

## RESEARCH ON THE AWARENESS OF VARIOUS SCHOLARSHIPS AND COURSES AVAILABLE IN INDIA AND DEVELOPMENT OF AN ONLINE COURSES AND SCHOLARSHIPS PORTAL

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### ABSTRACT

Awareness of the right colleges, courses, and scholarships facilitate the selection of the right career path and bring students on to the mainstream development track. Scholarships provide motivation for timely graduation, career progression and higher persistence. Career counseling programs provide students with both academic and occupational knowledge and skills, serve as a link between high school and college, and are situated to prepare students for employment. The benefits of both the scholarships and career counseling are really impactful but most people in India do not enjoy these benefits because of lack of awareness, social and cognitive biases and lack of accessibility. In this paper, a one stop portal, DESTINY is designed and implemented in order to allow students to access various colleges, courses and scholarships that are available out there and explore other peer reviews. The system is designed Using Object Oriented Analysis and Design (OOAD) methodology. The website uses various technologies ranging from HTML, CSS, JavaScript, React being the front-end driving modules and MongoDB and sanity being the back-end support .Both the websites are available to the audience using Netlify. This website model is carefully designed and analysed in great detail. The system provides all the available data at one place that saves time and makes the resources more accessible in a transparent manner.

**Keywords**—Explore, Scholarships, Colleges and Courses, Write Reviews

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### I. INTRODUCTION

Recently, there has been an increase in the number of career counseling programs in high schools in India. These programs offer students a combination of academic and vocational knowledge and skills, and act as a bridge between high school and college, preparing them for employment. These programs provide students with a comprehensive overview of different careers by combining academic and career-based curricula. The need for high-quality career programs was emphasized in the Harvard Graduate School of Education's Pathways to Prosperity report. This report highlighted the importance of career-focused educational programs that extend beyond high school. The report argues that students require a viable means of preparing for both college and work. High-quality career programs can prepare students for both college and work by providing them with opportunities for coherent, well-structured, and challenging academic and career-related courses.

Moreover, Success in higher education is commonly measured by a student's persistence, progression, and timely graduation. Providing financial aid to college students has been shown to improve these outcomes. Financial aid for higher education comes in the form of need-based and merit-based aid, such as grants, loans, tuition waivers, and private or institutional scholarships. Financial variables, particularly institutional scholarships, may play an increasingly important role in efforts to support student success in higher education. Although the impact of financial aid on student success has been established in the literature, it varies in direction and intensity, as well as across different types of aid and student characteristics.

Thus, to sum up, the benefits of both the scholarships and career counselling are really impactful but most people in India do not enjoy these benefits because of lack of awareness, social and cognitive biases and lack of accessibility. The students are not aware of the scholarships that are launched at the national or state level. They crawl through various web pages to explore the scholarships and check their availability and if, they are available, the long tedious process of online applications begin. This is the case of students that know how to use the

computers for their own benefits but on the other hand the students who don't know how to use computers don't even get to know about these scholarships that might benefit them the most.

Same is the case with Career Counseling, only 12% of the overall students attend career counseling while the most of the career guidance is from family, friends and teachers. This proves that career guidance is not given much importance in the Indian Society as of now but the 70% of people took career counselling feel that it was really beneficial. People still feel that career counseling is a waste of time but we need to understand the fact that if are not aware of the various opportunities (courses and colleges) that are available in India, one cannot choose the best choice according to the career aspirations and use them for their own benefit.

Thus, this calls for a need for an all in one portal that lists down all the Courses, colleges and scholarships all at a one place. This portal will help to spread awareness about various colleges, courses and scholarships and help them choose the best fit option for them.

## II. REVIEW OF RELATED LITERATURE

The Internet has become an integral part of our lives, both because of the vast information available as well as the ease of using it almost anywhere. It has also opened a gateway to many promising application areas like e-banking, exams, e-ticketing. With the introduction of the World Wide Web, and the implementation of the Web browser, in the 90's, a sudden boom of this data exploded the databases.

Today we find much of our interaction taking place through the browser. As the number of users on the World Wide Web increase every day, the usage of internet is also growing in different aspects. One of the most powerful aspects of the web is that anybody who has internet access can browse on the net. This enables sharing the information almost everywhere in the whole wide world. The Internet has become the reason for continuous growth in the number of transactions because of the speed, flexibility, and efficiency that it offers. This technology is required by every organization to reach out to its customers in this age of globalization.

Still there has been an information gap as the students are not aware about all the career opportunities that are available to them and this creates confusion in making decisions that are related to their higher studies. Even if they are aware, the lack of proper resources and guidance makes it difficult to form a good decision. In addition, a recent survey found that the youth in India feels that if they have opted for a particular course, there are only one or two career options that can be achieved after that. But the reality is that hundreds of courses are available that have been present over the years. Even now, various short term courses are being offered by Indian as well as Foreign Institutes.

Destiny, aims at being a one stop solution that will provide all the necessary scholarships as well as colleges and courses, so that the next child pursuing his dream is aware about the various options to achieve his dream career. Secondly, 50% of the scholarship seats go vacant as the students are unaware about the procedures as well as the scholarship itself. The reason for the same is that the data about the scholarships is present in a discrete form at various web pages and most of the people cannot access it. The government of India continuously encourages the youth and launches various welfare schemes for the youth to have great career but when it comes to proper utilization of resources, everyone is unaware of the programs.

When we talk about scholarship as a medium, we must know that the term "scholarship" is a form of financial assistance that does not require repayment or employment and which is usually offered to students who show potential for distinction, or who possess certain characteristics which forms the basis of many standards for providing scholarships. A scholarship is a form of financial aid that is specifically geared towards students who are attending school, college or any other institute. It is used as a way of financing their education, and it may pay a part of their education, or it may pay the entire cost of a student's tuition fees. It has also been noted that scholarships motivate students to graduate on time and give their contribution in extracurricular activities rather than being worried about ways of earning money for their tuition fees.

Our website aims at providing all of the following information ranging from the top skills, top colleges and courses as well as scholarships provided by both private as well as government institutions. The user can easily sign up or log in and find various courses that are offered in different streams. The new colleges are added by the admin on getting enough information and suggestions by the user. Once the student is aware about various skills courses and colleges, he/she has the power to choose and pursue the right career path. The website also provides

a detailed list of all the scholarships that are available on different parameters such as family income, merit based and other need based. The students can add comment and reviews on colleges and share information which provides a unique peer discussion feature. This form the major plus point for the website.

A major aim for our website is to increase the traffic so that the larger audience can easily reach out and find out the scholarships that suits them. Our analysis show that websites like CollegeDunia has a traffic of over 1,48,000 and Career360 has a traffic of around 50,000. Whereas government run websites have a traffic of only 3300. This shows that there is a gap between the information available and information known to all the students. Moreover, the data of the various scholarships that is available on the National Scholarship portal is present in a discrete manner and only data of the state run and national bodies are available over there. Our website is a one stop solution for all these issues and acts as a complete mediator for the right information to reach out to a wider AUDIENCE at the right time.

The website uses various technologies ranging from HTML5, CSS3, JavaScript, React being the front-end driving modules and MongoDB and sanity being the back-end support. The website is available to the audience using Netlify. This website model is carefully designed and analysed in great detail.

There has been detailed comparison between other such websites and a point of difference has been observed clearly indicating the need for one stop gateway for this plethora of information.

### III. METHODOLOGY

The idea of developing an one stop portal system was born out of the fact that the methodologies of the existing system is a manual and semi- online process hence the adoption of a new system to help the scholarship and college board better manage its processes of application and awarding scholarship and courses which makes it possible for applicants to apply for these processes anytime, anywhere and receive feedbacks with the use of their internet enabled devices.

#### Problems Identified With the Existing System

Paper-based and Semi-online method is what is used in the entire procedures of applying for scholarships and managing scholarship applications. This current process is faced with the following challenges:

**Lack of Awareness:** Nearly half of the seats of the scholarships go vacant due to lack of awareness about various scholarships. The literacy rate is quite low in India as of now and most of the people don't even know how to use and browse the web for their benefit. Many students just choose the courses and colleges as suggested by the peers and family just because they are unaware about the various different options that are available out there. Thus, this leads to waste of resources. That is why organizations providing scholarships, whether it is government or private, lose confidence in launching these kinds of opportunities.

**Waste of time:** A proper evaluation of the processing method currently in use reveals that lots of time is wasted during the processes involved in processing a student's application. Sometimes, students end up wasting a lot of time in search of different colleges or scholarships on different websites and are unable to identify the eligibility. Secondly, many students choose courses that the majority are going for in a hurry as they do not get enough time to ponder upon their true career aspiration

**Fraud:** There is also the case of fraud whereby some unscrupulous staff of the board guarantee that they can get the scholarships for the applicants or award them scholarship in exchange for an advance fee. With these, many applicants have fallen victims of these corrupt officials. Paying no attention to all these problems could sabotage the effort of the government to support professionals and outstanding students in the state. After the analysis of the existing system was conducted; problems in the existing system were identified and used to design a new system.

**Lack of Privacy:** All these websites run on user data, and here also users have to register and login to use the various services offered by the same. But many times, user's personal information like email-ids and phone numbers are shared with the universities and other institutions. So, users' data is exposed to services that the user never signed up for. Our website keeps in minds about the user's privacy and keep the data secure without any sharing of information unless authorized by the user themselves.

**Biased Review:** Many organizations take monetary funds for promoting information about certain colleges or scholarships. This creates a skewed perception about the college/scholarship but in reality it may not be the case.

This can cause misguidance among the people and this leads to improper usage of resources. This can have negative consequences for the student, such as a poor academic performance, dissatisfaction with the college or scholarship, or even financial burden. Additionally, it can also perpetuate the social and economic disparities in access to higher education. Thus, it is important that organizations provide comprehensive and unbiased information about colleges and scholarships to help students make informed decisions about their future.

Object Oriented Analysis and Design (OOAD) methodology is employed and Unified Modeling Language (UML) tools are used in the analysis to show specifications for the proposed system.

**Analysis of the proposed system**

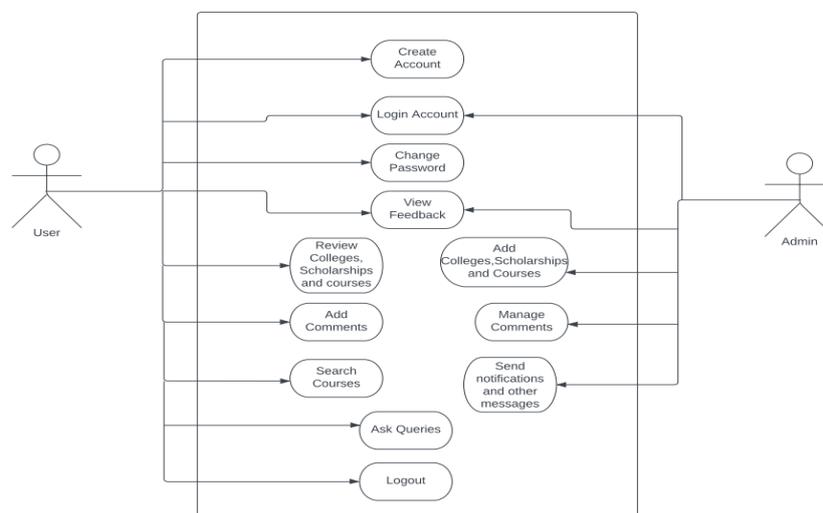
The software development approach that has been employed for this project is the Object-Oriented Analysis and Design (OOAD) methodology. After careful analysis of the user requirements the following application scenarios that would be handled by the system were identified.

- [1] Students/Users log in to the website to create an account. Log in with account details and review various colleges and scholarships that are available out there. The applicants also can view feedback about any particular college, and decide what’s best for them.
- [2] Admin Officer Login to website, the officer verifies the comments uploaded by each applicant. The officer views the evaluation request of applicants to add new colleges and can add the college information after adequate research. The Admin officer also sends a notification to applicants via email and SMS about various new scholarships. The Admin Officer configures the system and places various measures for updating the system and maintenance of the server.

**Design of the Proposed System.**

System design describes how the proposed system will operate. Unified Modelling Language (UML) tools are used in the system design. The tools used include Use case, class and sequence diagrams.

- [1] Use Case Diagram: A use case diagram is a diagram that shows the relationships among actors and use cases within a system. Below is the use case diagram of the system.



**Figure 1:Use Case Diagram**

- [2] Class Diagram: A class diagram in the Unified Modelling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system’s classes, their attribute, operations (or method), and the relationships among objects. The classes are analysed below with the aid of a class diagrams. The class diagram shows the major components of the classes. In the object modelling, the attributes and method (actions) are discussed and represented in the diagram below.

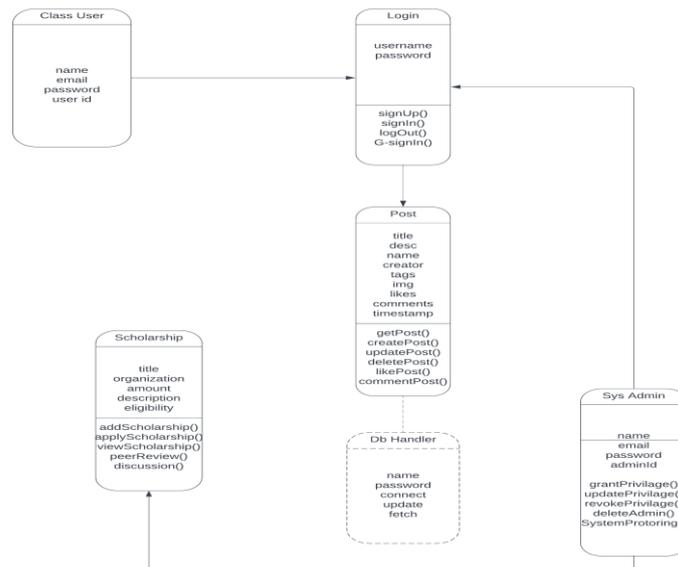


Figure 2: Class Diagram

[3] Sequence Diagram: Sequence diagrams are often used to illustrate the processing described in the use case scenarios. They can be used to illustrate a succession of interactions between classes or object instances over time. In practice, sequence diagrams are derived from use case analysis and are used in systems design to drive the interactions, relationships, and methods of the objects in the system.

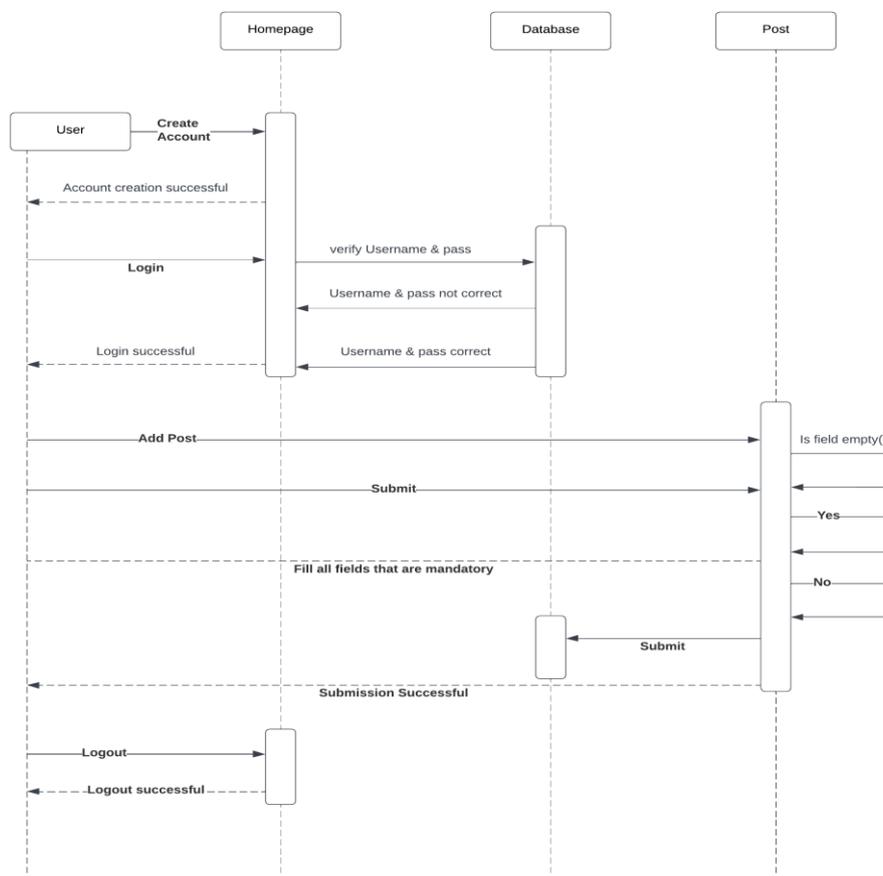


Figure 3: Sequence Diagram

[4] System Architecture: The architecture of the system design is a three-tier. The tiers are presentation tier, middle tier, and data tier.

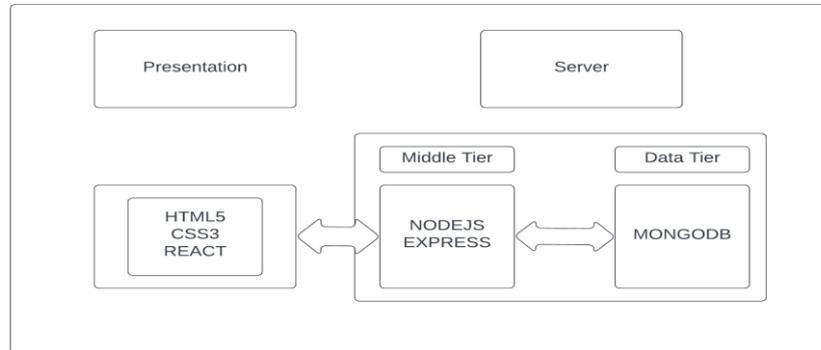


Figure 4: System Architecture

#### IV. IMPLEMENTATION

This was the stage at which all system designs were implemented, and new system procedures were thoroughly tested before the new system was fully implemented. Each individual part is checked and approved. This was followed by a creation process called conversion planning and commissioning of the new plant. The operational strategy used was parallel transformation. Parallel conversion uses the old and new systems simultaneously to ensure that key system issues are addressed before the old system is completely removed and decommissioned. This strategy was used in new system implementations due to the confidentiality of the information involved. The following diagram shows the various components of the software module.

[1] Implementation Architecture

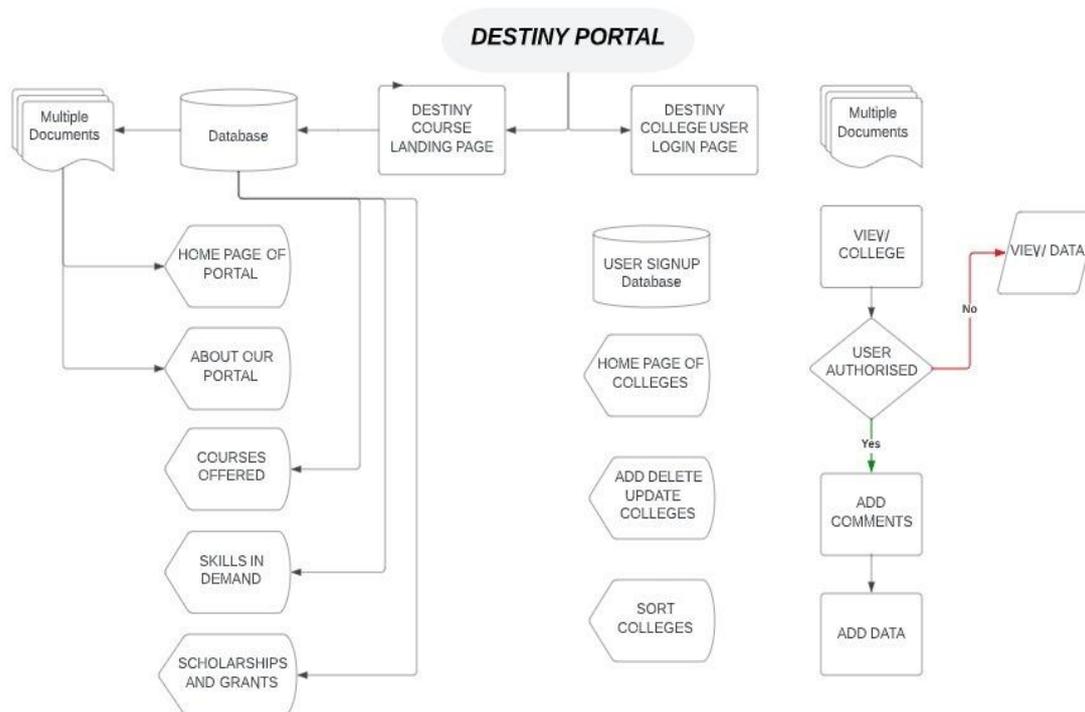
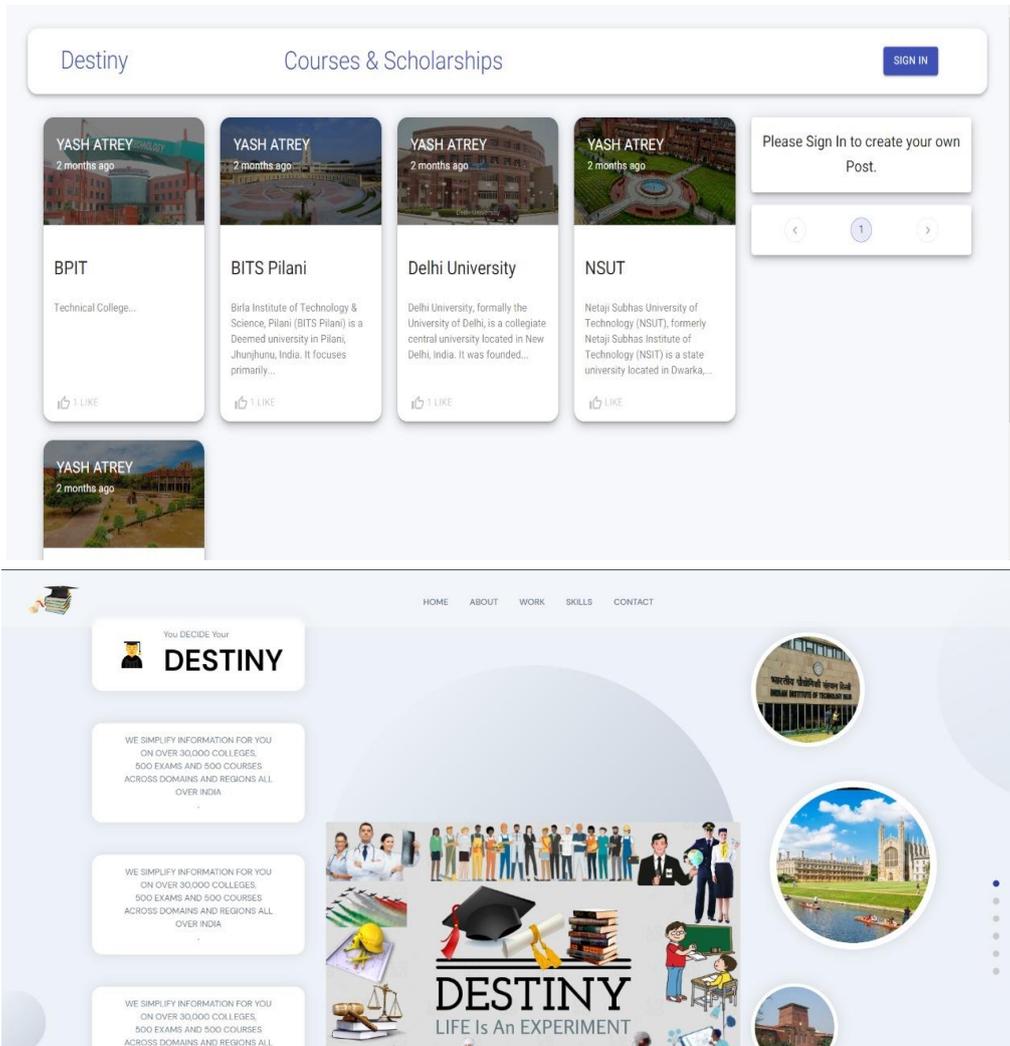


Figure 5: Implementation Architecture

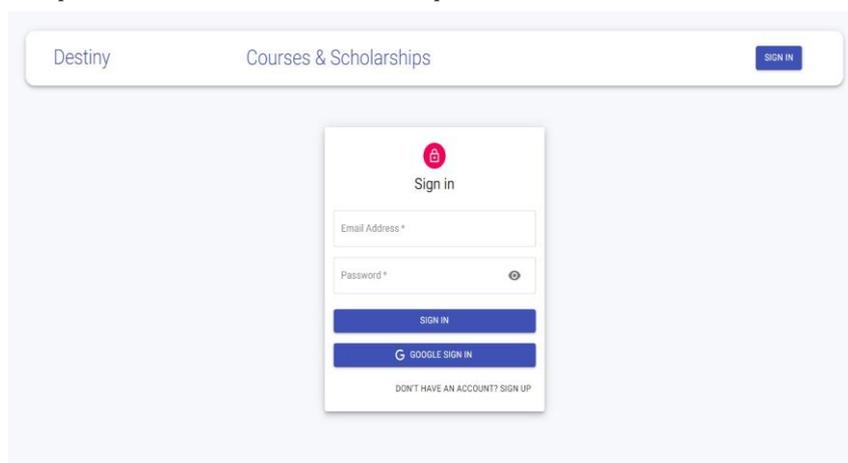
[2] Homepage and Other Pages

The homepage or FrontPage serves as landing page to all the users of the system. The applicant can review all the courses and scholarships without Sign-In but to add comments user must Sign-In into the account. The figure below shows the homepage of the e-scholarship system.



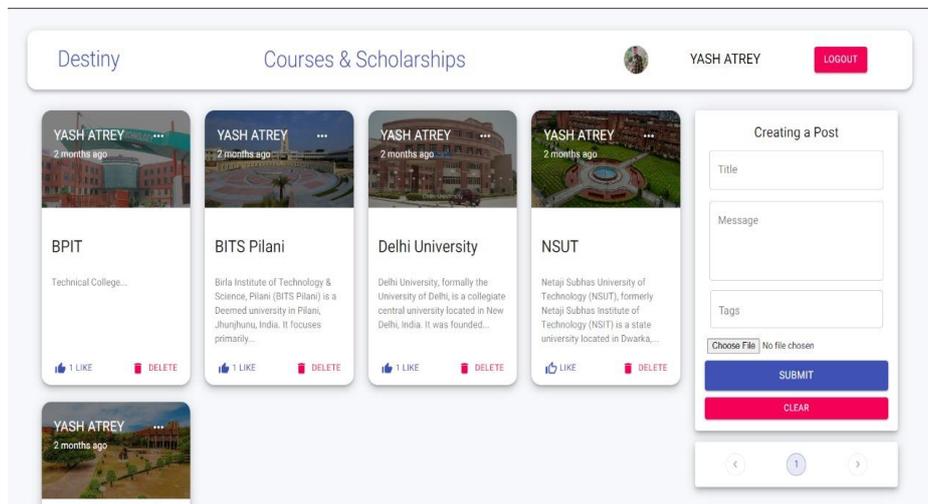
[3] Login Form

Once the user name and password is entered correctly by the applicant, he/she is granted access to add comments and explore other functionalities of the portal.



[4] System Administrator Home Page

The following is the administrator home page that has the access to create, add and delete posts on various Scholarships and courses and colleges. The administrator can grant access to the users, manage group discussions etc.



**Summary of Achievements**

The existing system were successfully studied and the weaknesses of the studied system were identified and areas of improvements have been implemented in the current system portal. The online web-based system (Destiny) software that was developed in the project was able to handle large number of requests and functionalities from the users and automate the processes of various functionalities. Users were able to create an account, like and add comments on certain colleges of their choice irrespective of their geographical location. The System also was able to list all the scholarships and courses in an unbiased and proper way.

**V. CONCLUSIONS**

In this work, an online web-based all in one portal for scholarships and courses was implemented that carefully sums and lists all the data that is present over the web in a discrete and organized way. The online web-based application allowed students to apply for scholarships online irrespective of their geographical locations and also provide them with feedback services. The software was developed using object oriented analysis and design. It is hoped that effective implementation of this software product would eliminate many problems discovered during the system's investigation and save time of the students that is usually wasted in searching and exploring eligible scholarships. This project also aims at spreading awareness about the various courses and colleges so that people can choose the best fit option for them.

**VI. FUTURE SCOPE**

The one-stop solution portal, Destiny has been built based on user needs and aim at increasing more traffic engagement, so as to increase awareness of the existing scholarships and other career options. In the future, we as a team Destiny plan to understand the users more efficiently and accurately by collecting more reviews of users through face to face interviews and Google forms. This data will help us to apply various machine learning models to understand the sentiment of users, their needs and awareness constraints. This will further help us to make the portal more efficient.

Moreover, in the near future we definitely aim to add resume builder so that the students can build there resume over the same platform and submit their applications to their preferred universities and colleges.

An additional feature that needs special attention is chatbot that would make the functionalities of the portal more accessible and easy to use. Secondly, this chatbot would continuously train and learn the more frequently asked questions and help in solving the upcoming queries of the applicants.

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