# Development of an Online Repository and Search Engine for Delsu Alumni

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**ABTSRACT--- *This research was aimed at developing a repository and a search engine for the alumni of the Delta State University, Abraka, which is of importance to a university. The Repository and Search Engine (RASE) is an Internet based application that can be accessed throughout the World. Anyone can access the search Engine to know about any Alumni of that college but cannot be able to add. Alumni members can only update the database when they are in the college, but they can update their basic record online anytime. The research also discussed the importance and benefits of an alumni association to the school and the members. The application was designed with asp.net, Dreamweaver and Microsoft access was used for the database design and served as the backend of the application.***

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## 1. INTRODUCTION

The internet has indeed become a major breakthrough in our world today. If you desire the growth, success, and want a large participation in anything then you need to ensure it is on the internet. Any organization that deals on large amount of data of necessity requires an online application to manage it effectively. The delta state university alumni association has been in existence for a very long time and its presence has never been really felt in reality. Membership registration is done manually and recorded on files kept in the office. These files can be lost by fire outbreak or even flood or a water accident. More also records cannot be retrieved for any purpose rather each time you are asked to submit your details to the association's office. Alumni members cannot even keep in touch because a lot of them have lost their contacts and there is no way of getting in touch except by accident. These and many more led to this study.

As the modern organizations are automated and computers are working as per the instructions, it becomes essential for the coordination of human beings, commodity and computers in a modern organization. Colleges need to maintain the information very accurately and up to date. This information helps the students to search the products very efficiently. Many big cities where life is busy needs many kind of transactions are taking place within few minutes of time. So, this online information called RASE helps one to complete this task within the time. A student can search the information through internet by viewing the details.

Previous research suggest students who were active in their college life primarily through voluntary association and student activities and organization are likely to be more philanthropic towards their alma mater than those who are less involved, or not involved at all. According to Ramesh (2011), institutional commitment created from students' social involvement continues after graduation. Ramesh also stated that the student should:

1. Be made aware of alumni association, by making registration easier.
2. Develop leaders among the graduate students,
3. Involve alumni members in the affairs of the university.

Alumni Association is an association of graduates (alumnus) or, more broadly, of former students, or fraternities. Alumni associations can also include associations of former employees of a business. These associations often organize social events; publish newsletters or magazines raise funds for the organization. Many provide a variety of benefits and services that help alumni maintain connections to their educational institution and fellow graduates. Additionally, such groups often support new alumnus, and provide a forum to form new friendships and business relationships with people of similar background.

Alumni associations are mainly organized around universities or departments of universities, but may also be organized among students that studied in a certain country. In the past, they were often considered to be the universities or schools old boy network. Today, alumni associations involve graduates of all age groups and demographics. For instance, a 9year old who graduated from Delsu Primary School and a 29year old who graduated some years ago are both members of the alumni association, which means that age has nothing to do with an alumni association.

Delta State University Alumni is an association of graduates of the University. The association acts as a forum where they can receive information to help grow or Finance the university or support certain programs of the school. Over the years the Delsu Alumni is no longer accessible to its entire member and their activities are always limited to a very few members who could be reached by the executives in charge. The association has now turn into what you just graduate, pay the association fees that year, collect stickers to either put in your car or house and that is all that is known these days about the association. Much about the association is not even known to its so called members. And yet it is assumed that the association is very functional. How then can a solution be found for these seemingly many problems? Of course in our discussion as we progress, we will begin to see how we can begin to solve these problems.

Why should a repository and a search engine be developed for the Delsu Alumni association? We will simply say that concerning all these issues that have been raised, a solution to salvage the situation will be the development of an online repository and search engine (RASE) which would be able to provide lasting solutions to all the associated problems and allow information to reach everyone who checks the news page of the application and as such participation would definitely increase.

One major objective of this "Repository and Search Engine for Alumni**"** ASP based final year project is to keep track the details of old students of a school or college and retrieved the student's information when required using Search Engine algorithm. This computer science project mainly provides communication between the college and old students.

When an online application is developed, the issue of retrieving records would have been dealt with. This is because with this application records can be easily retrieved without any effort. The problem of information breach would have also been solved, because all registered members will get information directly from the web application. Apart from this members can search for an old class mate whom they have lost contact with and of course reunion would have been made a lot easier. And that is why this study is poised to develop an online repository and search engine for Delsu Alumni.

## 2. METHODOLOGY

ASP.NET was used for developing the Repository and search Engine. IIS (Internet Information System) was also configured in the system used for the development and is required for the program to run. ASP was used as the front end of the application. While Access database was used as the backend of the application, and it also acted as the administrative part of the application.

## 3. SYSTEM ANALYSIS AND DESIGN

Conceptual design can be divided into two parts: the data model and the process model. The data model focuses on what should be stored in the database while the process model deals with how data is processed. To relate this to the context of the relational database, the data model is used to design the queries that will access and perform the operations on those tables. The relational database therefore forms the data store for all the data that will be input into the system.

For this project, Microsoft Access was used to build the database. Also the architectural design of the system which comprises of the various interface also regarded as the frontend was design with ASP.NET

**ANALYSIS OF THE SYSTEM UNDER STUDY**

The Existing system is a manual one in which records and details of Alumni are kept in books and shelves. This information is hard to retrieve as it is very difficult to maintain historical data. The Delta State University Alumni though in existence is not operating to even a quarter of its purpose left alone its full capacity, this is because very few graduate are aware of what happens as far as the organization is concerned. Information spreading is low as there is no effort to reach everyone who is a member. The system exist only for you to pay that alumni fees once you want to collect your result and after that nothing is heard about an interaction with the association. I would say that the association exists by its name and not by its functions.

**CONSTRAINTS OF THE EXISTING SYSTEM**

The system under study has a lot of limitations and weakness in that searching for a record is a tedious process and may never be successful. And not just that, a fire accident can destroy everything; however the following are some of the constraints of the existing system

- It is difficult to maintain important information in books.
- An alumnus cannot be verified on the spot, the office has to be contacted.
- More manual hours are needed to generate required reports.
- It is tedious to manage historical data which needs much space to keep all the previous years' ledgers, books etc.
- Fire outbreak can ruin all records which have no back-up anywhere.
- Record searching for retrieval is done at the discretion of whoever that is put in charge.

**PROPOSED SYSTEM DESIGN**

The advent of a Repository and Search Engine (RASE) as a software application which avoids more manual hours needed to be spent in record keeping and report generation. The design of this application is highly justifiable as it tries to resolve the constraints of the existing system. Some of the benefits of the proposed system include:

- ❖ This application keeps the data in a centralized way which is available to all the users simultaneously.

❖ It is very easy to manage historical data in database.
❖ No specific training is required for staffs of the Alumni association to use this application. They can easily use the tool that decreases manual hours spending for normal things and hence increases the performance.
❖ It is very easy to record the information of the colleges and about the students in the databases.
❖ Cost of printing files for alumni is reduced dramatically.
❖ Records of alumni could be searched on the spot without having to contact the office.
❖ Transactions with the union could be done at ease anywhere since you could get across to them anytime.

**SYSTEM ALGORITHM DESIGN**
The online application of the repository and search engine will be implemented with the use of a database for information storage, ASP.NET on the frontend and then IIS will be configured on the system before the application can be run. The system algorithm design tells us about how the data is processed or flows from stage to stage.
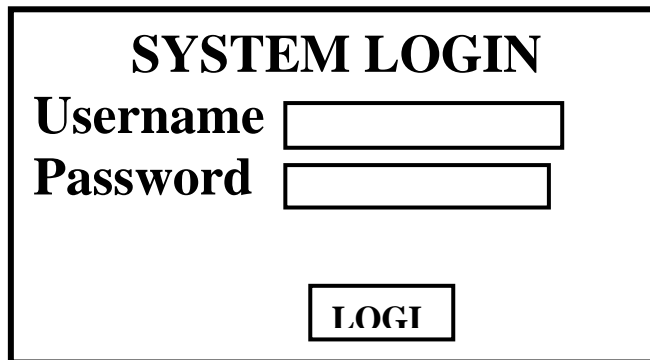
**INPUT DESIGN**
The input design specifies the manner in which data enters the system for processing. Input requirement is necessary for data entry and processing because it is a developing procedure for data preparation.

The input design is represented by modules or windows forms used by the proposed system to collect data from system users for storage and processing. The system uses ASP.NET controls to collect data.
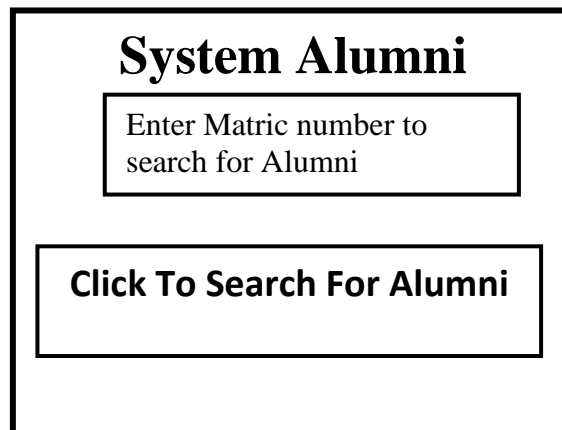
**INTERFACE DESIGN**
The user interface will be designed with macromedia Dreamweaver 8 as it will be a web based interface viewed with a web browser. Below are the design interfaces for the various modules of the system.

System Login Form: This form lets the user submit login details to gain access into the system.

Alumni Search Form: This form is used by all users either alumni or non alumni to search for any particular person whose record are in the database of the application.

Fig 2 System alumni search form

**OUTPUT DESIGN**

This aspect of the project intends to give a structural detail on how the various designs look like, but basically the output design. All systems must have a means by which they display result in form of output. This is achieved by the following design output views.

**SYSTEM DATABASE DESIGN**

This is the design of the tables used in the designed system. Microsoft Access was used for the design. The tables below contain information about the users of the system.

Table 1: Alumni login table

|  | **FIELD NAME** | **DESCRIPTION** | **FIELD SIZE** | **DATA TYPE** |
|---|---|---|---|---|
| 1 | UID | Username for accessing the system | 255 | Text |
| 2 | PWD | Password for accessing the system | 255 | Text |

Table 2: Alumni search/update table

| S/NO | FIELD NAME | DESCRIPTION | FIELD SIZE | DATA TYPE |
|---|---|---|---|---|
| 1 | Serial_number |  | 255 | Auto number |
| 2 | Matriculation_number | It is used to uniquely identify a record | 255 | text |
| 3 | First_name | Gives the first name of a person | 255 | Text |
| 4 | Surname | Gives the surname name of a person | 255 | Text |
| 5 | DOB | birthday | 255 | Date/time |
| 6 | Sex | Describes the sex of a person | 255 | Text |
| 7 | Email | Gives the email address of a person | 255 | Text |
| 8 | Permanent_address | Gives the address of a person | 255 | Memo |
| 9 | Course_of_study | Shows the course the person studied | 255 | text |
| 10 | Marital_status | Show marital status of a person | 255 | Tex |
| 11 | Graduation_Year | Gives the year of graduation of the person | 255 | text |
| 12 | Phone_number | Gives the phone contact of a person | 255 | Text |
| 13 | Picture | Shows the person's image | 255 | Memo |

## 4. SYSTEM IMPLEMENTATION

The new system will be implemented along side with old system with a view of strengthening the inadequacies of the old system; hence a parallel approach plan will be used to implement the new system. i.e. old system and the new system would be used together.

**HARDWARE REQUIREMENT**

- Pentium-IV (Processor).
- 1GB Ram
- 512 KB Cache Memory

- Hard disk 50Gb
- Microsoft Compatible 101 or more Key Board

**SOFTWARE REQUIREMENTS**

- Operating System :        Windows
- Programming  language:  ASP
- Front-End:                CS 5
- Back-End:                    Access DB 2007
- Operating system :            32bit and 64-bit

## 5. SYSTEM TESTING

This ensures that the program runs smoothly by debugging every error associated with the proper functioning of the new system. We tested if after inputting the username and password it appeared on the front side of the project. In the testing process, we had to ensure that mandatory field must be filled to increase the efficiency and errors detected were debugged.

## 6. SYSTEM REVIEW AND MAINTENANCE

As time goes and the system is in use, the requirement of users may change, therefore equipment installation and implementation of a working system is not the end of the system analysis and design, there would be the need for continuous review of the state of the system if the users are no longer satisfy. And also there is need for maintenance to ensure that the system continually meets the objectives or achieved its specified goal.

In order to achieve this maintenance goal, the system monitoring method should be employed. By that I mean monitoring the system during or after implementation by observing and measuring the efficiency of the procedures in each run.

**INSTALLATION PROCEDURE**

The requirement for the installation of the online RASE system are mentioned in the hardware and software requirement section**.**

**USER GUIDE**

This online application is very user friendly and the steps are simple to follow. As a user for you to gain access into the site you need to obtain a user name and a password from the Alumni office on campus, thereafter you can use same to login and update your details and save them. On the other hand you can easy search for alumni that you know their matriculation number. These are the first two forms you see and they are distinct and one has just one entry (for searching) and the other two entries (for login user name and password).

**Summary**

We have been able to discuss the existing system, and have found out that this proposed and designed system is better. we spoke on the enormous constrains of the old system as well as the benefits of the new system, how alumni can be better enhanced with the help of the new system and the hardware and software requirement were highlighted and the system was tested and then implemented.

## 7. CONCLUSION

Our conclusion is that there is an improvement in the efficiency of the entire system as a result of its automation, which has enabled it to provide a friendly graphical user interface which proves to be better when compared to the existing system. It gives appropriate access to the authorized users. It effectively overcomes the delay in communications. Updating of information becomes so easy. System security, data security and reliability are the striking features. The System has adequate scope for modification in future if it becomes necessary.

## 8. RECOMMENDATION

We have been able to have an improved system that works better than the existing system. Still we found out that the project can be done in a better way. Primarily, such that we can request for information about any Alumnus of a college nationwide, with just a particular website that is directional, that is a centralized website for all Alumni associations in Nigeria, from where we can link into any particular university Alumni. We request information about a particular college it just shows all the details of the college. So, after getting the information we can get access to the college website just by a click on the college name. The next enhancement that we can add is a link button which directly links to the colleges and. These are the two enhancements that we could think of in the future and to those who still want to research on this area. Thirdly in my design you have to know the matriculation number of alumni to be able to search for alumni, future endeavors should be to ensure the search criteria is by year of graduation department or by name of alumni.

## 9. REFERENCES

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