ASHESI UNIVERSITY COLLEGE

RECRUITMENT AGENCY DATABASE MANAGEMENT SYSTEM

BY

STEVEN ODARTEIFIO

Applied Project Report submitted to the Department of Computer Science,

Ashesi University College

In partial fulfillment of Bachelor of Science Degree in Computer Science

APRIL 2012

DECLARATION

I hereby declare that this dissertation is as a result of my own work and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature:…………………………………..

Candidate's Name:………………………..

Date:…………………………………

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by Ashesi University College.

Supervisor's Signature:…………………………………..

Supervisor's Name:………………………..

Date:…………………………………

ACKNOWLEDGEMENT

I would like to express my sincerest gratitude first of all to my project supervisor, Nathan Amanquah for his time and guidance through the successful finish of my project.

I would also like to thank my parents for all the support, motivation and encouragement from the very start of university through to the end.

A special show of gratitude also goes to the Management of Ergon Recruitment Agency for taking time out of their busy schedule to help me gather all the information that I needed for this project.

I could not have done any of this if it were not for my lecturers at Ashesi University College and my friends. I want to say thank you to everyone who directly or indirectly influenced the final outcome of this project.

ABSTRACT

In this era of technological outburst and advancement, it has become very necessary for organizations and institutions to keep abreast with all developments. Technology introduced in any department of an organization goes a long way in improving all its processes.

Various businesses and organizations need to keep records of their data and handle huge quantum of data, thus they therefore have the responsibility to make sure that data input and access is controlled and managed properly so as to prevent financial loss. It also becomes necessary for the organization, in its quest to acquire software to handle the control and management of its own database, to find one that perfectly suits the processes as well as the structure of the organization. Any software that is meant to improve any process should do just that and not rather cause difficulties for the user.

ACRONYMS

PHP – Hypertext Preprocessor

HTML – Hypertext Markup Language

CSS – Cascading Style Sheet

UI – User Interface

HTTP – Hypertext Transfer Protocol

ERA – Ergon Recruitment Agency

PDF – Portable Document Format

SQL – Structured Query Language

Table of Contents

CHAPTER 1 – INTRODUCTION

1.0 PROJECT SCOPE AND OBJECTIVES

This project seeks to create a database management system for recruitment agencies in Ghana. Recruitment agencies serve as a medium between individuals seeking employment and individuals providing employment. The employer could be an individual or a company. In most cases recruitment agencies generate their income through some contractual commission laid out between the prospective employee and the prospective employer or both.

This project specifically seeks to create a database management system for a recruitment agency that recruits drivers (also known as candidates) on behalf of their clients (also known as employers). The company I create this application for is Ergon Recruitment Agency (ERA).

1.1 STATEMENT OF THE PROBLEM

Ergon Recruitment Agency is a leading Job Placement Agency in Ghana involved in linking qualified professionals; skilled and/or unskilled people with jobs across a wide range of specialized industries and professions. Since its incorporation **ERA** has lived up to its mission of having successfully liaised with its numerous clients to provide Job Placements to candidates within varying playing fields.

Ergon Recruitment Agency's scope of operations cuts across both the Private and Public Sectors. Their candidates have the option of accepting temporary, permanent or even contract based placement/jobs. *Website (www.ergonrecruitmentghana.com)* The company currently has all of its client data on paper and this is highly inconvenient especially when a particular clients information is needed to be looked up. It is a tedious and very slow process. The project seeks to develop a web based database management system that allows the administrator to enter, search and sort out data relevant to his needs. Individuals seeking employment are called CANDIDATES whereas those providing the jobs are called CLIENTS.

1.4 OVERVIEW OF REPORT

The following represents how this report has been structured. This chapter (Chapter 1) highlights a detailed introduction to the whole report. It has elements of the motivation for this particular project. It also contains detailed information of what the project is about and gives detailed information on the objectives of the project.

In Chapter two, I highlight the requirements for the project. These are the requirements I gathered from the interactions with the users of the application, mainly, the Operations Department of Ashesi University College. I also gathered system requirements and non-functional requirements by assessing the viability of the project as well as the implementation.

Chapter 3 has elements that cover the main description of the project. In this chapter, I talk about exactly what the project entails – the main user classes, the operating environment, the kinds of documentation that come with the software.

Chapter 4 covers the design of the software. It has information on the user interfaces – how they have evolved over the course of development. It also talks about the design of the database that the application interacts with in the back end. There is information on the relational models of the database. I explain the various interfaces; hardware, software and communication interfaces.

Chapter 5 covers the implementation of the software. In this chapter, I describe the tools and approaches that I use and provide justification for the usage of the tools and approaches that I chose for the various models. I also talk about the testing techniques that I used and make mention of the challenges that I faced in the course of development and implementation.

Chapter 6 concludes the document and I also discuss my recommendations and the way forward for this project. There are several features that can be added to the software to extend it during its evolvement.

CHAPTER 2

2.0 REQUIREMENTS SPECIFICATION

2.1 FUNCTIONAL REQUIREMENTS

These are the functions the application is expected to perform in order to meet its design goals

- The application should allow for data entry by the administrator of candidates and clients(those seeking employment and those in search of employees)
- The application should be able to display a well grouped tabular data about the agency's candidates and clients. (prospective employees and employers)
- The application should be able sort, search and display any information requested by the administrator in a tabular form (candidates/clients) or non tabular form (candidates/client)
- The application should also be able to serve as a reminder to the administrator by indicating the time due or elapsed for the agency to collect monies due or owed them by their clients.
- The system should also generate, if any, a list of candidates/clients whose monies payable to the agency are due. It shall further generate an alert signal showing clients whose monies are due to be collected within a certain number of days by the agency(when the agency finds employment for a job seeker (client), the client must give 50% of his/her salary to the agency within the first 2 months of their employment).

- The application should also inform the user/administrator of a client whose contract with their employer is due to expire. This should enable the administrator or agency to find suitable replacements for the employer (client) when the contract expires.
- The application should also be able to display Candidates (job seekers) who are on the waiting list. This means that candidates who have submitted their forms but have still not been matched.
- The application should be able to display the compatibilities of the job preferences of candidates to the job description of our clients. (one of the many information provided by the job seeker is the kind of job(s) he would prefer)
- The application should be able to display the compatibilities between the salary expectation of the job seeker with that of what the employer is willing to offer
- The database shall generate a search function where the user/administrator can search for names of their clients in order to view their personal information.
- The system will limit access to only three administrators
- The system shall also generate a log to display entries made by the administrator/user on a daily, monthly, quarterly and yearly basis.
- The system will also be able to generate reports in pdf, or word format.

2.2 NON-FUNCTIONAL REQUIREMENTS

These are requirement that specify how the application should perform the functions stated above

- The application should not burden the system with excessive processing that could deplete battery power and memory
- The application should be able to be deployed onto a mobile phone
- The application should be easy to modify (programmer perspective)
- The application should be easy to learn and use, should not take more than 2 working days to figure out and familiarize with all functionalities.
- Database or queries should be optimized such that it shall not burden the system

CHAPTER 3

3.0 PROJECT DESCRIPTION

The Recruitment Database Management System will be the first of its kind to be used by Ergon Recruitment Agency. It will be a suitable replacement to the current manual method of attempting to recruit and store information about clients and candidates. The software shall enable one to access information of prospective employees and also employers. It shall be exclusive to the administrator.

Create a Reminder function

When the agency secures employment for the job seeker in question there is a binding contract between the agency, the employer and the employee where 50% of the employee’s salary in the first and second month is paid to the agency as their commission. The administrator working on behalf of the agency as a liaison between the client and the candidate would have to manually check each day if there is any money to be collected or owed the agency. This is tedious. The software seeks to provide a function where the administrator can be reminded of the dates to which collection of the agency’s remuneration is due. By this the administrator will be automatically informed or updated.

Client Candidate Match

Usually when a client makes a request there may be a candidate match that is a candidate who meets the requirements specified by the client.

This application shall seek to provide a match where salary expectations of prospective employees are matched with the salary propositions of the prospective employer. This occurs by comparing the salary expectation of the candidate with that of the salary expectation of the client. The matches are made specifically through the following criteria:

- When a client proposes a salary of say GH250, the match looks for candidates whose salary expectations are between GH200 and GH300. This could still bring out more than a single candidate who matches. In order to avoid this, a further match is required
- Finding a match based on the years of experience and proficiency of English spoken by the candidate should provide enough detail to draw a match.

This will help facilitate the pairing of candidates and clients.

3.1 USER CLASSES AND CHARACTERISTICS

The two key players of this project are the clients and the candidates. The clients are those who would usually contact the company and request for an employee or candidate. The candidate(s) are those who are available for placement by the company depending on the request of the client.

3.2 OPERATING ENVIRONMENT

The database for the company Ergon Recruitment Agency will be programmed In PHP and the database option will be MySQL. The software if time allows will be deployed on web and mobile phone.

Why PHP?

- PHP is one of the "most popular server side scripting languages running today" and is used by 77.9% of all websites whose server side programming language is known.
- PHP can be easily integrated with other open source software and programs without requiring plug-in or libraries.
- PHP is simple. It is easy to understand and learn, especially for those with backgrounds in programming such as c, JavaScript and HTML.
- PHP also runs on just about every platform including UNIX, Macs and Windows versions.
- PHP does not use a lot of the systems resources so it runs fast and doesn't tend to slow other processes down.
- PHP is fairly stable and since its open source, the PHP community works to fix any bugs. The community offers technical support and continuously updates the code further expanding PHP's capabilities.
- PHP offers many levels of security to prevent malicious attacks.

WHY MYSQL?

- MySQL forms one of the most used database systems by web developers.
- MySQL is also open source and hence there is no need to pay in order to use the system.
- MySQL provides large storage capacity for a potentially large database system in the Ergon Recruitment system pending development.

- System is also secure as it allows frequent updates and also should a port become too vulnerable one it allows the option of changing it.
- MySQL is fast, reliable and cost effective compared with the other expensive databases like MS SQL SERVER and ORACLE.
- MySQL has a wider development circle compared to the others as people around the globe are continually developing new modules for it. Patches, upgrades and fixes are developed fast and becomes available in forums, blogs and developer sites on the internet.
- Its cross platform operability makes this suitable for such a project. Platforms such as windows, linux and OS2 and Solaris. It also contains API's for integration with C, C++, PHP, Java, Perl, Python and TCL.
- It is also secure as all passwords are stored in an encrypted format restricting any unauthorized access to the system.

Disadvantage of using MYSQL

If there is a disturbance or interruption that takes place while working with MySQL, then it may result to loss of data.

Alternative I could have used and why I did not use them

Java

It would not be appropriate to compare java with php in terms of ability since PHP is purely a server-side scripting language and java is a general purpose language (both server side and desktop programming language).

However server side programming comparison between the two should explain why I choose php over java:

- Almost all web hosting companies use Apache Server/PHP
- Changing or creating a page in php is easier
- Though both languages will get the job done my choice was mainly founded on the fact that the web is built by millions of amateur programmers who continually tweak and rebuild their websites. Scripting languages like php lend themselves to that and are widely available at affordable cost. Sun on the other hand failed to make java available and accessible to amateurs.

The project is web based especially at the client level. Clients seeking candidates to employ are usually more educated. Clients usually call to make requests, but this is usually so because this is the only channel through which they can make their requests. A web based system provides some reasonable option for the client. As will be demonstrated later in this document the client would have an account where they view available candidates and make their own selection.

Advantages of making this web based are:

- No need to do an installation as all personal computers have browsers
- This will also help reduce business costs as less time will be spent talking to customers over the phone and also allow user to update their own details
- Centralized data is secure and easy to back up

- Web applications will also provide quick and easy updates
- From a global perspective this could help reach people anywhere in the world especially where this advantage is relative to the growth of the business
- High availability and reliability twenty four hours a day, 7 days a week

Disadvantages

- Having to support different browsers and different versions
- Security risks
- Internet may not always be 100% reliable

3.3 USER DOCUMENTATION

The delivery and implementation of this version of the Recruitment Agency Database Management System will come with a read-me file that will serve as a user's manual.

CHAPTER 4

4.0 DESIGN

4.1 USER INTERFACE DESIGN

It shall provide functions as follows:

- Sorting/search functionality
- Entry of data

The search functionality allows the administrator to search for any relevant information:

Employer Data

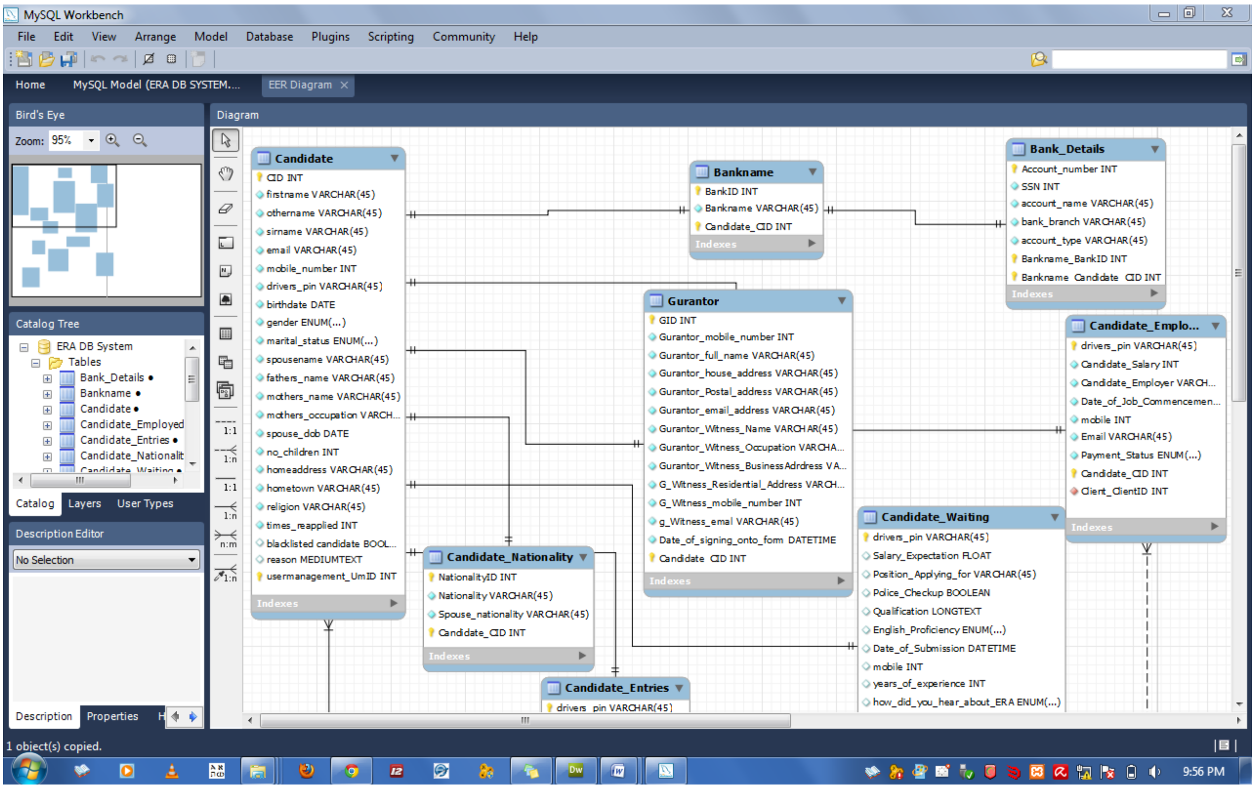
Name(individual)	Company	Location	Email	Telephone	mobile

Employee Data

Personal	First name	Surname	Other name	Gender	Age	Date of birth
Nationality	Home town	Religion	Country	Marital status	Home address	
Contacts	Email	Tel (home)	Tel (mobile)	Positions applied for		
Other	Certificates	CV	Salary	Date of	Date of job	Sala

			Expectations	submission	commencement	due

Upon entry into the database of the information tabulated above the administrator could further retrieve or access such data based on his need or what is relevant at that point in time.



Candidate
CID INT
firstname VARCHAR(45)
othername VARCHAR(45)
sirname VARCHAR(45)
email VARCHAR(45)
mobile_number INT
drivers_pin VARCHAR(45)
birthdate DATE
gender ENUM(...)
marital_status ENUM(...)
spousename VARCHAR(45)
fathers_name VARCHAR(45)
mothers_name VARCHAR(45)
mothers_occupation VARCH...
spouse_dob DATE
no_children INT
homeaddress VARCHAR(45)
hometown VARCHAR(45)
religion VARCHAR(45)
times_reapplied INT
blacklisted candidate BOOL...
reason MEDIUMTEXT
usermanagement_UmID INT

Bankname
BankID INT
Bankname VARCHAR(45)
Candidate_CID INT

Bank_Details
Account_number INT
SSN INT
account_name VARCHAR(45)
bank_branch VARCHAR(45)
account_type VARCHAR(45)
Bankname_BankID INT
Bankname Candidate CID INT

Gurantor
GID INT
Gurantor_mobile_number INT
Gurantor_full_name VARCHAR(45)
Gurantor_house_address VARCHAR(45)
Gurantor_Postal_address VARCHAR(45)
Gurantor_email_address VARCHAR(45)
Gurantor_Witness_Name VARCHAR(45)
Gurantor_Witness_Occupation VARCHA...
Gurantor_Witness_BusinessAdrdress VA...
G_Witness_Residential_Address VARCH...
G_Witness_mobile_number INT
g_Witness_emal VARCHAR(45)
Date_of_signing_onto_form DATETIME
Candidate CID INT

Candidate_Emplo...
drivers_pin VARCHAR(45)
Candidate_Salary INT
Candidate_Employer VARCH...
Date_of_Job_Commencemen...
mobile INT
Email VARCHAR(45)
Payment_Status ENUM(...)
Candidate_CID INT
Client_ClientID INT

Candidate_Nationality
NationalityID INT
Nationality VARCHAR(45)
Spouse_nationality VARCHAR(45)
Candidate_CID INT

Candidate_Waiting
drivers_pin VARCHAR(45)
Salary_Expectation FLOAT
Position_Applying_for VARCHAR(45)
Police_Checkup BOOLEAN
Qualification LONGTEXT
English_Proficiency ENUM(...)
Date_of_Submission DATETIME
mobile INT
years_of_experience INT
how_did_you_hear_about_ERA ENUM(...)

Candidate_Entries
drivers pin VARCHAR(45)

BASIC STAGES OF SOFTWARE DESIGN AND SPECIFICATION

The first task will be to design a mockup of the software.

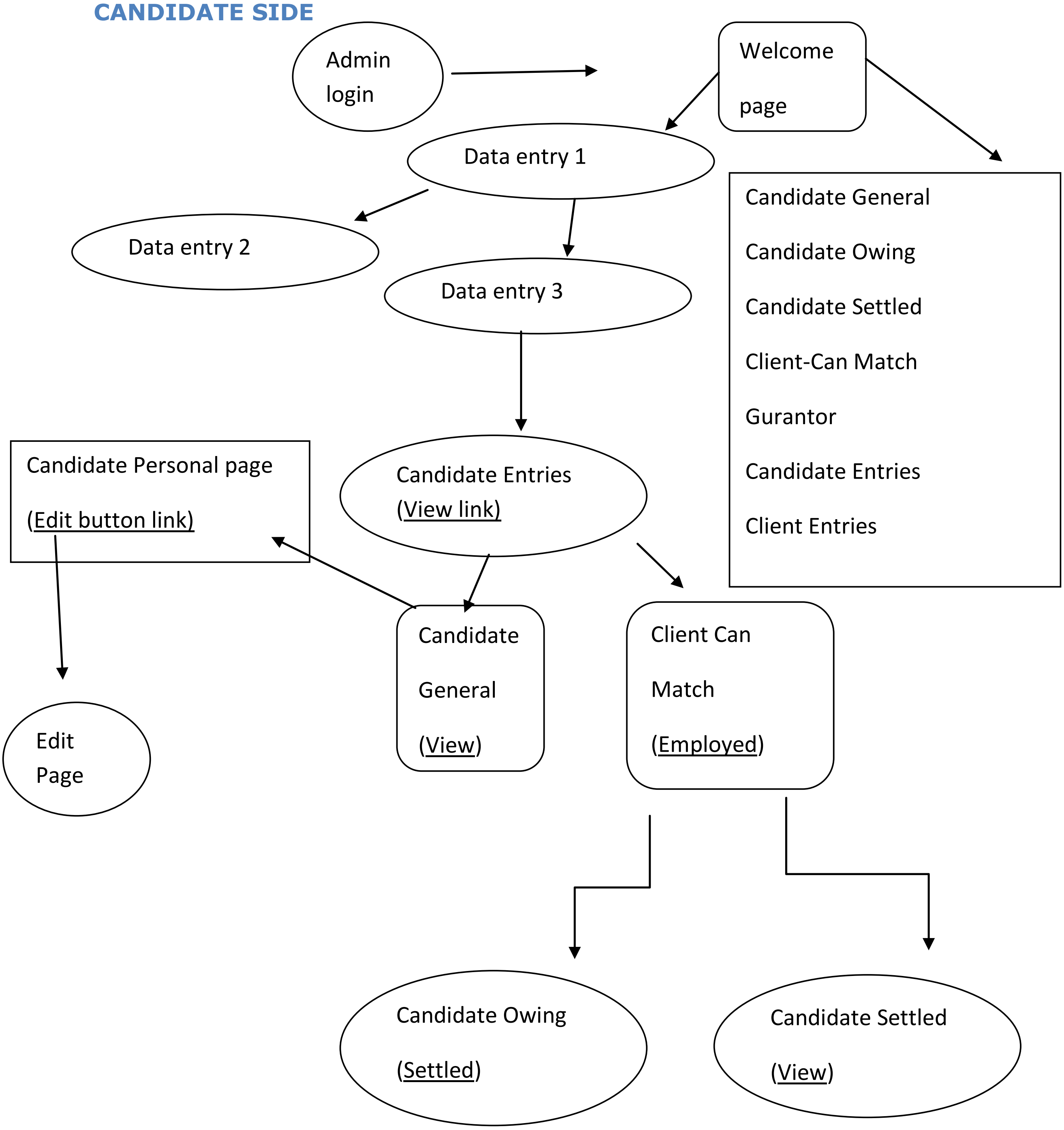
This will be done using the software for the mockup sketch called mockup builder

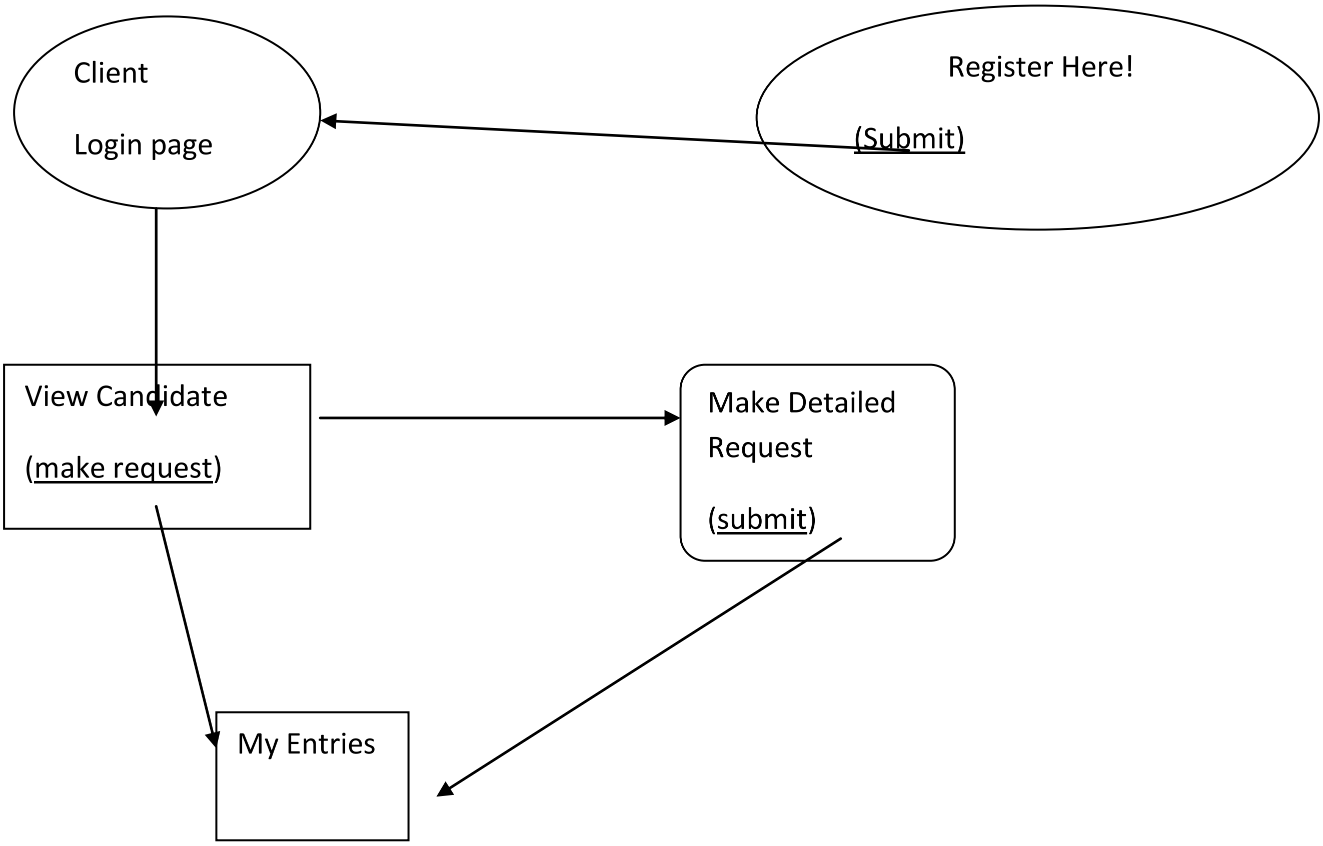
The second will be to design a more structured interface of the design in Photoshop.

This will require some study of this software

Thirdly will be the CSS layout of the software and ensuring that pages included in the design are consistent with what is being coded

CANDIDATE SIDE




Client
Login page
Register Here!
(Submit)
View Candidate
(make request)
Make Detailed Request
(submit)
My Entries

CHAPTER 5

5.0 IMPLEMENTATION

5.1 TOOLS AND APPROACH

The tools used to develop the Ashesi Inventory Management System include:

5.1.1 MOCKUP BUILDER

Mockup Builder - Mockup is a free web applications built in Microsoft Silverlight that is designed to let one create software and website mockups, then easily share them with clients and co workers. Mockup offers a great starting point for prototyping simple ideas and concepts. This application greatly helped me fashion out a clear vision of how and what I needed to do in the actual project to complete it.

5.1.2 PHOTOSHOP

After the mockup design I proceed to design a more visual perspective of the end product. This is necessary as mockup does not provide coloring and detailed design but 'pencil' mockup. I hence further upgraded the design with Photoshop. This made me learn the application and thus I applied this newly acquired skill and knowledge in creating the design

5.1.3 WORKBENCH

The project will start with setting up the database. Using workbench and exporting code to run in LocalHost and MYSQL.

5.1.4 HTML

Hypertext Markup Language also known as HTML is used in web application development because it tells the browser how to display elements on the web pages.

5.1.5 CSS

I used Cascading Style Sheets (CSS) in addition to HTML to define the structure and display of the elements on my pages.

5.1.6 PHP

Hypertext Preprocessor also known as PHP is a server-side scripting language. PHP is executed on the server. I employed the use of PHP because it runs on different platforms. Because it is open source, a lot of documentation is found on the Internet. PHP can connect to the MySQL database, which I used.

5.1.7 MYSQL

MYSQL can serve a large number of users and is able to handle data in large quantum. It allowed me to run a lot of queries exactly how I wanted and exactly how the software required.

5.1.8 Apache Server (MAMP/XAMPP)

MAMP and XAMPP are web servers that are capable of running locally on a laptop. I employed the use of XAMMP to enable me run and execute all database requirements locally on my laptop.

N.B. before doing the actual HTML AND CSS I decided to create a simple page that would successfully enter all information in the various fields into the database. I felt this was important since the form entry information is tedious and many and hence before arranging and doing all the CSS a successful raw data entry process must be ensured.

5.2 TESTING

I conducted the following tests on the Recruitment Agency's Database Management System:

5.2.1 DEVELOPMENT TESTING

In the process of development, I carried out tests for the various features of the Recruitment Agency's Database Management System:

In writing code for a particular feature, I would assume the role of a user and try to see if it did exactly what it was supposed to do. If it did not, I went back to the code to make corrections and made sure it worked properly before moving on to another feature.

5.2.2 COMPATIBILITY TESTING

Since the Recruitment Agency's Database Management System is web-based and requires the use of browsers, I took the time to test how the application works with different browsers – Google Chrome, Firefox, Safari and Internet Explorer.

5.2.3 REQUIREMENTS TESTING

I had a list of all the stated functional requirements. I tested the application on every one of the requirements that I had written down to make sure they were being satisfied by the application. If the application did not satisfy a particular requirement, I went back to the code to make sure it did in the end.

CHAPTER 6

6.0 CONCLUSION, RECOMMENDATION AND WAY FORWARD

The project given time limitations would have been able to further implement the following:

- Deploying the project unto a mobile phone
- Creating a desktop application for the application
- Include other jobs aside just the Driver job
- Creating Graphs to improve marketability and planning

However I have learnt a lot in building the application. After testing the software I believe it meets all the functional and non functional requirements.

- The application should allow for data entry by the administrator of candidates and clients(those seeking employment and those in search of employees)
- The application should be able to display a well grouped tabular data about the agency's candidates and clients. (prospective employees and employers)
- The application should be able sort, search and display any information requested by the administrator in a tabular form (candidates/clients) or non tabular form (candidates/client)
- The application should also be able to serve as a reminder to the administrator by indicating the time due or elapsed for the agency to collect monies due or owed them by their clients.

- The system shall also generate, if any, a list of candidates/clients whose monies payable to the agency are due
- The application should also be able to display Candidates (job seekers) who are on the waiting list. This means that candidates who have submitted their forms but have still not been matched.
- The application should be able to display the compatibilities of the job preferences of candidates to the job description of our clients. (one of the many information provided by the job seeker is the kind of job(s) he would prefer)
- The application should be able to display the compatibilities between the salary expectation of the job seeker with that of what the employer is willing to offer
- Screen can print on-screen data to the printer in a formatted layout.
- The database shall generate a search function whereby the user/administrator can search for names of their clients in order to view their personal information.
- The system will limit access to only three administrators
- The system will also be able to generate reports in pdf, or word format

These are requirements that specify how the application should perform functions stated above

- The application should not burden the system with excessive processing that could deplete battery power and memory
- The application should be easy to modify (programmer perspective)

- The application should be easy to learn and use, should not take more than 2 working days to figure out and familiarize with all functionalities.
- Database or queries should be optimized such that it shall not burden the system

This system will go a long way to permanently solve the tedious job of having to search candidates and clients up manually. A database system will alow the administrators to view and easily match candidates with their clients. This I belive will improve the efficiency of the company in the short run and their profitability in the long run.

BIBLIOGRAPHY

Ergon Recruitment Agency, 2012,

http://www.ergonrecruitmentagency.com

APPENDIX

APPENDIX 1

SYSTEM FEATURES

PART 1 - CANDIDATE ENTRY INFORMATION

In this section the administrator will enter information submitted by the user in hardcopy into the system. It is advised against the user doing it by themselves as a mass majority of them are uneducated or undereducated.

Secondly it is also important that the hardcopies are kept as well since they will bear the candidates signature. In applying for a job through the agency, candidates usually purchase forms from the agency fill them and return them. The administrator in turn transfers it into the database. However the hardcopies are kept for the candidates own benefit should any problems arise and the candidate would have to be shown the signature he/she appended to the terms and conditions of their application. Moreover most of the candidates have very weak educational backgrounds and hence it would be prudent to keep their hardcopy records. This would not be problematic as they will be seldom referred to.

CANDIDATE DATA ENTRY 1

Validations for the following and special features of fields:

First name

First letter of the name must be capital within this field. Digits and punctuations are not allowed. This field can also not be null.

Other name

First letter of the name need not to be capital within this field. Digits and punctuations are not allowed. This field can be null.

Surname

First letter of the name must be capital within this field. Digits and punctuations are not allowed. This field can also not be null.

Date of birth

The date of birth is a required field.

Place of birth

- No numbers or digits allowed
- No punctuations allowed
- Cannot be null

Hometown

- No numbers or digits allowed
- No punctuations allowed
- Cannot be null

Mobile number

- No letters, just digits
- Limit of 10 digits
- Limit should never be less or more

Email

- Can have both digits and letters
- Must have @, dot and com

Gender

- When entry is single, entry for spouse name, spouse date of birth and spouse nationality must be blocked
- When the married radio button is chosen entry must be opened for the above

Others to be validated are position applied for, father's and mother's name and occupations including next of kin details will follow the same precedence in the validating the ones before

CANDIDATE DATA ENTRY FORM 2

Validation for the following or features of various fields:

Account name

- No digits and not case sensitive
- Required field

Account number

- No letters
- Required field

Bank name/Bank branch

- When the bank name is chosen from the drop down list an automatic dropdown is created for that bank showing its branches

Salary expectation

- No letters
- Required field

Position applying for

- No digits
- Required field

Years of experience

- Only digits
- Required field

Drivers pin

- Variable characters
- Not more than 20 characters

CANDIDATE ENTRY THREE

Usual validations for all just like the above

The candidate data entry 1 and 2 forms have both a submit button and a continue button and once the those buttons are clicked they feed in the respective database.

The database created in my localhost is called ‘era db system’. Information or fields in the candidate data entry 1 form are stored in a table called ‘candidate’. Information or fields in the candidate data entry 2 form are stored in two different tables in the ‘era db system’. As we view in the form page we see one section having the bank details and the other section featuring other information feeding into a different table. Hence the information carrying the bank details feeds into the 'bank details table' and the other feeding into the 'candidate_waiting' table. The information concerning the gurantor in the last page feeds into the gurantor table in the database. Once the final submission is made the page candidate entries is loaded displaying the latest entries made by the administrator.

PART 2 - CANDIDATE VIEW SECTION

CANDIDATE ENTRIES PAGE

The candidate entries page provides the administrator a view of recent entries made during the day or in the course of the week. It basically displays the name of the candidate, position applied for, salary expectation and most importantly the submission time

Features

This page like others must have the following functionalities

- Search function that should work where entry of a candidate's name is entered and accessed
- Also the 'view more details' link for the administrator to view personal details of the candidate
- Be able to sort out names in the table in alphabetical order and also per letter specified
- Be able to sort salary expectations for example "show only those with a certain salary expectation"

CANDIDATE GENERAL

The candidate general page provides the administrator a view of the candidate's name, age, contact, salary expectation, position, status and the submission date.

This page displays general information about the candidate and not detailed information though it is the most detailed of the other tables.

Features

This page like others must have the following functionalities

- Search function that should work where entry of a candidate's name is entered and accessed
- Also the 'view more details' link for the administrator to view personal details of the candidate
- Be able to sort out names in the table in alphabetical order and also per letter specified
- Be able to sort salary expectations for example "show only those with a certain salary expectation"
- Be able to sort out different mobile agents
- Also sort out those waiting and those employed

CLIENT CANDIDATE MATCH

This is essentially the heartbeat of this project/application. The client candidate match page displays a list of candidates who salary expectation meet salary proposition of the client when they requested for a candidate. This page displays the Candidate name, Employer or client name, candidate contact, employer contact, salary expectation, job description, salary proposition and submission date of candidate.

Features

- The feature should be able to match the salary expectation of the candidate with that of the client over a given range. For example a candidate that expects 200cedis will automatically have a set range of 50 plus and minus, meaning any client that proposes between 150 and 250 will have a match or vice versa. This algorithm is only necessitated when a client who does not want any of the candidates listed in the'view candidate' page may make their own request by clicking on the 'make request link'
- Sometimes or often times based on the clients choice through the list of available candidates a direct match can be found without using the above algorithm. For example when the client visits the 'view candidates' table they will be able to view a list of candidates who have not been requested by other clients. The client is able to view the salary expectation of the candidate and hence clicking on the 'make request' link confirms an acceptance of the salary expected by the candidate, hence no need for the above algorithm.
- The client candidate match page is somewhat linked with the candidate owing, candidate settled and candidate waiting pages. Without the client candidate match page it is impossible to fill out data or display data in those 3 pages.
- When a match is found, or as the matches are displayed in this page, the administrator would have to confirm by calling both client

and candidate in question to establish the contract and spell out company policy to them. Upon agreement the administrator clicks on a radio button called “**employed**”

- Upon clicking this updates the ***candidates owing page***
- In the candidate owing page another radio button called “**settled**” is displayed such that when the client or employer of the candidate has paid her fee to the company, the administrator selects that button. This also deletes the row and updates the ***candidate settled page***
- Search function should be work where entry of a candidate’s name is entered and accessed
- Also the ‘view more details’ link for the administrator to view personal details of the candidate
- Be able to sort out names in the table in alphabetical order and also per letter specified
- Be able to sort salary expectations for example “show only those with a certain salary expectation”
- Be able to sort out different mobile agents
- Also sort out those waiting and those employed

CANDIDATE OWING PAGE

The candidate owing page basically displays information about candidates who have gained employment but whose employers have not yet settled the commission owed ERA in finding them an employee. Candidate owing displays candidate name, age, contact, salary, job description, employer name and submission date.

Features

- A radio button called employed is selected when the candidate in question’s employer has paid their commission to the company.
- When button is selected and submitted, the row automatically deletes and the candidate employed table is updated
- A date function should be engrafted into the system to inform the administrator that collection is due exactly 30 days upon entry into the table
- When the 30 days is up, the collection table is updated for the administrator to view and call
- Search function should work where a candidate’s name is entered and accessed
- Also the ‘view more details’ link is for the administrator to view personal details of the candidate
- Be able to sort out names in the table in alphabetical order and also per letter specified
- Be able to sort salary for example “show only those with a certain salary expectation”
- Be able to sort out different mobile agents

CANDIDATE SETTLED

The candidate employed table displays candidates whose clients have settled their commission to the agency. Candidate settled displays candidate name, age, contact, salary, job description, client name and submission date.

Features

- Search function should be work where entry of a candidate’s firstname or surname is entered
- Also the ‘view more details’ link for the administrator to view personal details of the candidate
- Be able to sort out names in the table in alphabetical order and also per letter specified
- Be able to sort salary for example “show only those with a certain salary expectation”
- Be able to sort out different mobile agents

CLIENT ENTRIES

The client general page shows request made by the client for the administrator to view. It displays client name, client contact, client request and their time of request

Features

- Be able to sort out names in alphabetical or any order
- Be able to sort out different mobile agents

GURANTOR

Gurantor displays the information of the candidate’s Gurantor. It displays candidate name, candidate contact, candidate gurantor, gurantor contact, gurantor witness name and gurantor witness contact.

Features

- Be able to sort out all names in alphabetical or any order

- Sort out mobile agents

CANDIDATE BLACKLIST

The blacklist table displays names of candidates who failed a police check or put the agencies name into disrepute when employed. The latter is made known to the agency through the client. Information here include name of candidate, contact, employer, email and reason for blacklist

Features

- When police check in the candidate data entry reports failed the submit button on that page enters the candidates name into this table and no other table
- This action updates and deletes all information about the candidate in the other tables
- Sorting functionalities for name and contact should be able to be done

CLIENT BLACKLIST

This displays a list of clients blacklisted by the agency for the following reasons: inability to pay their employees, refusal to pay the company its commission and maltreatment and disrespect to both the candidate and the company.

Features

- The blacklisted table is updated when the administrator activates that in the client entries table.
- Client information in the client entry table is deleted and updated into the blacklist page
- Other sorting functionalities applied

PART 3 - CLIENT SIDE

The client data entry section is basically the homepage of the client. Here the client logins in and is able to access or perform 3 keys actions: ***visit entries*** they have made, ***view information about candidates*** and ***make a request.*** This necessitates a log in id for each client

CLIEND DATA ENTRY

Within this section there are two categories of people allowed to make this: the individual or a company.

The individual must enter their full name, occupation, mobile number, request and the salary they are willing to offer. The company entry requires company's name, request, how did you hear about us and salary proposition

Upon submission the client is taken to the candidate list page where they can view candidates who are currently tagged or yet to be employed

VIEW CANDIDATES IINFORMATION

The client in visiting this page will be able to see a list of candidates on the waiting list. This page serves as alternative where the client can sort out the information that they need according to the job offer or preference.

This page displays in tabular form name of candidate, age, salary expectation, years of experience, candidate_status and fluency in English.

Features:

- Sort out amounts
- Sort out years of experience
- There would be a "make request" link which will be updated into the client entries table and the clients personal entries table and also the client candidate match table

MY ENTRIES

This page is always updated when the client makes a request

MAKE DETAILED REQUEST

This page contains two fields i.e the salary expectation and the request being made. This page is only visited by the user or client when they are not satisfied with the options displayed in the 'view candidates' page.

PART 4 CANIDIDATE PERSONAL

The candidate personal page is a page that displays all the information entered by the administrator during the data entry section. It is necessary because none of the other tables show all the information about the candidate. This page is accessed through the search functionality but basically when one clicks the view details link in any of the tables.

Features

- The page must have an upload picture link for the administrator to upload the passport picture of the candidate
- The page should be editable in a sense that the administrator can double click on any name or information and edit it, this should subsequently update in all tables of the application

PART 5 GRAPHS

This section would basically develop graphs based on information in the database. This is basically to aid the company develop and improve on its marketing strategy.

The information on "how did you hear about era" with the options signboard, radio, friends, internet and banner will require a graph to show the company how which marketing strategy is first of all attracting candidates to the agency.

This also applies to the clients

PART 6 DEVELOPING REPORTS (PDF AND WORD)

This section allows the administrator to generate reports from the data in the tables. Data will range from reports.

Candidate	Table takes basic information about the candidate (first name, othername,sirname,pix,date_employed,candidate_status,email,mobilenumber,birthdate,place of birth, gender, spouse nationality, marital status, spouse name, fathers name, mothers name, father occupation, mothers occupation, spouse date of birth, no of children, home address, postal address and next of kin information)		
Bankdetails	This sincludes account number, SSN, accountname, bank branch, and account type		
Bankname	Bank id and bank name		
Candidate Waiting	Drivers pin, salary expectation, position, Policecheckup, English Proficiency, years of experience, how did you hear about ergon, drivers license class		
Candidate Nationality	Nationality id and nationality		
Client	Client id, client fullname, client mobile, occupation,		

	registration date, how did you hear about us, applicant category, times reapplied, blacklisted, reason for blacklist		
Client login	Username and password and client id		
Client request	Client request, date of request, salary proposition		
Gurantor	Gurantor mobile number, gurantor full name, gurantor house address, gurantor postal address, gurantor email address, gurantor witness name, gurantor witness occupation, gurantor witness business address, gurantor residential address, gurantor witness mobile number, gurantor witness email, date of signing unto form		
User management	Username, date of time login, date of time logout,		

form	password, usergroup		