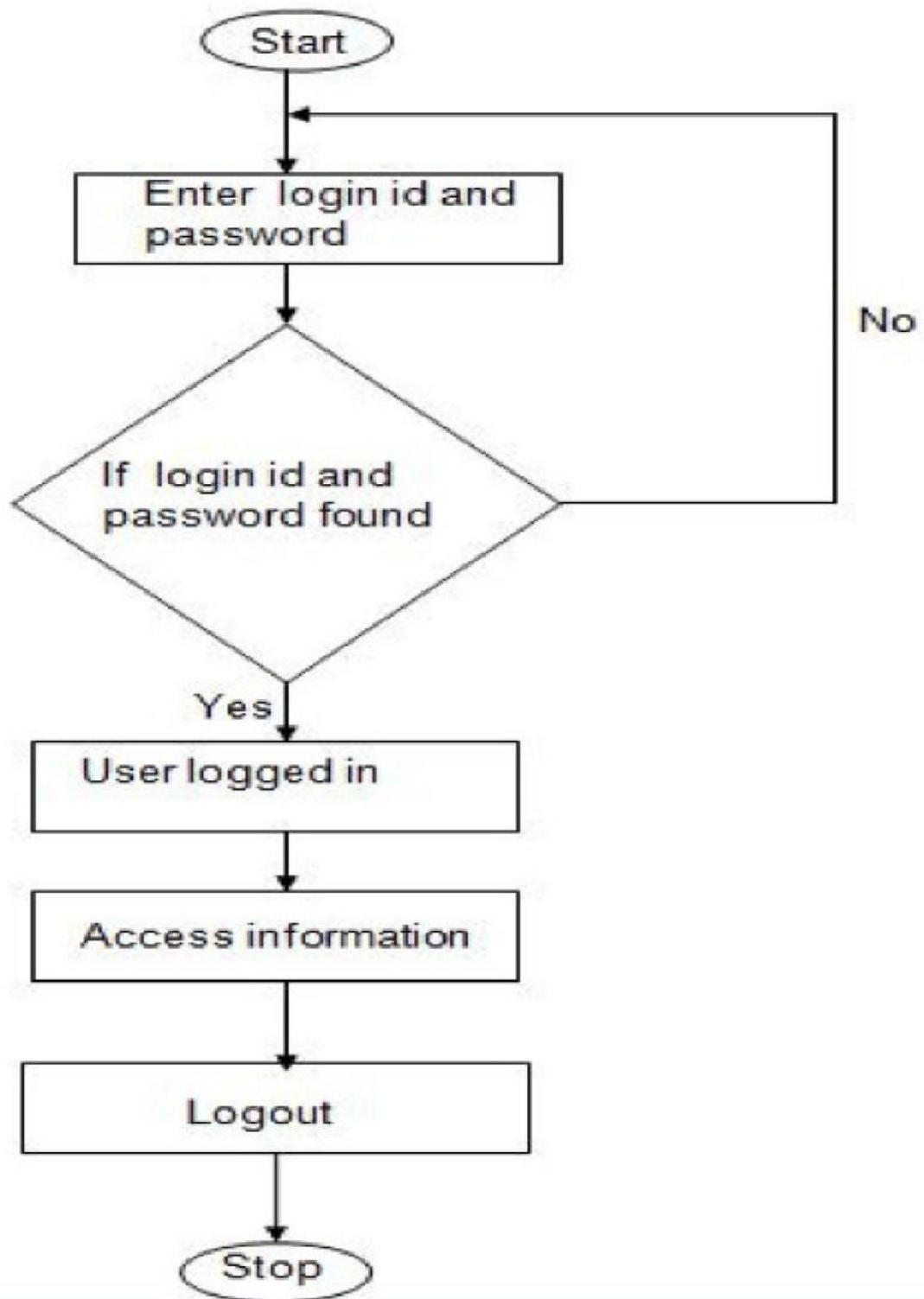


Fig 1.4 User Login

1.4 Modules on E-Learning management system: -

1.4.1 User Authentication Module:

- User registration and login.
- Password recovery/reset functionality.

1.4.2 Course Catalog Module:

- Browse the available courses.
- Filter courses by category, difficulty, or other criteria.

1.4.3 Admin Information

There are all the details about Admins, how many Admins are there.

1.4.4 Lesson/Module Delivery Module:

- Deliver course content, including text, images, and primarily videos.
- Track progress.

1.4.5 Video Content Module:

- Host and organize video lectures or tutorials.
- Provide transcripts and supplementary materials.

1.4.6 User Profile Module:

- Allow users to create and manage their profiles.
- Update personal information, profile pictures, etc.

1.4.7 Resource Library Module:

- Store supplementary materials, documents, and links related to video content.

CHAPTER 2

LITERATURE REVIEW

2.1 General

E-learning platforms have become increasingly popular in recent years, as they offer a convenient and affordable way for students to learn. There are several different e-learning platforms available, each with its own unique features and benefits. In this chapter, we will provide a literature review of e-learning platforms, discussing the different types of platforms available, their features and benefits, and the research that has been conducted on their effectiveness. Types of E-Learning Platforms

There are several different types of e-learning platforms available, each with its own unique features and benefits. Some of the most common types of e-learning platforms include:

-Content-based platforms: These platforms provide students with access to a library of pre-recorded content, such as video lectures, tutorials, and assessments.

-Interactive platforms: These platforms allow students to interact with the content in a variety of ways, such as through quizzes, discussion boards, and simulations.

-Social learning platforms: These platforms encourage students to collaborate with each other and learn from each other.

-Blended learning platforms: These platforms combine online learning with traditional face-to-face instruction.

Features and Benefits of E-Learning Platforms:

E-learning platforms offer several features and benefits that can make them a valuable tool for students and instructors. Some of the most common features and benefits of e-learning platforms include:

-Flexibility: E-learning platforms allow students to learn at their own pace and on their own schedule.

-Affordability: E-learning platforms can be much more affordable than traditional face-to-face instruction.

-Accessibility: E-learning platforms can be accessed from anywhere with an internet connection.

-Personalization: E-learning platforms can be customised to meet the individual needs of students.

-Interaction: E-learning platforms can provide students with opportunities to interact with the content and with each other.

Research on the Effectiveness of E-Learning Platforms:

E-learning platforms are effective, but effectiveness varies depending on factors such as the design of the platform, the content of the course, and the learning objectives of the students.

In addition to the factors mentioned above, the effectiveness of e-learning platforms can also be influenced by the learning style of the students, the level of support provided by the instructor, the availability of technical support, and the cost of the platform.

It is important to consider all these factors when choosing an e-learning platform for a particular course or program.

Comparing other e-learning platforms:

There are several different e-learning platforms available on the market. Some of the most popular platforms include Blackboard, Canvas, Moodle, Edmodo, Udacity, and Coursera.

Each platform has its own unique features and benefits. Some platforms are more focused on course management, while others offer more social and collaborative features. Some platforms are free to use, while others require a subscription fee.

It is important to compare different e-learning platforms before choosing one for a particular course or program. The following factors should be considered when comparing platforms:

- Features and functionality

- Cost

- Support

- User reviews

Once you have compared different platforms, you can choose the one that best meets the needs of your students and your course.

A number of studies have been conducted on the effectiveness of e-learning platforms. The results of these studies have been mixed, with some studies finding that e-learning platforms are effective and others finding that they are not. However, the majority of studies have found that e-learning platforms can be effective, especially when used in conjunction with traditional face-to-face instruction.

Conclusion:

LearnAbit is an e-learning platform that is based on PHP, SQL, and React JS API. It offers a variety of features and benefits that can make it a valuable tool for students and instructors. These features include:

1.Flexibility: LearnAbit allows students to learn at their own pace and on their own schedule.

2.Affordability: LearnAbit can be much more affordable than traditional face-to-face instruction.

3.Accessibility: LearnAbit can be accessed from anywhere with an internet connection.

4.Personalization: LearnAbit can be customised to meet the individual needs of students.

5.Interaction: LearnAbit can provide students with opportunities to interact with the content and with each other.

CHAPTER 3

DESIGN

3.1 Data Flow Diagram

3.1.1 Level 0 Data Flow Diagram

Level 0 Data Flow Diagram will explain the basic flow of data in a system which shows how the new or old user will interact with the system.

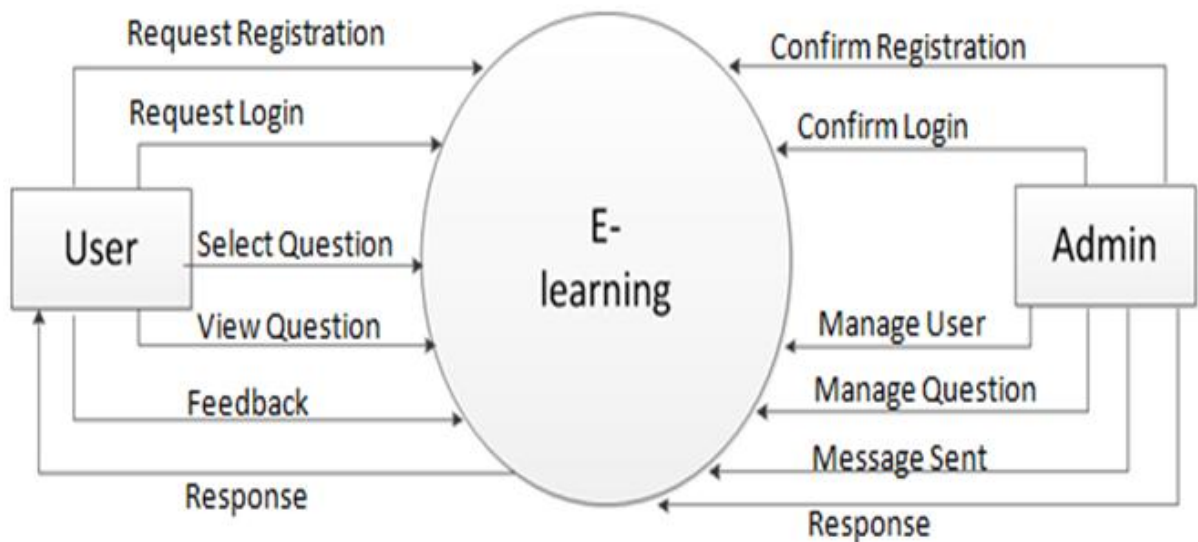


Fig. 3.1 0-level Data flow Diagram

Fig. 3.1 elaborates the interaction between user and the system. If the user is new then the user will first register to the system by providing name, username, email, password, phone, age and address. Once successfully registered a message will be displayed to the user of successfully registered. If the user is old, then they can directly login to the system. Once successfully logged into the system, it will provide a message to the user. Then the user will provide the home page and many facilities.

3.1.2 Level 1 Data Flow Diagram

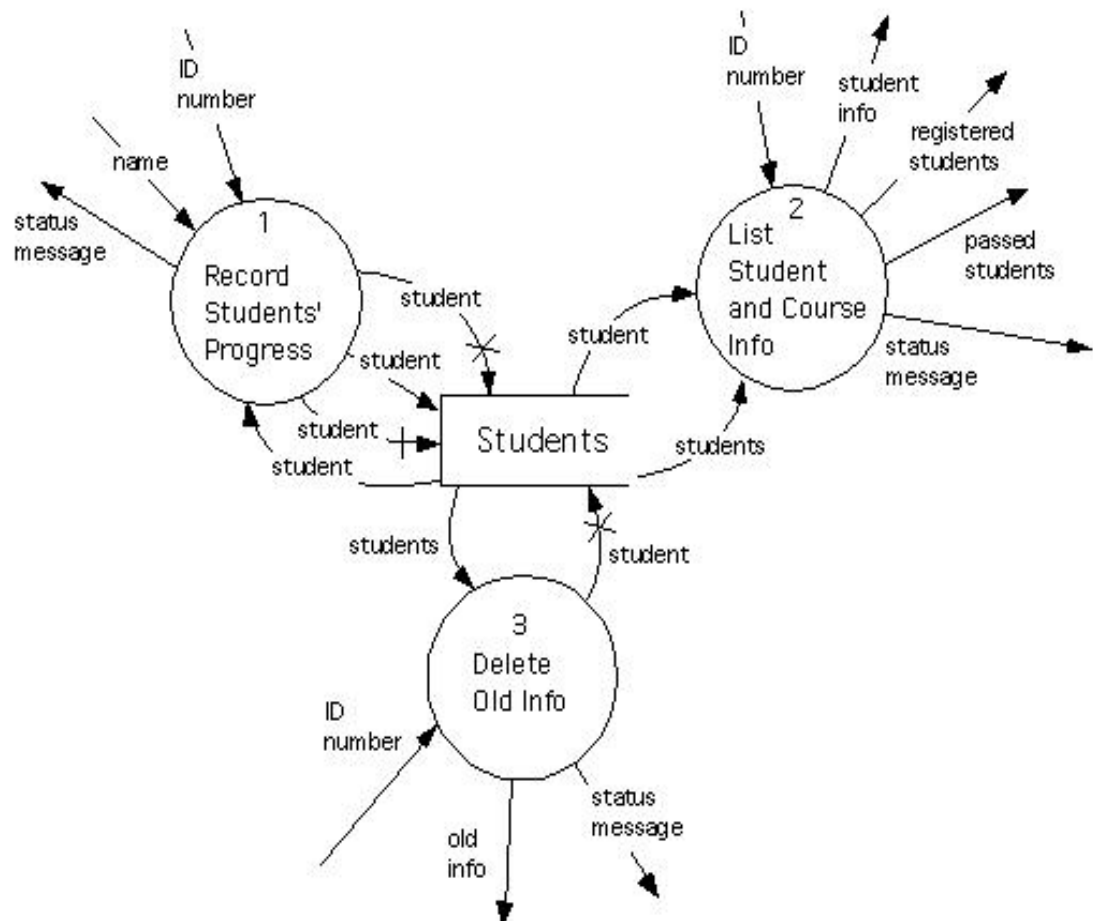


Fig. 3.2 1-level Data flow Diagram

3.2 Sequence Diagram

Sequence Diagram is used to show the process of the system based on the different timeline.

3.2.1 Sequence Diagram of Registration Process

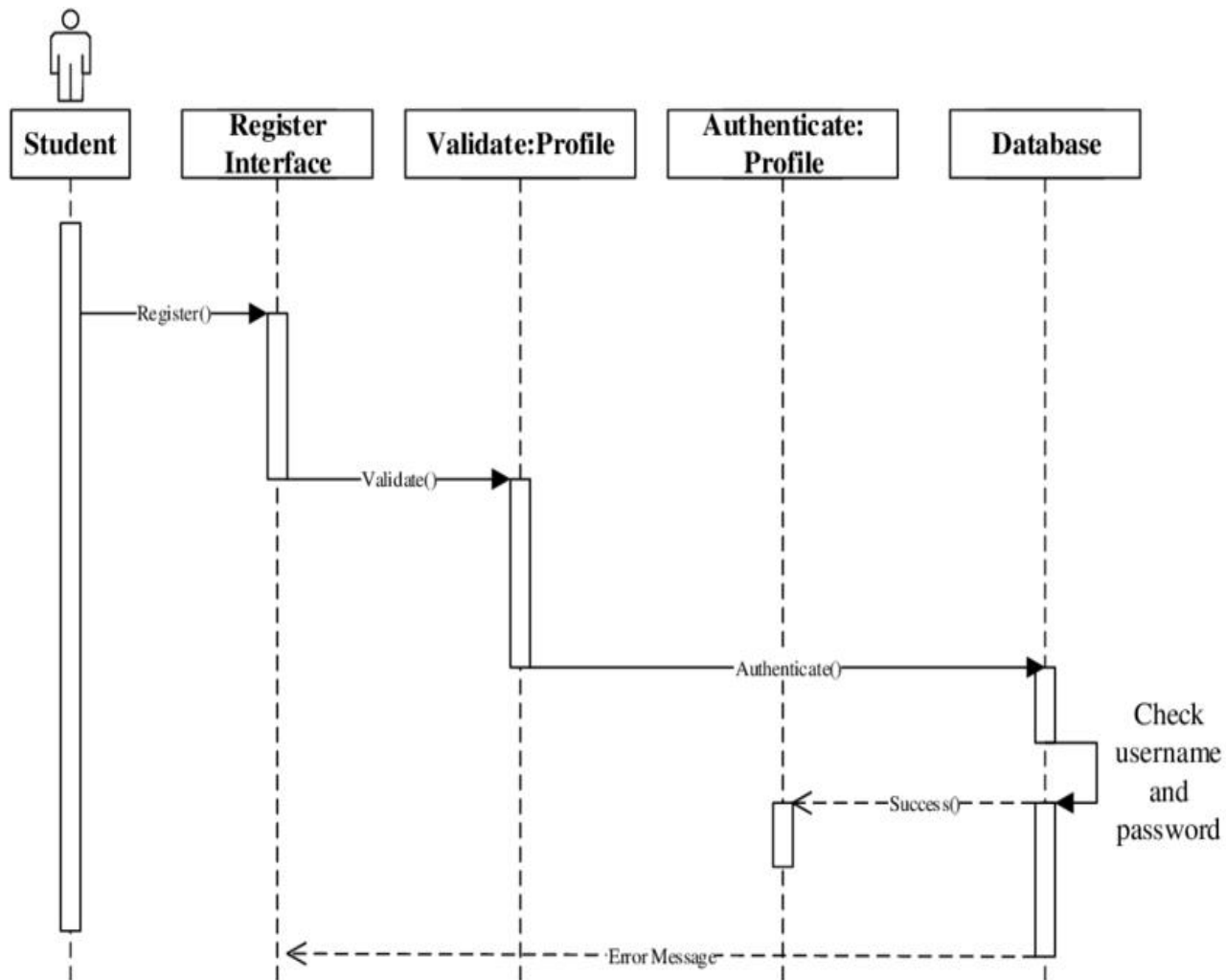


Fig. 3.3 Registration sequence diagram

Fig 3.3 explains about the process of registration where user send the details to the screen then validate those details. If details are not in correct format, then an error message is displayed. If details are in correct format, then successful message is displayed. Then details are stores in user database.

3.2.2 Sequence Diagram of Login Process

In this Diagram of Login Process, it has 4 objects one actor, one boundary object, one control object, one store object.

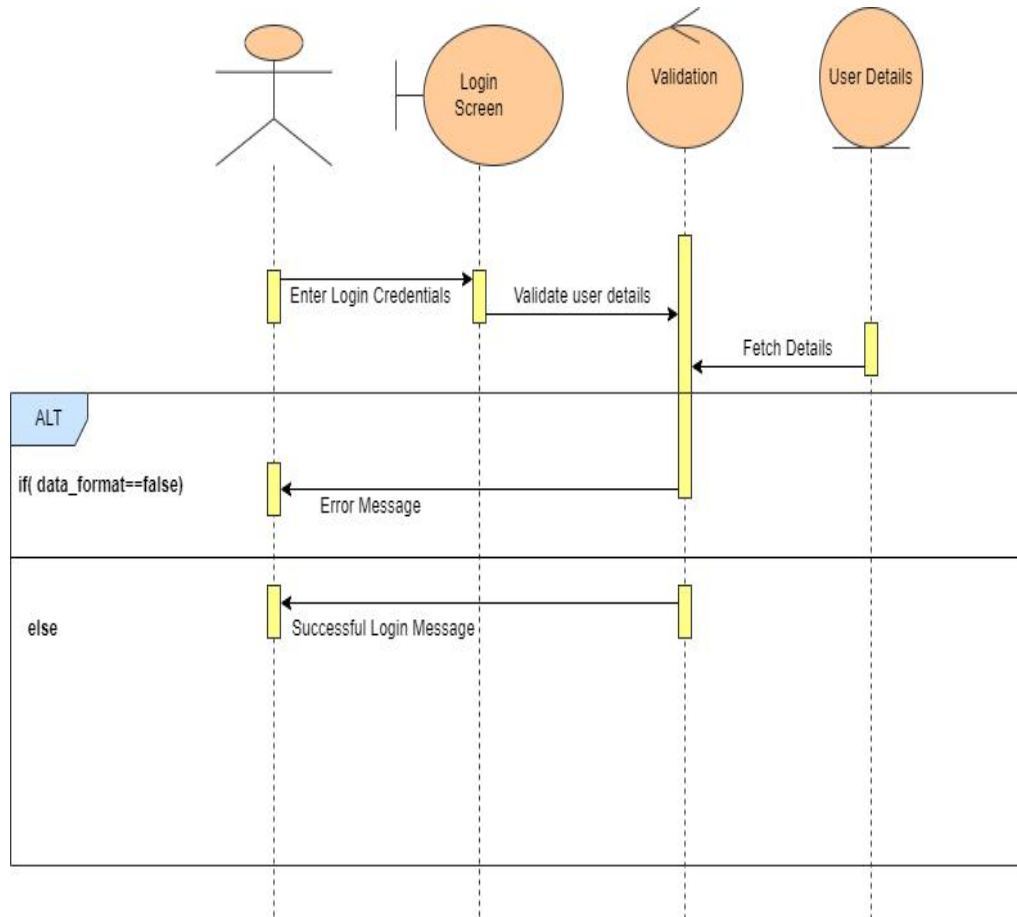


Fig. 3.4 Login sequence diagram

Fig 3.4 explains about the process of login where user send the details to the screen then validate those details. If details are not correct from fetched data from database, then an error message is displayed. If details are correct from fetched data from database, then successful message is displayed.

3.2.3 Sequence Diagram for LearnAbit:

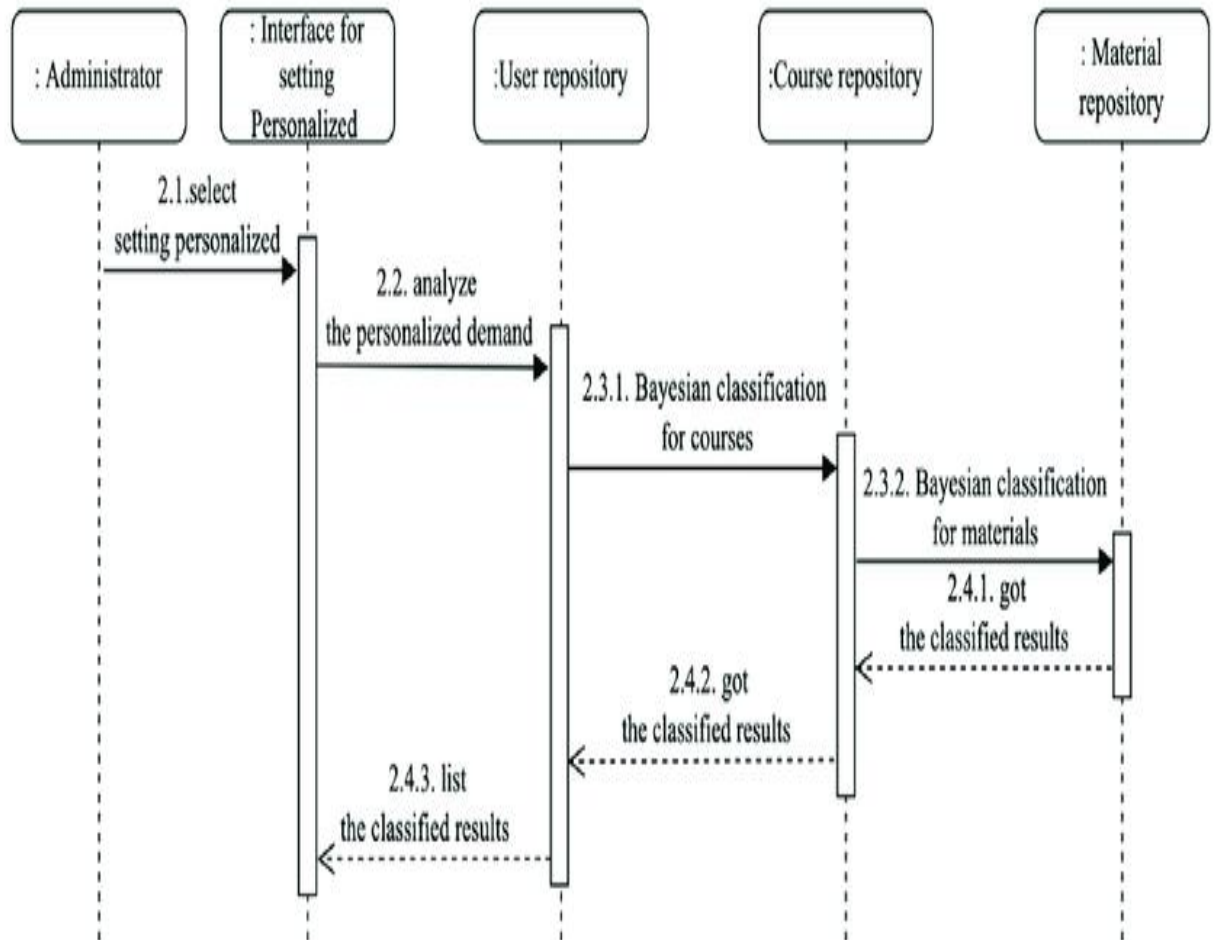


Fig. 3.5 LearnAbit sequence diagram

3.3 Use Case Diagram

In the Use Case Diagram, we elaborate about the purpose, actor, pre-condition, post- condition, basic flow, and alternate flow of all the use cases.

It explains the details and conditions of the system to be fulfilled in order to successfully complete each use case.

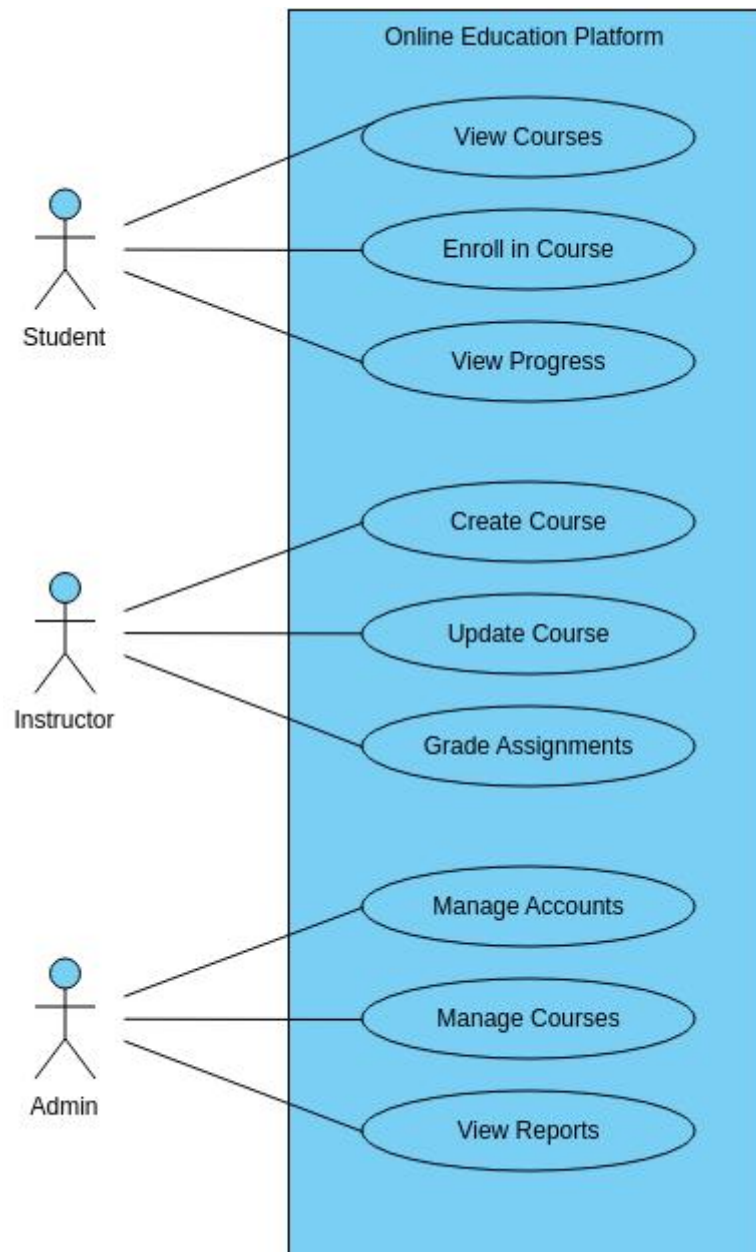


Fig.3.6 Use Case Diagram of LearnAbit

3.3.1 Use Case Description of Registration

Purpose:

The purpose is to register the user into the system who is new to the system.

Actor:

New User

Pre-condition:

None

Post-condition:

The user will successfully register to the system.

Basic Flow:

-The user will enter the name, email, phone, college details of themselves.

-The System will check the format of the details.

If the details of the user are correct, then it will successfully register the user.

Alternate Flow:

If the details entered by the user are not in the right format, then it will return the error message to the user.

3.3.2 Use Case Description of Login

Purpose:

The purpose is to Login the user into the system.

Actor:

Old User

Pre-condition:

The user must be registered into the system.

Post-condition:

The User will successfully Logged in to the system.

Basic Flow:

-The user will enter the email and password.

-The System will check the email and password from the database.

-If the details of the user are correct, then it will successfully Logged in the user.

Alternate Flow:

If the details entered by the user are not correct, then it will return the error message to the user.

3.3.3 Use Case Description for LearnAbit**Actors:**

- Student: The user seeking access to educational content.
- Instructor: The content creator or administrator responsible for creating and managing courses.

Preconditions:

1. The user has a registered account on the e-learning platform.
2. The user is logged into the system.
3. The instructor has uploaded video-based course content.

Basic Flow:**1. User Browsing Courses:**

- The user logs into the e-learning platform.
- The user navigates to the "Course Catalog" section.

2. Course Selection:

- The user explores available courses.
- The user selects a specific course that includes video-based content.

3. Course Overview:

- The user views a summary of the selected course, including objectives, duration, and topics covered.
- Information on the inclusion of video content is highlighted.

4. Enrollment:

- The user decides to enroll in the chosen course.
- If required, the user completes the enrollment process, which may involve payment or simply confirming enrollment.

5. Accessing Course Content:

- Upon successful enrollment, the user gains access to the course dashboard.
- The dashboard displays an overview of the course modules and video lessons.

6. Selecting a Module:

- The user chooses a specific module from the course outline.
- The modules are organized logically, providing a structured learning path.

10. Progress Tracking:

- The user's progress is automatically tracked as they complete video lessons and associated activities.
- The platform may display completion percentages, or other indicators of progress.

Alternative Flow:

1. Discussion and Collaboration:

- In some cases, the user may choose to participate in discussions related to the video content.
- The platform provides a discussion forum or chat feature where users can interact with peers and instructors.

Postconditions:

1. The user has successfully accessed and completed video-based content within the enrolled course.
2. Progress and completion data are recorded in the user's profile and course analytics.

Exceptional Conditions:

1. Technical Issues:

- If there are technical issues preventing video playback, the platform should provide troubleshooting guidance.
- The user may contact support for assistance.

2. Incomplete Enrollment:

- If the user encounters issues during the enrollment process, the platform should guide them through resolving the problem.
- Support resources or contact information should be easily accessible.

3.4 Activity Diagram for LearnAbit:

Activity Diagrams describe how activities are coordinated to provide a service which can be at different levels of abstraction. Typically, an event needs to be achieved by some operations, particularly where the operation is intended to achieve a number of different things that require coordination, or how the events in a single use case relate to one another, in particular, use cases where activities may overlap and require coordination.

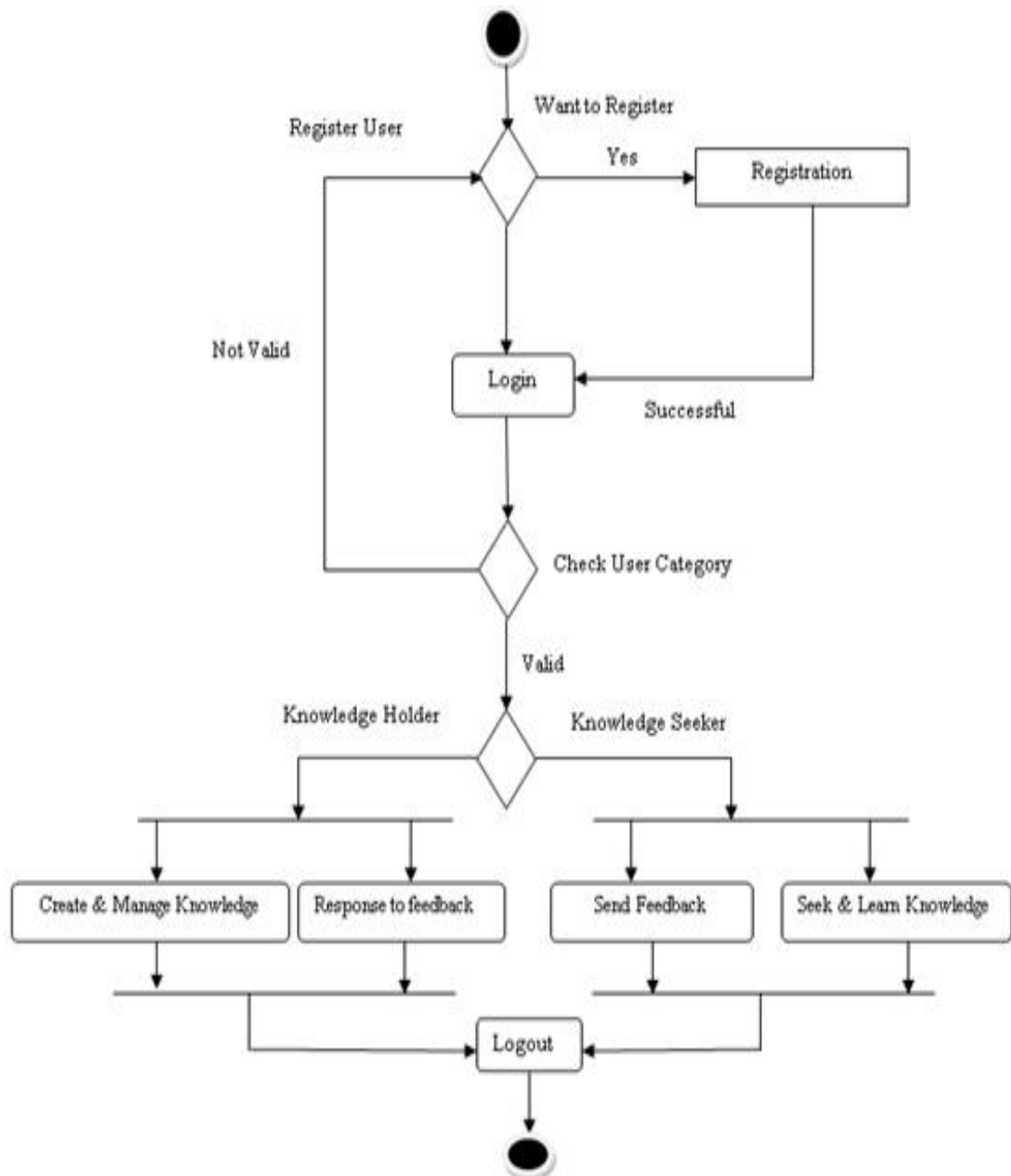


Fig 3.7 Activity Diagram for LearnAbit

CHAPTER 4

PROPOSED WORK

4.1 Dataset Description

A dataset comprises similar sets of information that are made up of distinct elements but can be modified by a computer. In our dataset model, there are many tables i.e. user details, admin table etc.

Users Table:

It stores the details of the user such as name, email, password, id, Role (Learner, Teacher)

Field	Type	Null	Key	Default
Name	Varchar (255)	No		None
Email (username)	Varchar (255)	No	Unique Key	None
Id	int (25)	No	Primary Key	None
Password	Varchar (255)	No		None
Role	Varchar (255)	No		None

Table 1: Users Table Description

Teacher's Table:

It stores the details of the Teachers.

Field	Type	Null	Key	Default
Specialization	Varchar (255)	No		None
Email (username)	Varchar (255)	No		None
Teacher_id	int (20)	No	Primary Key	None

User_Id	int (25)	No	Foreign Key	None
Bio	Varchar (255)	No		None
Experience	int (25)	No		None

Table 2: Admin Table Description

Courses Table:

It stores the details of all the courses.

Field	Type	Null	Key	Default
Course_Id	int (25)	No	Primary Key	None
Title	Varchar (255)	No		None
Description	Varchar (255)	No		None
Category	Varchar (255)	No		None
Teacher_id	int (25)	No	Foreign Key	None

Table 3: Courses Description

Content Table:

It stores the details of the content.

Field	Type	Null	Key	Default
Content_Id	int (25)	No	Primary Key	None
Title	Varchar (255)	No		None
Course_id	int (25)	No	Foreign Key	None
Description	Varchar (255)	No		None
Content_type	Varchar (255)	No		None

Table 4: Content Table Description

Video Lecture Table:

It stores the details of the video Lecture.

Field	Type	Null	Key	Default
Video_Id	int (25)	No	Primary Key	None
Content_id	int (25)	No	Foreign Key	None
Video_title	Varchar (255)	No		None
Video_url	Varchar (255)	No		None

Table 5: Video Lecture Description

CHAPTER 5

RESULTS

5.1 Screens and Explanations

This chapter will include all the screens available in the project such as home page, registration page, login page, our teachers, our programs, courses and response screen along with detailed explanation of each screen and its functionality.

Screens available in the system are as follows:

Screen 1: Home Page

Screen 1 is the home page of the website which displays the basic information about the MockMaster such as why interview preparation is important and what our system will provide. From this home page you can log in or register to the system to start your mock

interview.

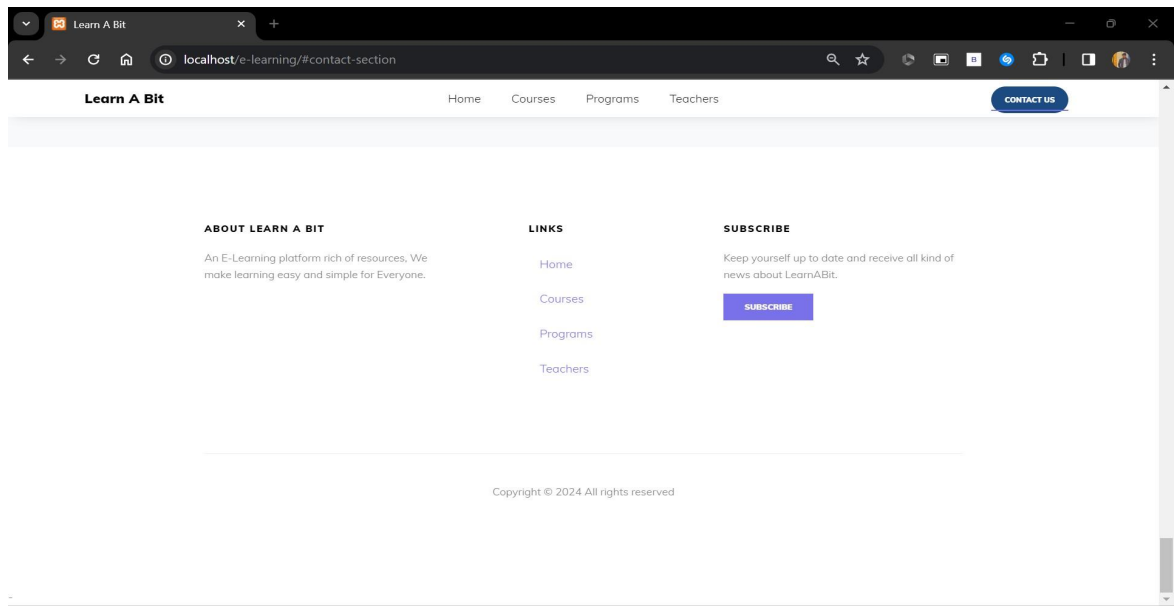


Fig 5.1- Home page

Screen 2: Sign Up page

Screen 2 is the sign up page where users can register to the LearnAbit website and can new learners can make their account.

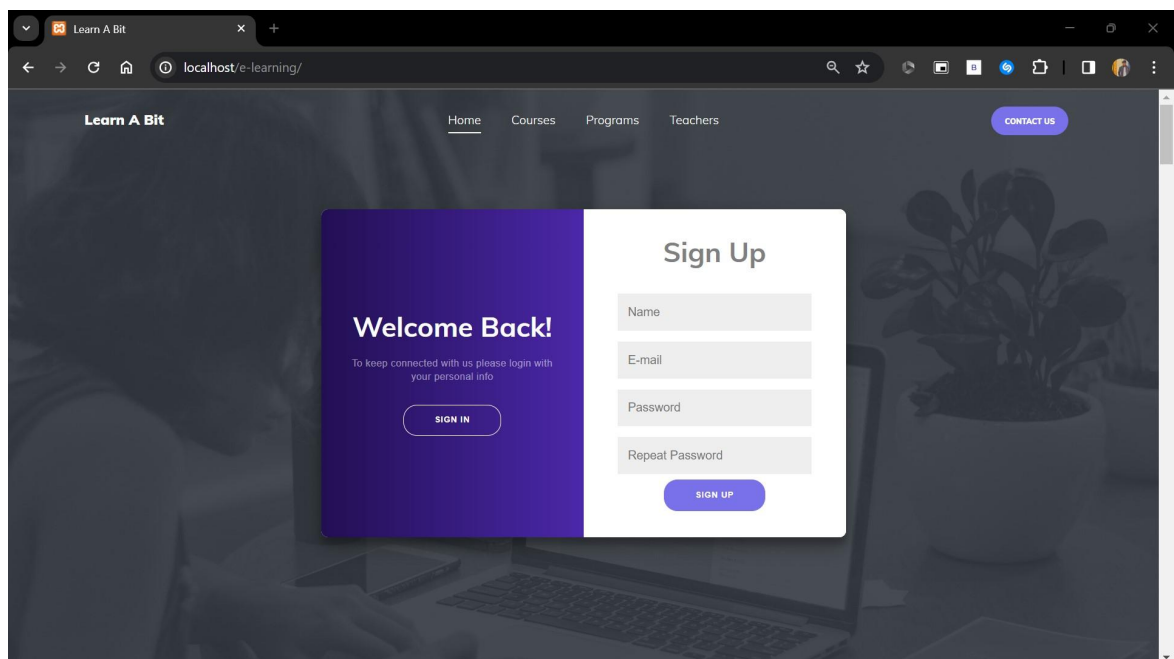


Fig 5.2 Sign Up Page

Screen 3: Login Page

Screen 3 is the login page where pre registered learners login through there login credentials.

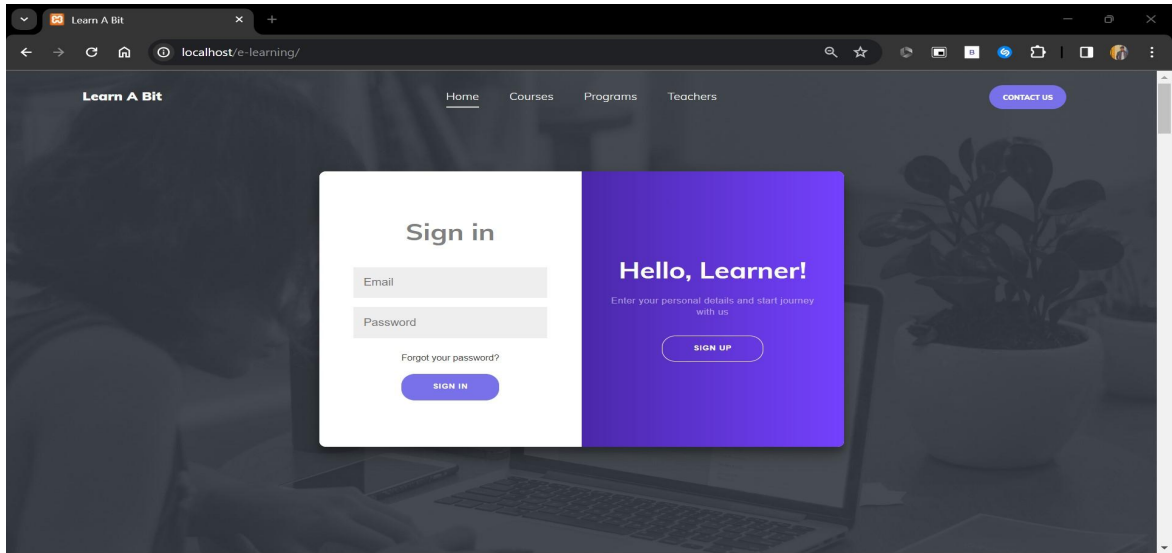


Fig 5.3 Login Page

Screen 4: Courses

Screen 4 consists of different courses which user can access.

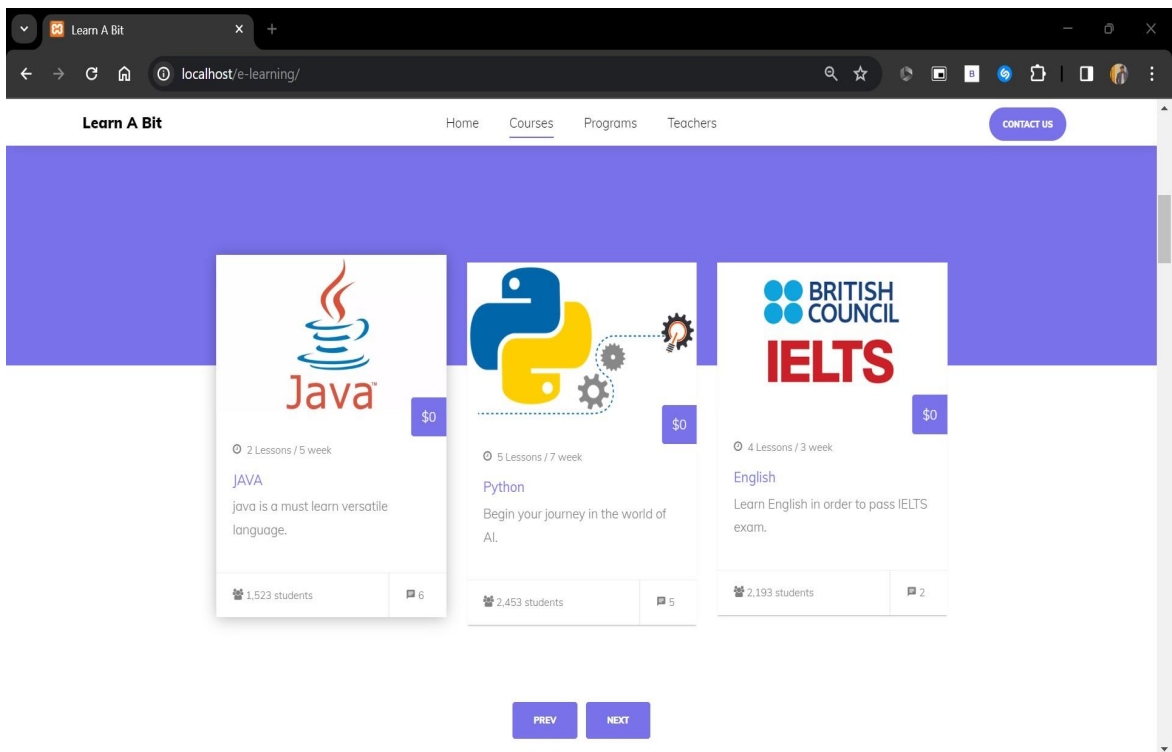


Fig 5.4 Courses Page

Screen 5: Teachers page

Screen 5 consists of the teachers who upload the study material

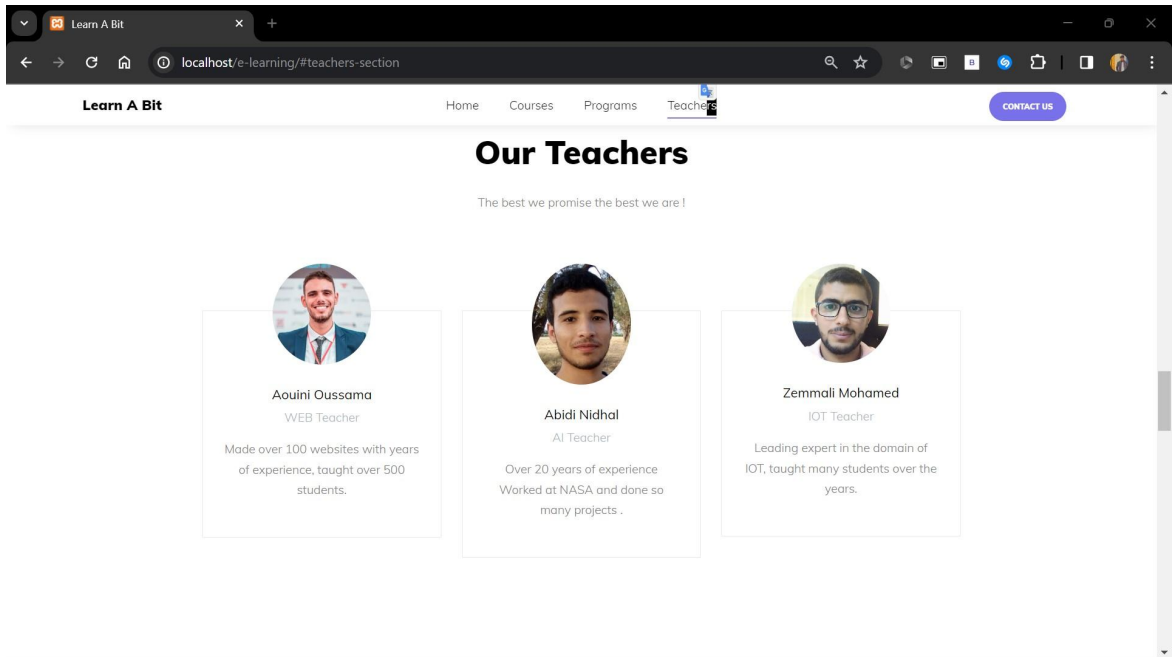


Fig 5.5 Teachers Page

Screen 6: Program Page

Screen 6 is the program page which comprises of the department we are good at.

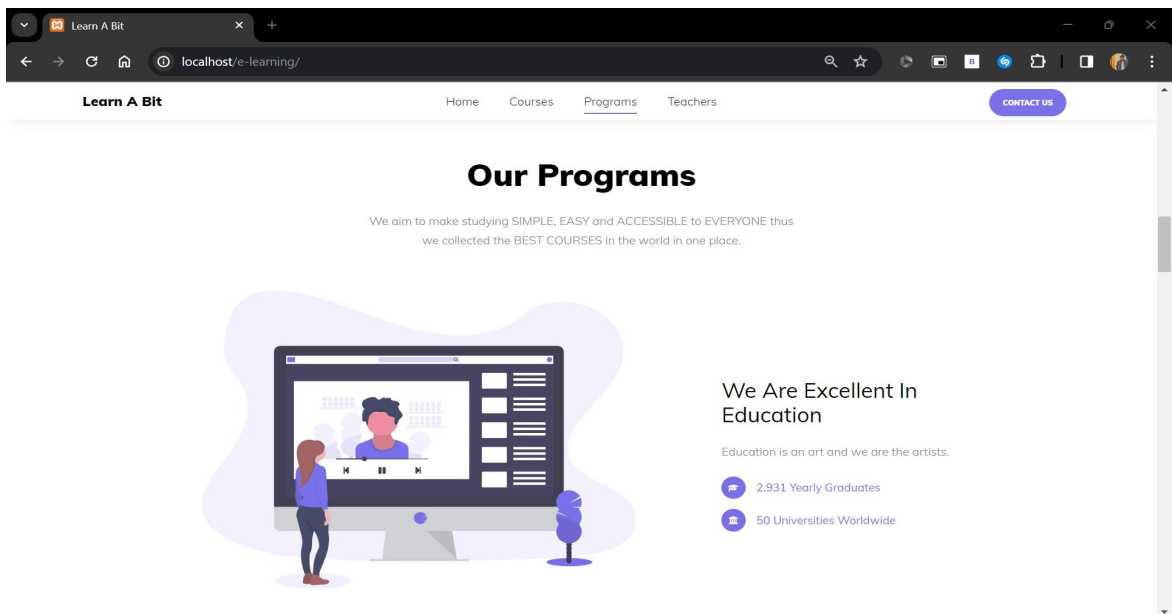
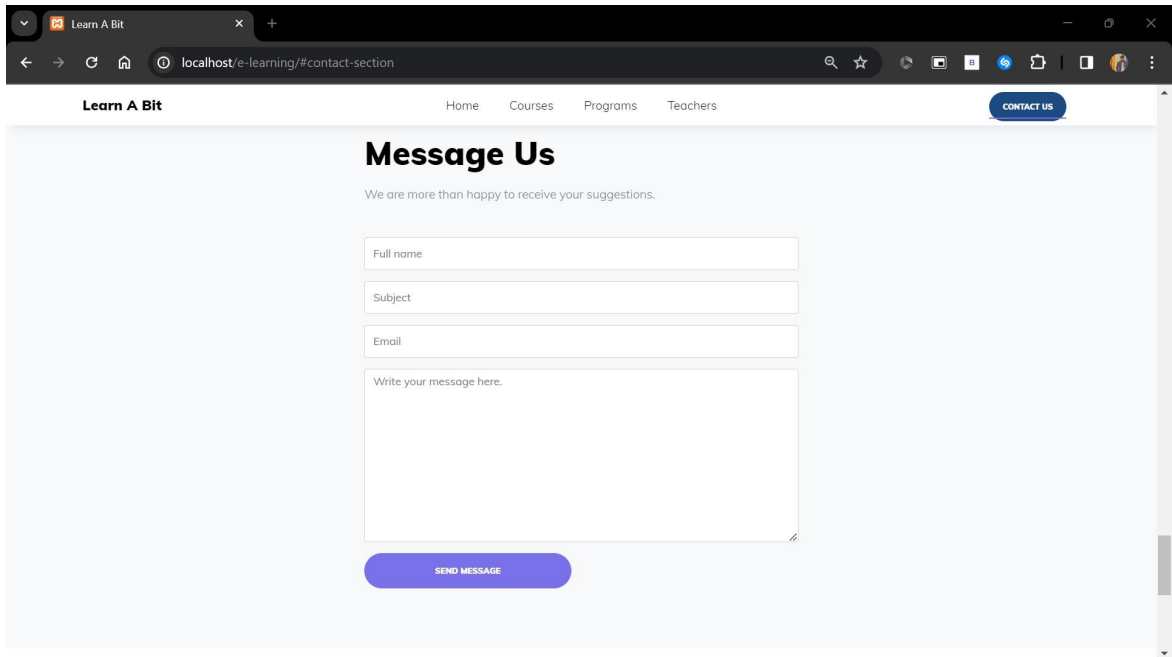


Fig 5.6 Program Page

Screen 7: Contact Page

Screen 7 is the contact page where user if found any difficulty can access help.



The screenshot shows a web browser window with the address bar displaying 'localhost/e-learning/#contact-section'. The website header includes the 'Learn A Bit' logo, navigation links for 'Home', 'Courses', 'Programs', and 'Teachers', and a 'CONTACT US' button. The main content area is titled 'Message Us' with the subtitle 'We are more than happy to receive your suggestions.' Below this, there is a form with four input fields: 'Full name', 'Subject', 'Email', and a larger text area labeled 'Write your message here.' A blue 'SEND MESSAGE' button is positioned at the bottom of the form.

Fig 5.7 Contact Page

PROJECT OUTCOME

Here are some common project outcomes for an e-learning website:

1. Functional E-Learning Platform:

- The primary outcome is the development of a fully functional e-learning website that offers courses, educational resources, and interactive features for learners.

2. High-Quality Content:

- The website should host a library of high-quality educational content, including quizzes, questions, and supplemental resources.

3. User-Friendly Interface:

- A user-friendly and responsive interface that ensures easy navigation and access to educational materials on various devices.

4. User Registration and Authentication:

- The ability for users to register, create profiles, and log in securely to access course materials and track their progress.

5. Progress Tracking and Analytics:

- Tools and features for tracking learner progress, assessing performance, and generating analytics reports for both learners and administrators.

6. User Support and Communication:

- Support mechanisms such as chatbots, discussion forums, and messaging systems for users to seek assistance and collaborate with peers and instructors.

7. Feedback Mechanisms:

- Feedback mechanisms that allow users to provide input, report issues, and offer suggestions for improvement.

RESEARCH METHODOLOGY

Researching e-learning websites requires a structured methodology to investigate various aspects, including user experience, effectiveness, content quality, and technological innovations. Here is a research methodology tailored to the study of e-learning websites:

1. Research Objectives:

- Define clear research objectives and questions to guide the study.
- How do users perceive the usability of the e-learning website.
- What impact does the e-learning website have on student learning outcomes.
- How does content quality affect user engagement.

2. Research Design: This research employs an experimental approach to design, develop and implement the E-learning website. This project involves iterative phases of design, coding, testing and refinement.

3. Data Collection: Online Surveys: To gather user feedback, preferences, and demographics.

Usage Analytics: To track user behavior, engagement, and patterns.

Content Analysis: To assess the quality, relevance, and alignment of educational materials.

4. API Integration: We will integrate API's to fetch quizzes, leveraging external question databases and resources to create a diverse and comprehensive question repository and a chatbot using AI.

5. System Architecture:

Front-end: ReactJS based front-end will communicate with the back end for user interactions and data handling.

Back-end: the back end will manage user data, handle API requests for question and quizzes retrieval.

6. Development phases:

The development phase of an e-learning website is a critical step in bringing your online education platform to life. It involves turning your concept and design into a functional website that can effectively deliver educational content to users. Here's a step-by-step guide to the development phase for an e-learning website:

Phase 1: Project Planning:

- Define the scope, objectives, and goals of your e-learning website.
- Identify the development team members and their roles.
- Allocate resources, including budget, technology stack, and infrastructure.

Phase 2: Content Creation and Acquisition: Develop or acquire the educational content that will be hosted on the website, including text, multimedia, assessments, and resources.

Phase 3: Website Design and User Interface (UI):

- Design the user interface and user experience (UI/UX) of the website.
- Create wireframes and prototypes to visualize the website's layout and features.
- Ensure that the design is responsive and accessible across various devices.
- Choose an appropriate database management system (e.g., MySQL, PostgreSQL) and design the data structure accordingly.

Phase 4: Development and Coding:

- Develop the front-end and back-end components of the website.
- Implement user registration and authentication systems.
- Build features for content delivery, quizzes, assignments, and progress tracking.

Phase 5: Maintenance and Updates:

- Regularly update content and technology components to keep the platform current.
- Address user feedback and bug reports promptly and continuously improve the website.

CONCLUSION

In conclusion, the implementation of an e-learning website that provides free courses, incorporates features for teachers and learners, and includes login and sign-up functionality can significantly enhance the educational experience for users. By offering free courses, the platform can break down financial barriers and provide access to education for individuals who may not have the means to pay for traditional courses.

The inclusion of features for teachers, such as the ability to create and manage courses, can empower educators to share their knowledge and expertise with a global audience. This not only benefits learners who can access high-quality educational content but also allows teachers to expand their reach and impact.

For learners, the platform can offer a wide range of courses across various subjects, catering to diverse interests and learning goals. The login and sign-up functionality can enable users to track their progress, earn certificates upon course completion, and participate in interactive activities such as quizzes and discussions. This personalized approach to learning can enhance engagement and motivation among learners.

Furthermore, the platform can foster a sense of community among users through features such as forums, chat rooms, and collaborative projects. This sense of community can enhance the learning experience by facilitating peer-to-peer interaction and support.

In conclusion, an e-learning website that offers free courses, features for teachers and learners, and login and sign-up functionality has the potential to revolutionize education by making it more accessible, interactive, and engaging for individuals around the world.

REFERENCES

1. Clark, R. C., & Mayer, R. E. (2016). *E-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning*. - This book provides evidence-based guidelines for designing effective e-learning courses.
2. Garrison, D. R., & Kanuka, H. (2004). *Blended learning: Uncovering its transformative potential in higher education*. - An important research paper exploring the concept of blended learning, which combines traditional and online learning methods.
3. Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2009). *Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies*. - This report provides a meta-analysis of online learning research and its effectiveness.
4. Allen, I. E., & Seaman, J. (2017). *Digital Learning Compass: Distance Education Enrollment Report 2017*. - A report on the state of online education in the United States, offering insights into enrollment trends and developments.
5. Dewey, J. (1916). *Democracy and Education: An Introduction to the Philosophy of Education*. While not specific to e-learning, Dewey's work explores the philosophy of education, which can be applied to online learning environments.
6. Bates, A. W. (2015). *Teaching in a Digital Age: Guidelines for Designing Teaching and Learning*. - This book explores the principles of effective online teaching and learning.
7. Siemens, G., & Gasevic, D. (2012). Guest Editorial—Learning and Knowledge Analytics. A research paper discussing the role of learning analytics in online education.
8. Anderson, T. (2008). *Towards a Theory of Online Learning*. - An article that proposes a theory of online learning, which is valuable for understanding the principles underlying e-learning.

BIBLIOGRAPHY

Online available e-learning websites

Here are some online resources that discuss e-learning websites with features for teachers and learners, offering free courses, and including login and sign-up functionality:

- 1. Coursera-** Coursera offers free courses from universities and colleges around the world. It provides a platform for teachers to create and share courses, and for learners to access a wide range of topics.
- 2. edX** - Similar to Coursera, edX offers free online courses from universities. It allows teachers to create courses and learners to enroll in them for free.
- 3. Khan Academy** - Khan Academy offers free educational content for learners of all ages. It provides a platform for teachers to create content and for learners to access it for free.
- 4. Udemy** - While Udemy is primarily a paid platform, it also offers free courses. Teachers can create courses and learners can access them after signing up for an account.
- 5. FutureLearn** - FutureLearn offers free online courses from universities and institutions. It provides a platform for teachers to create courses and for learners to enroll in them for free.
- 6. Coursera for Campus** - Coursera for Campus offers free access to Coursera courses for universities and colleges. It allows institutions to provide their students with access to a wide range of courses.
- 7. Google Classroom-** Google Classroom is a free platform for schools and educators to create, distribute, and grade assignments. It allows teachers to create courses and for students to access them using their Google accounts.
- 8. LinkedIn Learning** - LinkedIn Learning offers a library of courses on various topics. While it requires a subscription for full access, it also offers some free courses. Teachers can create courses and learners can access them after signing up for an account.

These online resources provide valuable insights into the world of e-learning websites with features for both teachers and learners, offering free courses, and including login and sign-up functionality.

Reference books-

1. **"E-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning"** by Ruth C. Clark and Richard E. Mayer - This book provides evidence-based guidelines for designing effective e-learning courses, including strategies for engaging learners and designing interactive multimedia.
2. **"E-Learning by Design"** by William Horton - This book offers a practical guide to designing e-learning courses that are engaging, interactive, and effective. It covers topics such as instructional design principles, multimedia integration, and learner engagement strategies.
3. **"The Online Teaching Survival Guide: Simple and Practical Pedagogical Tips"** by Judith V. Boettcher and Rita-Marie Conrad - This book offers practical advice for teachers on how to design and deliver effective online courses. It covers topics such as course design, student engagement, and assessment strategies.
4. **"Essentials of Online Course Design: A Standards-Based Guide"** by Marjorie Vai and Kristen Sosulski - This book provides a comprehensive guide to designing online courses that meet quality standards. It covers topics such as course planning, content development, and assessment strategies.
5. **"The Blended Course Design Workbook: A Practical Guide"** by Kathryn E. Linder- This workbook offers a step-by-step guide to designing blended learning courses that combine online and face-to-face instruction. It covers topics such as course planning, technology integration, and assessment strategies.