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~*~ THANK YOU ALL ~*~

ABOUT THE AUTHOR

The author, Salisu Muhammad Usman was born into the humble family of Alhaji Abdulkadir Usman and Hajiya Fatima A. Usman in Minna, and is an indigene of Niger State from the northern part of Nigeria. He commenced his early education at Hill-Top Model School Minna and went ahead to Federal Government College (F.G.C.) Kwali Abuja for his secondary school. The author then transferred to DECS New College in Minna to complete his secondary school where the passion and interest for computing arises.

The author choice of exploring the world of IT computers arises from the fact he had a close contact with experienced and successful computer programmers, he was also exposed to computers since from his early age which made him like anything that has to do with computers.

The author intended to study MBBS Medicine at Ahmadu Bello University (ABU) Zaria only for him to end up in School of Basic and Remedial Studies at Funtua Katsina State. Destiny came to prevail after eight months of studying in the remedial school, the author got the opportunity to transfer to INTI International University where is hopefully getting his Bachelor's degree in Computer Science. The author is currently in his final year pursuing a bachelor's degree in Computer Science. The author had met a vast computer world which the author fell in love with. The author's passion for computing has been the key factor to his excellence in his academics success. The author happens to be a very good practically and technically especially with the major programming languages.

After a successful completion in his bachelor's degree, the author intends to have a successful and influential career in the Information Technology world and also intends to make effort to improve the current backward situation of the IT industry of his home country. Never the less, the author hopes to become a successful web- developer after he graduates form INTI, with a clear goal, the author is ready to face the challenges in the pathway to his goal

PROBLEM DEFINITION

Problem Statement

The world is in an era in which everything is being digitalized. As the day goes by new technologies are developed and older versions are wiped out. The environment is becoming automated by the day goes by; things being done on paper are now electronic. Most people now have access to computers for different purposes; it could be work, personal use, or commercial use and so on. Therefore there is the need to keep up to the current technological trend in all aspects of life.

The Employer Relations (ER) Office at INTI needs a business solution to help campuses and the Product Managers manage 'Graduate Success'. As part of changing the focus and culture in Higher Education at INTI and in Malaysia, INTI are on a path to become the leader in a truly 'career and employer' education. Clear and measurable student success is a critical success factor in such a model. INTI has decided therefore that they will measure 4 basic criterions and they are,

1. Are students getting jobs in their field of choice?
2. Are students getting better starting salaries than their peers?
3. Are employers coming back to INTI to recruit more talent?
4. Are the above 3 things positively affecting enrolments?

Currently there is no clear process with the supporting technology underpinning to enable the team to easily understand and monitor 'Graduate Success'. In view this, the author embarked on this project so as to be able to come up with a tangible and concrete solution to tackle these issues.

Scope of Research

As this involves the internet, the project scope appeared to be more complex as was initially assumed to be by the author. Several research areas were being taken into consideration, some of which are:

- Study on the employer relations management system, these includes studying all the aspects of the employer relations management from its origin and to its current situation, some of the processes, procedures and methods involved.
- Study on the current/ existing web-based employer relations management systems like the Prepare career services used by Sunway university, Taylor's career services used by Taylor's University and so on
- Investigation on the application of intelligent agents on the web, to get the visibility of its implementation into this system.
- ASP.net, Vb.net programming and how it can be applied to realize the intended system.

These are the major scope pointed out clearly and there are as well others which might be found in this document. A successful research made in these areas is the key to achievements made in this project.

Limitation of Research

The time awarded for this project is eight months. This is arguably insufficient for a project for this scope considering other commitments to other subjects as well. However, the author was able to squeeze in and fulfill all the stated objectives before the due date. There are some features suggested for future enhancement which the author could have included if there was sufficient time.

Though internet and book resources were readily available for reference to all of the above stated research areas, time limitation was one of the major factors to the research as a whole. These resulted in the author putting some of the proposed functionalities to future enhancements of the system, even though some were realized.

Limitation of programming expertise of the author has also contributed to the amount of time needed to solve a particular task, without which everything would have been easier. Overall, these are some of the major setbacks to the research and implementation of some features to the system.

Research Methodology

The author adopted the **Incremental model** as his research methodology in doing this project. This model involves a sequential progress through phases with each phase completed before the starting of another phase. The decision to adopt it was its correspondence to the project at hand where by every task need to be fully completed before another task starts. The phases of this model are briefly described below:

- **Initial Planning:** This phase involves the project planning issues (budget estimate, project duration, project feasibility, etc.) to be critically analyzed.
- **Analysis:** Here, the system requirements are being gathered and understood clearly, to determine how they can be implemented. It involves an extensive communication between the system developers and customers.
- **Design:** This involve the demonstration of how the system analysis can be successfully designed into the system. Processes and steps of the system functions are being understood in this phase.
- **Coding:** This phase is where the overall system functions are being realized and developed by the programmer using any of the programming languages either ASP.net or C# and so on.
- **Testing:** The system functions are being tested in this phase to ensure that they meet the initial requirements and expectations being compiled in the previous phases.

The above sequence has been the activities which were done to successfully accomplish this project.

EXECUTIVE SUMMARY

As this project is one of the requirements for obtaining an honours degree in the authors field, working on it was one of the major challenges the author experienced in his studies. More of what the author learnt from the beginning of his computing studies was being applied and others that had to be learnt independently. The project has exposed the author to what he has never encountered before. The author has gain a lot from this project which will surely be a viable experience for him in this future career.

Major Findings

The major fact about this project to the author was the critical research it taught the author, and made him believe that everything is possible. Prior to this, the author never knew he could actually develop something like this. Though it was a tough task, designing the web-based intelligent employer relations management system site was really encouraging to the author in the sense that it demonstrated a sense of hard work and determination.

Time management is among the lessons learnt by the author in the course of doing this project. Without an effective time management, a system can never be developed to fulfil its objectives and scope. Hence, it was a great way to have tested the level of time management the author could achieve.

Finally, the author also got to enhance his approach towards problem solving. With the hike ups being experienced by the author including programming difficulties, solving them appropriately was a task on its own. Also the author was able to enhance his knowledge on the computing principles which was implemented in this project, area such as the intelligent agent (IA) feature.

Project Selling Point

As good as this project has been rated by most of the user who reviewed it; the author can confidently state that it has been a wonderful project. All of the intended functionalities were achieved with some extra ones been added. With this in mind, the project will have a very good selling option. Its automated behaviour of helping the students in finding the available jobs based on their field of study, and doing some matching things to fulfil the user requirement. Building of resume is part of the selling point of the developed system because this function helps both the students with resume and without resume to have a place to create a qualitative resume up to standards. Job placement is also a function which the system can perform, this function create an opportunity to students to apply for the available jobs with the support of the intelligent agent. Another vital

and essential selling point of the proposed system is the ability to generate report by tracing the graduate success of the overall INTI campuses. With all the identified functions they mostly attract users attention thus, can be said to be the project selling point.

Good and Bad Experiences

While carrying out this project, a lot of experiences have been met by the author some good and some bad. Though these have been reflected by the author from the beginning of his year 2, the challenges were not easy to keep up to. Programming the system was one of the good experiences to the author because, it enhanced his programming skills. On the other hand, dealing with all the programming difficulties was kind of a bad experience to the author as nobody wants to suffer before he gets something. The project had been a total diversion for the author's social life. All his leisure periods were limited for the purpose of this project. The author actually didn't find it easy to forgo most of his social activities, but for the sake of achieving the set of objectives for the project.

One very advantage enjoyed by the author was spending his two months holiday in school, trying to progress on his system, it really helped in getting time by the authors side. The bad experience towards this on the other hand was the fact that everybody was back home spending a good and lovely time with his family while the author was so lonely in school. The thought of this killed the author deep inside even though he knew that it was for his own benefit. This, the author can say was his major bad experience.

Recommendations

From the authors experience in handling tasks like this, time management is the major aspect that should effectively be monitored. With proper time management, a project like this will surely be a success. The computing project is usually done in phases accordingly, this is said to be a set of standard which students follow strictly in accomplishing the project.

When developing this kind of web-based intelligent ERMS site, requirements are most important. Its necessary requirements should be pointed out at the beginning and a through feasibility studies must be done. As always, the unforeseen happens and problems might surely be encountered or arise during the development of the project.

However, determination and hard work goes side by side with the said time management. Without being determined to do a task, time management will later result in a complete waste of time. When embarking on a project like this, it should be a source of motivation to a person that this might be a starting point for your career while it might also be the turning point of your dreams. All these should be taken into consideration for the said determination to be achieved.

Conclusion

As a conclusion, this project has been a source of a renewed self belief to the author. It has thought him so much including conducting research through the use of online resources, books, and other form of information gathering. Valuable skills have been acquired by the author from an IT point of view and also from a student life point of view. Most importantly, the author has learnt how to do huge tasks effectively and within a given time frame.

Lastly, as the author faces the day to day realities of the students life, there is need to remain flexible and willing to learn from all the experiences and to adjust plans as they unfold. One also has to remember that the goal is always to build on what has been learned before. This project is not only a display of school skill but indeed it is a life skill that will figure largely in the author's futures success

PREFACE

This is a project that studies and implements an intelligent Employer Relations Management System ERMS for INTI University. The project is about developing the system with some intelligent agent features that will help the INTI's ER (Employer Relation) Department to manage INTI Graduate Success as a part of becoming the truly leader of 'Career and Employer' Education. Graduate success is measure based on four criterions which are whether the student get the right job, whether the student get better salary compare to others, are the employer coming again to asked for more potential student, and are these three criterions affecting the enrollment.

The agent in this system will perform some kind of tasks which are performing analysis on graduate success and producing the report based on the analysis, comparing graduate success from the same faculty but different INTI campuses, making sure that all of INTI final year students have resume and had an interview before, notifying the student about the job posted by ER department as a request from the employer, and helping the ER officer to finding the right person for the position that requested by the employer. Basically this system will be used by ER Officer, Top-management level of INTI, Dean of faculty and Head of programme, and also graduated students (alumni). Therefore, the author intends to develop and implement a well user-friendly web-based intelligent agent for managing INTI's graduate success that will fulfill all the requirements of ER (Employer Relation) office.

This document is an explanation to the concept and processes of using the web-based Intelligent Employer Relations Management System (ERMS). It also explains all methods, tools, and techniques that were being applied in the development of this system. A brief description of the all the chapters in this documentation is as follows:

CHAPTER 1: LITERATURE REVIEW ON CURRENT PRACTICE OF MANAGEMENT ON INTI'S EMPLOYER RELATIONS DEPARTMENT

In this chapter, the author will perform a literature review to study and research on the current management practice of INTI's employer relations department. The author will start his research by analyzing the overall of INTI's ER department, followed by the organizational structure of INTI's ER department and also the tasks that are performed by INTI's ER department. Last but not least, the author will also look into the problem that is faced in the current practice of INTI's ER department.

CHAPTER 2: REVIEW ON SIMILAR EMPLOYER RELATION MANAGEMENT SYSTEM (ERMS)

In this chapter, the author will perform a review based on the employer relation management system (ERMS) that are implemented by some universities in Malaysia. The scope of this chapter is basically to identify some of the ERMS, finding out the features provided by each ERMS, identify the strength and limitation of each ERMS and also analyze the comparison between each ERMS.

CHAPTER 3: WEB-BASED INTELLIGENT AGENTS

In this chapter, the author will discuss a basic idea of web-based intelligent agents. This information includes the definition of intelligent agent, history of web-based intelligent agent, characteristic of web-based intelligent agent, classification of web-based intelligent agent, and so on.

CHAPTER 4: SYSTEM DEVELOPMENT METHODOLOGY

In this chapter, the author will discuss about software development techniques and tools. As we know, there are many different types of software development techniques. But in this chapter, the author will discuss on the 5 different types of software development methodology. Besides discussing software development methodology, the author will also discuss about software development tools and techniques. There are mainly 2 software development tools that the author needs in the development of this project which are diagramming tools, and development tools.

CHAPTER 5: REQUIREMENT ANALYSIS

In this chapter, the author will study about different types of fact-finding techniques or method such background reading, interview, questionnaire, document sampling, and observation. The study includes the advantages and disadvantages of each fact-finding method, when to apply or use this method. In this chapter also the author will select some of these fact-finding techniques to help him to find some information for requirement analysis. From the fact-finding result, the author will performs requirement analysis to find out the user requirements and the system requirements.

CHAPTER 6: SYSTEM ANALYSIS

In this chapter, the author will be doing some analysis tasks such modeling the system using use case diagram and activity diagram. In use case modeling, there are some activities that the author will carried out, which includes identify the actor and the use cases, draw the use case model and use case dependency model. Besides, each of the use cases in use case model will be converted in to activity model.

CHAPTER 7: SYSTEM DESIGN

In this chapter, the author will be doing some design tasks such as modeling the system using ideal object model, sequence diagram, and class diagram. In an ideal object model and sequence diagram, the author will discuss about how the user is interacting with the system, and how the system will response to the user activity. In the class diagram, the author will discuss about how each entity is interacting with others entity in the system.

CHAPTER 8: INTERFACE DESIGN

In this chapter, the author will be discussing about the interface design of the system. There are 10 sketches will be drawn in this chapter. Besides drawn the interfaces, the author will also discuss about the buttons that are provided in each interfaces.

CHAPTER 9: DATABASE DESIGN

In this chapter, the author would like to discuss about normalization procedure in the database that will be applied to the system's database. There are three normalization procedures that the author will perform to normalize the database.

CHAPTER 10: SYSTEM DEVELOPMENT AND CODING

In this chapter, the author would discuss about every aspect of software development and coding. This includes software installation for the software that required by the application, explanation of the important codes in the system such student registration, create resume and so on. As the author discuss earlier, this project will used asp.net with support of VB.net languages, because of that, the author needs to install software such Microsoft Visual Studio 2008, Microsoft SQL server 2005, IIS (Internet Information Services).

CHAPTER 11: SYSTEM TESTING

The objective of this chapter is to perform testing on the proposed system. There several different kind of testing that the author will perform in this chapter, which includes unit testing, integration testing, user evaluation and beta testing. The purpose of this testing is to ensure that the system functionalities are work perfectly as individual component and also as a group of related functions. Besides it will also be used to ensure that the system functionality meet user requirements.

CHAPTER 12: SYSTEM REVIEW

This is the last chapter of this project report. In this chapter, the proposed solution has been fully developed and therefore the author looks towards evaluation the final product. In this chapter, the author will discuss about the limitation of the proposed system, and also the future enhancement for the future development

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