

Alumni Management System – Web Application

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Abstract - This paper represents a web service for Alumni management of a college. It highlights use of database management for ease of access of student records. Various web development tools are used to create a responsive website which focuses particularly on alumni data and interaction of university with individual alumnus. The implementation of the website along with the algorithm or the flow of the process is also discussed in this paper.

Key Words: Alumni management systems, web development, database management, digitization.

1. INTRODUCTION

The newer methods have an advantage of accessing data from anywhere around the globe. Modification and updating data become an easy process. As it is a responsive two-way managing service, the data of the individual is maintained by the admin as well as the alumni. Depending on the requirement, the input of the data can be added or modified on timely basis. Along with data management, additional interactive features can also be added if required by the institution.

The alumni management system is build based on an ER diagram which provides a distributive knowledge about the scope of the website and also presents on how different relationships can be accessed through one database [3].

This method helps the institution to keep a track of an alumnus after graduation and the student interaction with the institution for any reference, guidance or mentorship can be made available.

2. LITERATURE SURVEY

A. Existing System

The former methods of data preservation were tabular forms, excel sheets, documentations, etc. These system limits multiple accessing, easy modification in the data, searching for records [2]. As we are moving towards digitalization, techniques of data management have been improved. One of these methods include, database management system. The database management system

works on the principle of data-keeping using computerized technologies.

B. Disadvantages of existing system

These current methods though provide global access considering cloud-based word document such as Google Docs, Microsoft Word, etc. they have to be modified manually by an individual. This results in time consumption as well as lack of consistency in maintaining the data. The limitations of the current methods are that they are have to be updated regularly to avoid loss of data and it becomes inconvenient for every user to the same.

C. Proposed Model

Alumni Management System is a system which manages the records of the students who are a part of the respective institution or were a part of the institution. Alumni management is important as it keeps the records of the previous students for keeping them in touch with the institution. The alumnus can be a help to the college in their expertise files of study from the outside world giving students guidance and updating them about the current happenings. It particularly concentrates on the graduated students of the institution and not on the students who are currently a part of the institution.

D. Benefits of Proposed Model over Existing system

The database management system is a collection of a particular data depending on the requirement. It is easier to alter and implement changes in the existing data. As the new software technology is rising, we can store this data in a conventional and effective way using these software's and interfacing them in a proper functional order which can be accessed remotely.

3. IMPLEMENTATION OF THE PROPOSED MODEL

A. Software Requirements

As this project mainly focuses on alumni database on web services it uses methods based on web development tools like HTML, CSS, JavaScript along with Python framework (Django). The existing database has to be saved and modified using SQL. The HTML, CSS & JavaScript are considered to be the front-end development tools [1].

i. HTML

The HTML is used for the basic layout of the website which includes inputs in the form of registration form, a log-in page and details of a particular student using the HTML tags.

ii. CSS

The styling that includes designing of the web page for user attraction is done using CSS. The CSS is used because of its easy and efficient access to styling which is generally paired with HTML for most of the websites available.

iii. JavaScript

It is paired with HTML and CSS for a responsive front-end (Client Side).

iv. Django – A Python based Framework

As Python is an easy programming language due to its rich availability of resources for developing, the framework is preferred for back-end (Developer’s Side). This is an individual framework that also provides web extracting features for pulling out data in case of adding automating techniques like web-scraping tool (Beautiful Soup) [4] [7].

v. SQL

As we are using a structured data which is easy to handle in a database management system, SQL is preferred over other databases. SQL is said to be one of the oldest methods of storing large data in tables which avoids duplication of data. RDBMS concept is used to provide relationship between each table to fetch structured data across multiple tables [6].

B. Flow of the Proposed Model

The website focuses on user interaction and multi-functioning by adding various features to increase reusability [5].

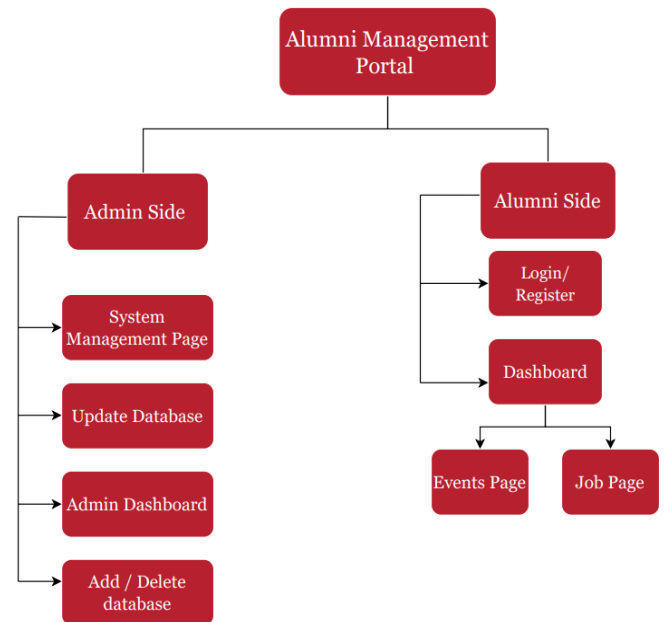


Fig - 1: Flow of the Project

This system is divided into two sides – Admin side, Alumni/Student side.

i. Admin Side

A log-in access is provided for security, verification and individuality purposes. The admin has access to the individual details of a particular alumni. The admin wants to keep track of the updated personal details. Along with this, it also focuses on managing alumni related events or job postings if necessary.

ii. Alumni Side

The alumni are required to update his/her personal details for college records. They have access for viewing the job postings or events on their personal dashboard. They can also post any job openings in their field for the benefit of other alumni and students.

C. Methodology

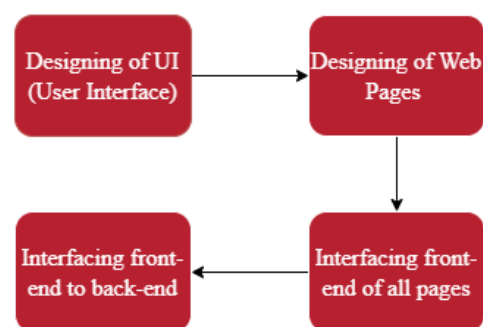


Fig – 2: Plan of action

The plan of action as mentioned in Fig. (2) is a step-by-step procedure which is followed to build the website. The designing of the UI (User Interface) is the first step which provides a rough idea of how the website will be presented throughout. These are termed to be static UI. The front-end is then created using HTML, CSS and JavaScript referring to these designs which becomes easier for the developer while implementation. After the development of the static pages, the framework is interfaced with the database and the front-end static pages to create a fully functional website. Depending on the user that is the admin, various features can be added later on by the developer.

5. FUTURE SCOPE

1. Job postings can be automatized using tools such as web scrapping which are available to scrap data from other websites.
2. The security can be enhanced to protect the database of the students to a greater extent.

6. RESULT

Image insertion, file insertion and verification of data becomes easy while using this method. Adding events is one the feature of this website.

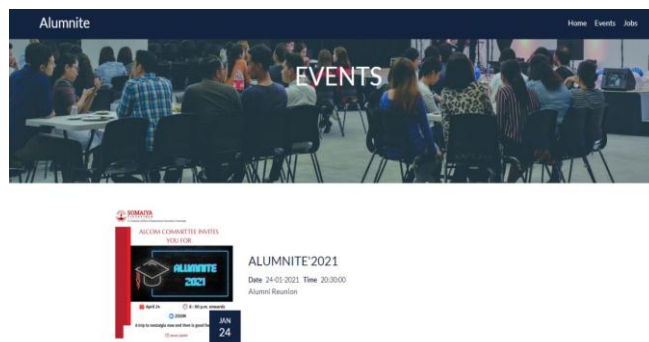
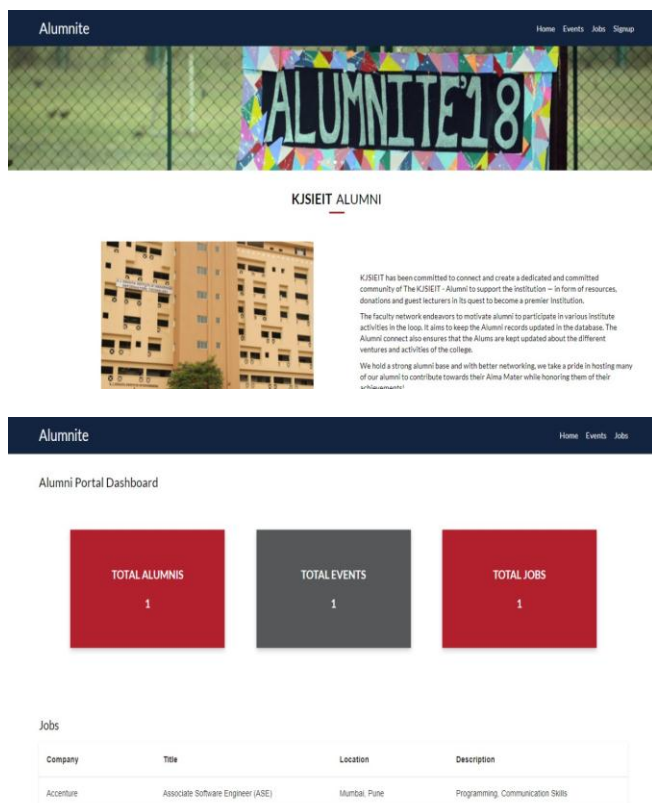


Fig – 3: Screenshots of the Web page

7. CONCLUSION

The "Alumni Management System" website is a fully functional website which time saving, easy to use, efficient way of managing relatable data, making it for the institution to connect with them easily and updating them about the ongongs of the institution. Automating techniques to some extent can increase feasibility in order to increase functionality in the further development of the website. This can also include in updating the user-interface to latest standards and keeping it agile to bring in faster changes with less modification in the original website and still getting valuable outcomes.

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