Chapter 1- Introduction

1.1 Introduction

In this project, we are going to make a web application based on selling courses and hosting live sessions. The online learning is another form of the education which take place over the internet. This is often referred to as e-learning among other terms. However, the is the one of the types of the distance learning which is the umbrella term for the any learning take place over and across the distances not like the traditional classrooms.

In present time it is the most popular means of education present which is growing rapidly which generating many jobs for peoples. Over 92 million students were registered for the online education in the fall of 2021. In years past, instructors had to create their "virtual classrooms" from scratch which was difficult and often led to poor results. Today, an entire industry has emerged to do this for us. A software is utilized by all colleges today. Which allow instructors to design and deliver their courses within a flexible framework that includes a number of different tools to enable learning and communication to occur.

In today's digital world people are getting less habitual to the older learning methods People like to get everything at their figure tips so most of the students are leaning towards the online education which fairly easy to enrol in the course without any extra procedure and paperwork. The pre- requisites of the online education are minimum knowledge or no knowledge and people are free to choose from the courses available. As there is less written work to read and to do, most of the part is in the form of the video's which keep the learner interest for the longer time. Unlike traditional education the learner can attend the class according to their comfort either they can join the live lecture or they can watch recorded section later. The notes are also point to point which make it easier to understand it and interactive test is conducted to test the knowledge of the learner. Teacher can hold the live section if they want to instead of providing the recorded section. They can interact with students in the live class thorough the chat, live discussion section, or student can raise a doubt. There is constant support for the technical issues faced by both student and teachers the classes are under constant moderation of the moderators which make it easier to conduct live classes and problem solving. The moderator has the power to examine the student behaviour and the test conducted after the course completion of the course. As the platform support live and static sections teachers got multiple options on a single platform which doesn't make them to use another platform for the different things. The present of the students are maintained by the application itself when they join the class so no extra efforts are need to put for it which give teacher to fully utilize the given time for the class. On the other the notes are maintained according to the module so is fairly easy to get them according to modules or the units. Students can get the fully summery of their course path on their student dashboard which the course completion in percentage, their present in the class, how many classes has been conducted live, doubt sections taken, notes provided, test or quiz taken, also include the personal information and course eligibility, badges they have got for completion the test which shows the progress done.

1.2 Problem Statement

In today's fast-paced educational environment, students often struggle to find effective study methods tailored to their individual learning styles. Traditional study approaches may not align with the needs of diverse learners, leading to suboptimal academic outcomes. The project aims to address this gap by developing a personalized, data-driven study platform that offers adaptive learning strategies, real-time feedback, and resource recommendations. By analyzing students' performance data and learning patterns, the platform can suggest customized study plans, practice tests, and collaborative tools to maximize efficiency. The ultimate goal is to empower students to take control of their learning journey, improve their understanding of complex subjects, and achieve better academic results through a more targeted and engaging study experience.

1.3 Need for Proper System

Thus, in such situation where time is money, more valuable than everything, it becomes huge time consuming and mind-boggling to search for these basic needs.

To make it easier, less time consuming, a system can be there to facilitate these requirements and provide well organized platform to its users. This project is basically an ideal platform between its users, especially service providers and customer, using it customers are able to easily find their service providers which best suits according to their requirements. On other hand service providers also got the same advantage.

1.4 Objectives

The Following are the Objectives of Our Smart Stream Project:

- The main objective of this project is to provide knowledge for development and improvement of skills for the students with the help of the courses provided in the application.
- Live sessions facility will also be included in the application for tutors and students.
- Real Time Chat session will be also included in the application along with the mock tests, study materials & assignments.
- With the user-friendly UI of the application students will have easy accessibility and reliability on the application.

1.5 Scope

The Smart Stream includes the following Scope:

1. Integration with Learning Management Systems: To give students and institutions a seamless learning experience, we may eventually combine the E-Learning platform with well-known Learning Management Systems (LMS) like Moodle or Blackboard.

2. AI-Powered Learning: The use of AI and machine learning algorithms might personalize the educational experience for each student, giving them feedback and information that is specifically customized to help them learn more effectively.

3. Virtual Reality: Thanks to technological improvements, we may look at incorporating VR into the E-Learning platform. Students could benefit from an immersive learning environment as a result of being able to engage and explore virtual worlds relevant to their studies.

4. Gamification: Including gamification strategies in the E-Learning platform may boost motivation and engagement among students. Based on how well they do in classes, assignments, and examinations, students may be given points, badges, and other awards.

5. Expansion to more Languages: Adding more languages to the E-Learning platform might broaden its audience and make it more accessible to students who do not speak English as their first language**.**

CHAPTER 2 - LITERATURE SURVEY

2.1 Existing System

A literature survey is an evaluative report of information found in the literature related to your selected area of study. The review should describe, summaries, evaluate, and clarify thi literature. It should give a theoretical base for the research and help to determine the nature of your research.

“Dacast: live streaming and video and video hosting platform”, launched in Oct 2010, since then, Dacast has been offering the best online video platform that simplifies the distribution of premium media content. The company's goal is to offer the highest quality streaming solutions available at the most competitive pricing. More than 300,000 professional broadcasters and businesses have trusted Dacast to deliver their live and video content. On March 13, 2019, Dacast announced the acquisition of vzaar , a video hosting platform trusted by businesses worldwide, further establishing Dacast's position as an uncontested leader in the OTT industry . Dacast currently provides video and audio content distribution based on industry standard HTML5 technology. The stream ingest is RTMP and the stream delivery is supported in HLS and HDS formats.

Hassan M Selim (2007) led an exploratory investigation on the factors which affect the perception on e-learning. Information Technology (IT) and intense competition are reshaping universities worldwide. Universities have begun to utilize and integrate IT in teaching and learning in order to meet the instructors' and students' needs. E-learning, one of the tools that has emerged from IT, has been integrated into many university programs. There are several factors that need to be considered while developing or implementing university curriculums that offer e-learning-based courses. Since e-learning is a relatively new learning technology, this paper is intended to identify and measure its Critical Success Factors (CSFs) from student perceptions.

2.2 Proposed System

The proposed system aims to address the limitations of the existing e-learning systems and provide a seamless and secure platform for online transactions using the latest Smart Stream technologies. The proposed system will improve upon the existing system in terms of efficiency, security, and user experience, and will position itself as a leading e-learning platform in the study.

2.3 Feasibility Study

2.3.1 Technical Feasibility

The technical feasibility of this project is high. The required technologies, programming languages, and platforms are available and well-established.

Identifying the expertise required to implement and maintain the project. This includes determining if the team has the necessary knowledge of programming, data management, and system integration. Assessing how data will be collected, processed, stored, and analyzed. This includes evaluating the security and privacy measures to protect sensitive data and ensuring compliance with data regulations. Considering whether the project can scale as user demand increases. This involves ensuring that the system architecture is robust enough to handle future growth and that additional resources can be added without major overhauls.

2.3.2 Economic Feasibility

The economic feasibility of this project depends on the team's ability to manage the development and maintenance costs and generate sufficient revenue to cover expenses and achieve profitability.

Economy is the most important part of any project and organization. Maintenance costs, such as hosting fees and updates, must also be factored into the project's budget. The store's revenue streams will depend on the products and services offered, and revenue can be generated through product sales, transaction fees, and value-added services such as escrow and dispute resolution.

2.3.3 Operational Feasibility

The operational feasibility of our SMART STREAM project depends on the ability of the team to effectively integrate the store into existing business operations while complying with relevant regulations and laws

The project will require a team of skilled developers who are knowledgeable in both web development and blockchain technology. Additionally, customer support staff will need to be trained in using the store's front-end and back-end systems. Finding and hiring the right staff can be a challenging and time-consuming process, and it is important to ensure that the team has the necessary expertise and experience to complete the project successfully.

The infrastructure required to support the development and operation of the e-commerce store is another important consideration. This includes high-speed internet, servers, and data storage. The necessary hardware and software infrastructure must be in place to support the development and operation of the e-commerce store.

Training is also an important consideration. All staff members involved in the

operation of the e-commerce store will need to be trained on how to use the system effectively