

**JOB-MATCHING SYSTEM  
FOR HUMAN RESOURCE SELECTION PROCESS**

By

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DISSERTATION

Submitted in Partial Fulfillment of the Requirements

For the

Bachelor of Technology (Hons)

(Information Technology)

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1) Personnel management -- Data Processing

# **CERTIFICATION OF APPROVAL**

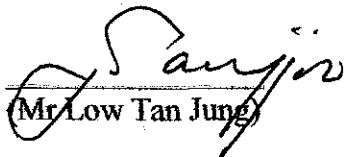
## **Job-Matching System for Human Resource Selection Process**

By,

Daeng Haryanti Md Rahim

A project dissertation submitted to the  
Information Technology Programme  
Universiti Teknologi Petronas  
In partial fulfillment for the  
**BACHELOR OF TECHNOLOGY (Hons)**  
**(INFORMATION TECHNOLOGY)**

Approved by,

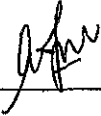


(Mr Low Tan Jung)

**UNIVERSITI TEKNOLOGI PETRONAS**  
**TRONOH, PERAK**  
**MAY 2006**

## **CERTIFICATION OF ORIGINALITY**

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons



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(Daeng Haryanti Md Rahim)

## **ABSTRACT**

This report is written to introduce the Final Year Project on 'Job-matching System for Human Resource Selection Process'. Nowadays, the selection process when recruiting new employees or selecting team members takes quite a long time to complete. Not only that, when the process is done manually, there will be human errors or biases. This process can be very tedious and at times become ineffective.

The objective of this system is to put in place a selection system for the recruitment process to reduce time and cost faced by the human resource department in most companies. This system also increases in efficiency in getting a better result in choosing the most potential candidate/employee.

The constraint of the system is that it can only be used when all the screening and interview process are completed and when the panel of interviewers have entered the interview outcomes to the candidates' database. This system is to be run on the Windows platform.

This project uses the waterfall model as its development methodology where the stages are requirement analysis, specification, design, implementation, integration and maintenance.

## ACKNOWLEDGEMENT

An absolute most is my expression of gratitude towards Allah Swt. It is with His blessings and mercy that had given me the strength in facing the challenges in completing my final year project.

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My utmost gratitude goes out to my parents for their endless support, affection, concerns and encouragement. Try as they might, with their never ending support and motivation in ensuring I move forward in life and appreciating my life as I endure it. The knowledge they do in fact shower me with is truly appreciated. Everything that they have bestowed upon me since day one in this world, is the most treasured and irreplaceable experience.

Lastly, I would like to acknowledge with greatest appreciation is to everyone else who have helped contribute and support me during the completion of this project. To Universiti Teknologi Petronas (UTP) for believing in me and providing me endless opportunity to embark on a knowledgeable journey and for helping me gain the experiences I need in life. All of everyone's kindness and cooperation are highly appreciated.

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## **LIST OF ABBREVIATIONS**

1.	Information Technology (IT) . . . . .	16
2.	Unemployment Insurance (UI). . . . .	20
3.	National Longitudinal Survey of Youth (NLSY). . . . .	20
4.	Visual Basic.net (VB.net) . . . . .	27
5.	activeX Data Objects (ADO) . . . . .	27

# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 Background of Study**

Candidate selection is one of the most important processes in employees' recruitment. It is a process of identifying and selecting the most qualified and suitable employee/candidate for available positions. Recruitment is an important and costly function in human resource management. It determines the quality of human resources of the organization. Errors in selection process can be detrimental to organization. Hence, it is crucial for accurate and quick selection decision.

This project will focus in the design of a Selection System to enable quick and accurate matching of a candidate with a specific job. The system would be able to match jobs through their requirements with potential candidates by their qualifications and competencies. The system can be widely applied in several human resource functions such as promotion and project team selection. It can also be used by individuals to find out if he/she fits a specific job.

## **1.2 Problem Statement**

Recruitment is an important and costly human resource management function. Organizations depend on this function to ensure they have a team of employees that are best fitted into jobs within the organization. Poor selection process can cause damage to the company's performance.

### **1.2.1 Tedious and repetitive task**

Selecting candidates for a job is a tedious and repetitive task. It is so because when selection process is done manually, the people in charge have to compare all shortlisted candidates with the proper qualifications to find the best suited candidate for the job. The person could miss some qualifications or requirements that could make a difference in selecting the right candidate for the job.

### **1.2.2 Longer time to make decision**

Because of the tedious and repetitive task, the process could take a long time. The person in charge of selection has to compare the candidates with the positions and have to make some calculations before making the decision to recruit/select the candidate. But usually, time is not a luxury they have during decision making.

If they take a long time to come up with a candidate, the organizations production could decrease because of that effect. Not only because the position is not being filled as fast as possible, Human Resource executive that is being in charge is busy trying to make the decision that all the other work may become pending.

If the person makes decision as fast as possible, not taking into consideration other aspects except that the candidate's qualification matches the job requirement, the

selected candidate may not be able to perform as expected. When this type of candidate is selected, it will affect the productivity of the organization and also will affect the organization's image.

### **1.2.3 Ineffective**

Another problem with the current human resource selection practice is that it can be ineffective due to biasness judgments, lack of structured tools and inadequate information on the candidates. These human errors can end up as organizational errors. Structured system will help minimize these human errors and make selection process more effective.

## **1.3 Objectives and Scope of Study/Work**

### **1.3.1 Objectives**

There are three main objectives for this project. The first objective of this project is to study and understand human resource recruitment process focusing on the selection process done in Malaysia. By studying and understanding the selection process, it would help to develop a more precise the job matching system.

Another objective of the project is to design a system that would generate results from the interview conducted and come out with a percentage for every match. This can help the HR executive in making the selection decision.

The last objective of the project is to minimize human errors by using automated system that calculates the gaps between what the candidates possess and what the job requires. By having this automated system, it could help reduce or if possible eliminate the tedious and repetitive task problem.

### **1.3.2 Scope of Study/Work**

The scope of the study covers the selection process in recruitment and selection of candidates for a specific job. This involves the following processes.

One of the scope of study required to complete the project is to identify the criteria for selection. This is also known as job-specifications that specify requirements for the job. Understanding job-specification is important for identifying the specifications of the candidates for the job. This is also called man-specifications.

Next is prioritizing selection criteria. This involves identifying which criteria are more important than the others. Weights are assigned to each criterion which signifies its importance to the selection.

Finally, is to calculate the job matching level. This is done by comparing information about the candidates and matches them with that of the man-specifications. The smaller the gaps, the better the choice.

### **1.3.3 Assumptions**

There are several assumptions made when designing and developing this system.

1. It is assumed that the targeted companies/organizations are using Microsoft Windows as their business platform. With this assumption, the system will be running on the Microsoft Windows platform.
2. Other than that, it is assumed that the system can only be used when all the interview process have been completed and that the outcomes of the interview are available in the database and in the system.

3. For this system to work, all selection criteria should be measurable. That means the outcomes of the interview have to be in a specific weightage for calculation to get the best fit candidate for a particular position.

## **CHAPTER 2**

### **LITERATURE REVIEW AND/OR THEORY**

#### **2.1 Introduction**

This chapter reviews all the studies, theories and researched facts done by credible professionals in their respective field which are published in world wide journals. These facts are being used as the basic of this project. All studies, theories and research facts discussed are based on identified sources and not merely on personal opinion

The human resource selection process is done after several interviews and some written tests to ensure the validate candidate's qualifications and competencies. Regardless of the number of candidates being interviewed, human resources coordinators should be able to rank the outcome of each interview, along with other data such as demonstrated skills and levels of education, as a scalable result that can be weighted to match the job requirement. The results will provide a rating of suitability of candidates to a job [1].

Usually a candidate selected has the most closely match with the job requirement in the organization. On the other hand, some companies feel that the candidate's development and learning potential is as important as his qualifications and ability to fill in to the available job. Jim Kutz, IT Recruiting Director in Capital One Financial Corporation says, "We often look not only what the person can do now, but what he can do in the next job." [2]

## 2.2 Selection techniques

According to University of Glasgow[4]

The selection process should provide enough evidence for the appointment panel to be able to assess and select an individual who matches the skills, knowledge and experience outlined in the person specification. There are a variety of methods available to help in the selection process which should increase the predictive validity of the whole process. Research carried out by the British Psychological Society found the following validity coefficients for six of the commonly used selection techniques: (Zero is no better than tossing a coin whilst 1.00 is 100% accurate)

- Job simulations - 0.45;
- Ability tests - 0.35;
- Biodata - 0.30;
- Structured interviews - 0.25;
- Personality tests - 0.15;
- Unstructured interviews - 0;

The most significant influence in the choice of selection method for any one vacancy is the type of job. According to a survey carried out by IRS in 1997, employers use three different methods when seeking to fill clerical/administrative posts. The most important is the interview, and of secondary importance are the application form, and ability tests.

The survey also found that selection processes for managers' posts were the most complex, with four methods used. The most important (as with all job types) is the interview, with at least two interview stages. Candidates were also likely to be asked to take some kind of formal test, either an ability test, or a personality questionnaire, or both.



### **2.3 Decision making process**

There are four rules which should be followed by appointment panels when making a final selection decision:

- All of the panel members should have received training
- Have a clear set of decision criteria;
- Apply them equally to all candidates;
- As much evidence as possible should be obtained within practical constraints.

Evaluation requires not only having information about the candidates, but also having the ability to relate this information to the evidence required in the person specification. The person specification is the key to effective evaluation.

You need 'hard' evidence in order to make rational decisions about each candidate. You need to ask yourself if the evidence you have obtained is 'fact' rather than 'feelings' on your part. Review the examples given by the candidate in relation to the key skill areas and make a judgment.

Are you going to conclude that a person who left a job after a row with his/her manager is a headstrong and difficult character - or an independent thinker with clear principles? Your conclusion will depend on the other evidence you have gathered in order to assess recurring patterns of behavior. If there is evidence that there were other occasions when the person flew off the handle with those they did not agree with, the first inference may be justified. If the pattern is one of reasoned debate and principled behavior, the second may be nearer the mark.

Once each of the criteria has been systematically covered you should combine this data with that from other sources e.g. job simulations.

There are common sources of error in the selection decision-making process and interviewers should be aware of these:

- Halo effect - this is where an interviewer bases his/her judgment on a small number of strong factors which affects all other judgments on that candidate. The few strong factors might coincide with the interviewers own personal interests. Interviewers must be aware of their own prejudices and maintain objectivity by examining each criterion separately.
- Horn effect - this is the opposite of the halo effect and can occur when a candidate has a notable weakness. There could be compensating strengths in other areas and interviewers should guard against rating the candidate's other attributes more negatively than they otherwise would have done.
- Projection - this can occur when the line manager for the post is a panel member, and he/she may try to recruit a mirror-image of him/her. This can perpetuate stereotypes in a particular section and discourage diversity.
- Bias - This takes many forms. The age, social class, physical appearance and shared hobby can all affect your judgment and pre-dispose you to a particular candidate - who may not have all the attributes you need.
- Negativity bias - in most interviews you will receive both good and bad news about a candidate. There is research evidence to suggest that these two kinds of information are not weighted equally in the final assessment. One piece of bad news can easily outweigh three pieces of good news. It is important that the negatives are probed fully to make sure that conclusions are not based on half the facts.

- Stereotypes - generalizing about people on the basis of what they look like, or one aspect of their behavior, is potentially dangerous and discriminatory e.g. 'people with red hair have quick tempers', 'fat people are lazy' and 'young women leave to have families'.

Individual panel members, using an assessment form, should rate each candidate against the essential and desirable criteria for the post. This should take place prior to the group discussion chaired by the Convener. If, following the discussion, a member changes his/her view, this should be noted on the assessment form. This assists transparency as it provides a clear audit trail if the candidate should make a claim against the organization in an Employment Tribunal. Interviewers must be aware that their reasons for appointing or not appointing a particular candidate may be challenged under discrimination legislation.

An appointment should not be made if none of the candidates fit the person specification. If this occurs you should systematically go back over all the stages in the recruitment process to find out why it has failed to provide a suitable candidate.

The interview panel recommendation form, signed by the Convener, should be sent to Human Resources along with the individual assessment forms and the notes made by the panel members.

#### **2.4 Effects on job search on match quality**

Most empirical studies that use duration modeling techniques focus on either unemployment or employment. Many authors have characterized the distributions of unemployment and wages, and the job stability literature focuses on the distribution of employment. Among those who study employment, none have attempted to study the correlation between unemployment duration and the duration of the subsequent employment spell.

Eckstein and Wolpin, in their 1990 *Econometrica* paper [13], were the first to use the NLSY to characterize the duration of non-employment and wages for young workers in their first jobs. Their work primarily aims to demonstrate the feasibility of estimating an equilibrium search model [12]. Their analysis of the data is limited to observed hazard rates for non-employment. Their initial works have been extended by using their data sample, addressing the link between employment and nonemployment and by exploring specific behaviors of individuals during non-employment.

Previous work on match quality focuses on the effect of the business cycle on employment duration [19]. She uses the NLSY with the unemployment rate as the cyclical variable and discovers that there is variation in match quality over the business cycle. She also finds that controlling for wages reduces this effect significantly. Bowlus's definition of match quality was used to document evidence on the correlation between job search and match quality. The cornerstone of the applied empirical literature in this field is the Meyer (1990) [14] *Econometrica* article that introduces a semiparametric duration analysis technique and applies it to test the effects of the level and length of unemployment insurance benefits (UI) on unemployment durations. Meyer uses duration modeling and hazard rate analysis to conclude that increasing UI benefits has a negative effect on the probability of leaving unemployment. His conclusions imply that high UI benefits implicitly decrease the cost of job search and leisure, but he restricts his analysis to the duration of the unemployment spell. Meyer introduces a multiplicative form of unobserved heterogeneity to the proportional hazard model. He concludes that the coefficients with gamma distributed unobserved heterogeneity are similar to those obtained with the no heterogeneity specification. He also concludes that the non-parametric specification of the baseline hazard substantially reduces the inconsistency effects of misspecifying the baseline hazard. Some of Meyer's estimation techniques are applied.

Previous work on the characterization of employment focuses on job stability. The job stability literature documents the evolution of job retention rates and wages in the United States [15], but does not provide any evidence on the relationship between

unemployment duration and job stability. In addition, job stability is measured by the job retention rate, which is averaged over individuals and does not control for heterogeneity. As is the case in this study, previous empirical studies on employment and unemployment have been “one-sided” due to the fact that individual characteristics are well defined in the data, but firm characteristics are not.

In an analysis that includes both individual and firm characteristics, Abowd, Kramarz and Margolis [17] find that person effects are more important than firm effects for explaining wage variation in a French data set. In a related study, Postel-Vinay and Robin [18] find that person effects are important, accounting for up to 40% of wage variation, but that market imperfections caused by search frictions account for up to 50% of wage variation. These papers provide evidence that studies using “one-sided” data sources may still yield useful results. All of the above-mentioned work examines either the distribution of employment or the distribution of non-employment, but it does not address the question of whether the amount of time spent in non-employment has an effect on match quality. To investigate the link between employment and non-employment requires that both distributions be examined to determine their degree of correlation.

## **CHAPTER 3**

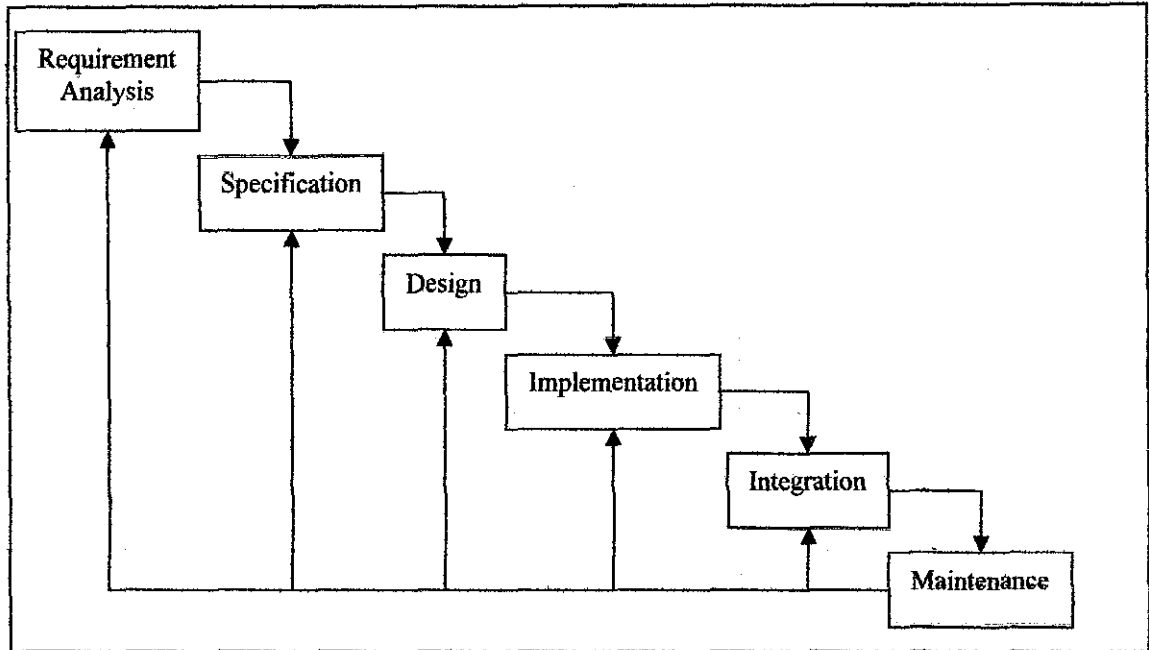
### **METHODOLOGY/PROJECT WORK**

#### **3.1 Introduction**

The methodology that is used for this project is based on available methodology and is combined to best suit the requirement and time constraint of the project. Basically, the methodology applied in this project is the waterfall model. In "The Waterfall" approach, the whole process of software development is divided into separate process phases. The phases in Waterfall model are: Requirement phase, specifications phase, Software Design, Implementation phase, Integration and Maintenance phase. All these phases are cascaded to each other so that second phase is started as and when defined set of goals are achieved for first phase and it is signed off, so the name "Waterfall Model". All the methods and processes undertaken in Waterfall Model are more visible.

## 3.2 Methodology

The methodology used in this project is the waterfall model.



*Figure 3.1 The Waterfall Model*

This software life cycle model consists of 6 distinct stages:

### 3.1.1 Requirement Analysis Stage

In this stage, problem statements are identified. The objectives of the project are also defined in this stage. Not only that, constraints, if there is any, is also identified in this first stage.

### 3.1.2 Specification Stage

In this specification stage, all the software specifications are defined.

### **3.1.3 Design Stage**

In the system and software design phase, the system specifications are translated into a software representation. In this phase I was concerned with data structures, software architecture, and algorithmic detail and interface representations. The hardware requirements were also determined at this phase along with a picture of the overall system architecture. By the end of this stage I was able to identify the relationship between the hardware, software and the associated interface.

### **3.1.4 Implementation Stage**

In the implementation and testing stage the designs were translated into the software domain. Testing at this stage focuses on making sure that any errors were identified and that the software met its required specifications. Functional testing was done in order to identify errors that may occur.

### **3.1.5 Integration Stage**

In the integration and system testing phase all the program units were integrated and tested to ensure that the complete system meets the software requirements.

### **3.1.6 Maintenance Stage**

In the maintenance phase the software is updated to meet changing customer needs, adapt to changes in external environment, correct errors and oversights undetected in the testing phase and enhance the efficiency of the software.

The feedback loops allow for corrections to be incorporated into the model. The choice of this model is due to its enforced disciplined approach.



### 3.2 System Workflow

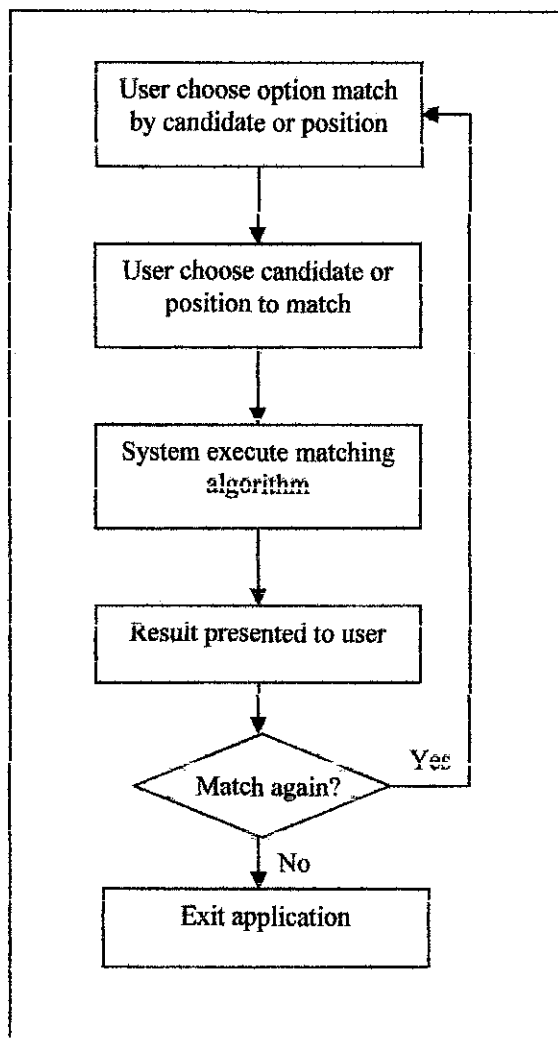


Figure 3.2 system workflow

### **3.3 Data Collection Method**

Data Collection is an important aspect of any type of research study. Inaccurate data collection can impact the results of a study and ultimately lead to invalid results.

#### **3.3.1 Interview**

An informal interview was conducted. Most of the interviews conducted were telephone interviews with the HR Manager of University Kuala Lumpur.

#### **3.3.2 Internet Research**

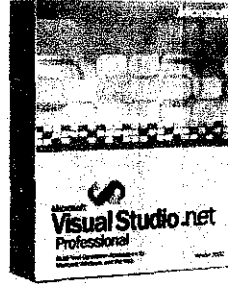
Most of the information collected was from internet research. It is the most convenient method to gather data and information regarding human resource recruitment, selection and job matching process.

#### **3.3.3 Document/Data Reviews**

Another method used to collect information is by reviewing the data and document given by the HR Manager of University Kuala Lumpur. One of the documents used to develop the job matching function is the interview rating form.

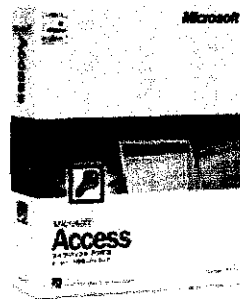
## **3.4 Tools Required**

### **3.4.1 Microsoft Visual Studio.net 2003**



This software is used for developing the system. The programming language being used is VB.net language

### **3.4.2 Microsoft Access 2003**



This software is used to store database information from the system. VB.net programming language was connected to Microsoft Access by using activeX data objects (ADO).

## **CHAPTER 4**

### **RESULTS AND DISCUSSION**

#### **4.1 Introduction**

Job matching system prototype performs as expected. There will be three parts in this chapter. First is the result of functional testing; second is the process flows of the system and finally the screen captures of the system. Each part presented will be discussed and justified.

#### **4.2 Functional Testing**

As being highlighted earlier, the system will need to go through functional testing in order to detect if there are any bugs in it. The module or components being tested were described as in table 4.2 below:

<b>Module/Component</b>	<b>Expected test result</b>	<b>Actual test result</b>
<b>Login page for user</b>	To ensure that the system will be accessed only by authorized person that has log in with correct username and password.	Successfully allow user to log in to the system if the username and password are entered correctly.
<b>View candidate's information</b>	View the candidate's information according to the selected candidate.	Screen successfully shown the candidate's information needed by the user
<b>View available position's information</b>	View the position's information according to the selected position	Successfully shown the position's information needed by the user
<b>Select to update candidate's information</b>	To ensure that the screen will be directed to the form to update (add, edit, delete, save) data and will be automatically be updated to the database and can be viewed without any problems by the users.	Successfully directed to the form to update any changes of data obtained from the database involved.
<b>Select to update available position's information</b>	To ensure that the screen will be directed to the form to update (add, edit, delete, save) data and will be automatically be updated to the database and can be viewed without any problems by the users.	Successfully directed to the form to update any changes of data obtained from the database involved.
<b>Select option to match candidate</b>	To ensure that the screen will be directed to the form to match a candidate from a	Successfully directed to the form for user to select a candidate to be match with

	list of candidates	all available positions
<b>Select option to match available position</b>	To ensure that the screen will be directed to the form to match a position from a list of available positions	Screen successfully directed to the form for user to select a position to be match with all candidates.
<b>Matching algorithm</b>	To ensure that the algorithm use successfully calculate the level of fit for each match being done.	Matching function is successfully done by calculating the 'level of fitting' for each match.
<b>Select to view result</b>	To ensure that the result from the calculation is presented correctly with the matching details.	Result of the matching function is presented successfully together with the matching details.

*Table 4.2 Functional testing*

Each of the modules listed above were functioning as expected. Overall, during the testing, the system was performing well without much redesign.

### 4.3 Process Flows

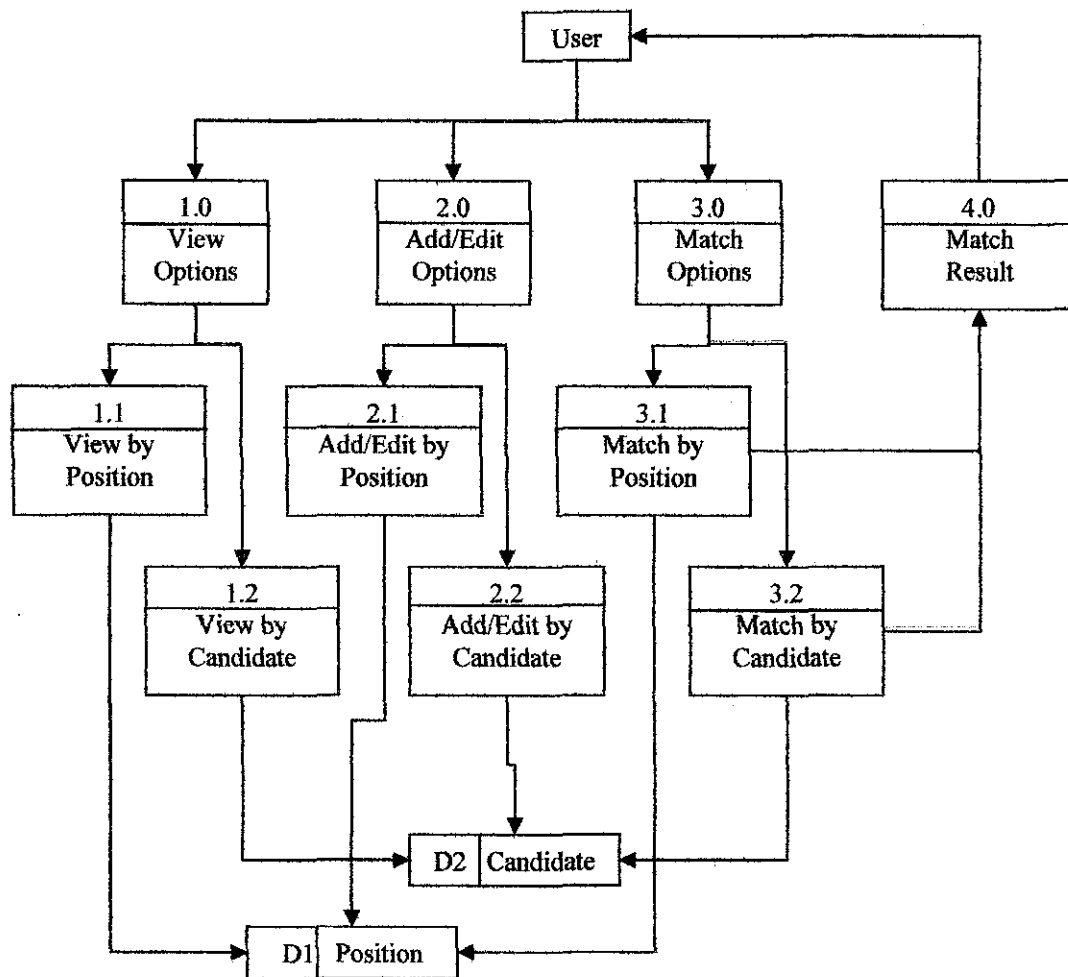


Figure 4.1 Data Flow Diagram

The data flow diagram shown in figure 4.1 shows that the user have three tasks that can be used in job matching system. The user can choose whether he/she wants to view all available positions or candidates, or if he/she wants to add/edit available positions or candidates. This is usually done by the administrator because only the administrator have the authority to add, edit and delete the candidates' and position's information. The user can also choose to match either by available positions or by candidates. All of these tasks get its details from the position and candidate table in the selection database. If the user chooses matching by position or by candidate, the matching result with be received by the user.

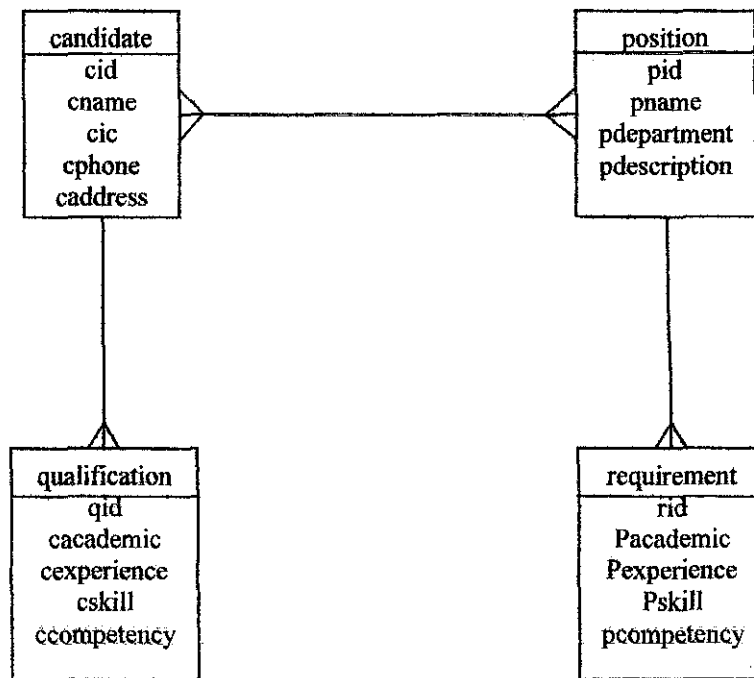


Figure 4.2 Class Diagram

Above diagram represents the class diagram for the selection database. Three assumptions were made when creating this diagram. The first assumption made was one candidate can have many qualifications and one qualification can only be possessed by one candidate.

The second assumption made was one position can have many requirements and one requirement can only represent one position. The last assumption made was one



candidate can match many positions and one position can be match with many candidates.

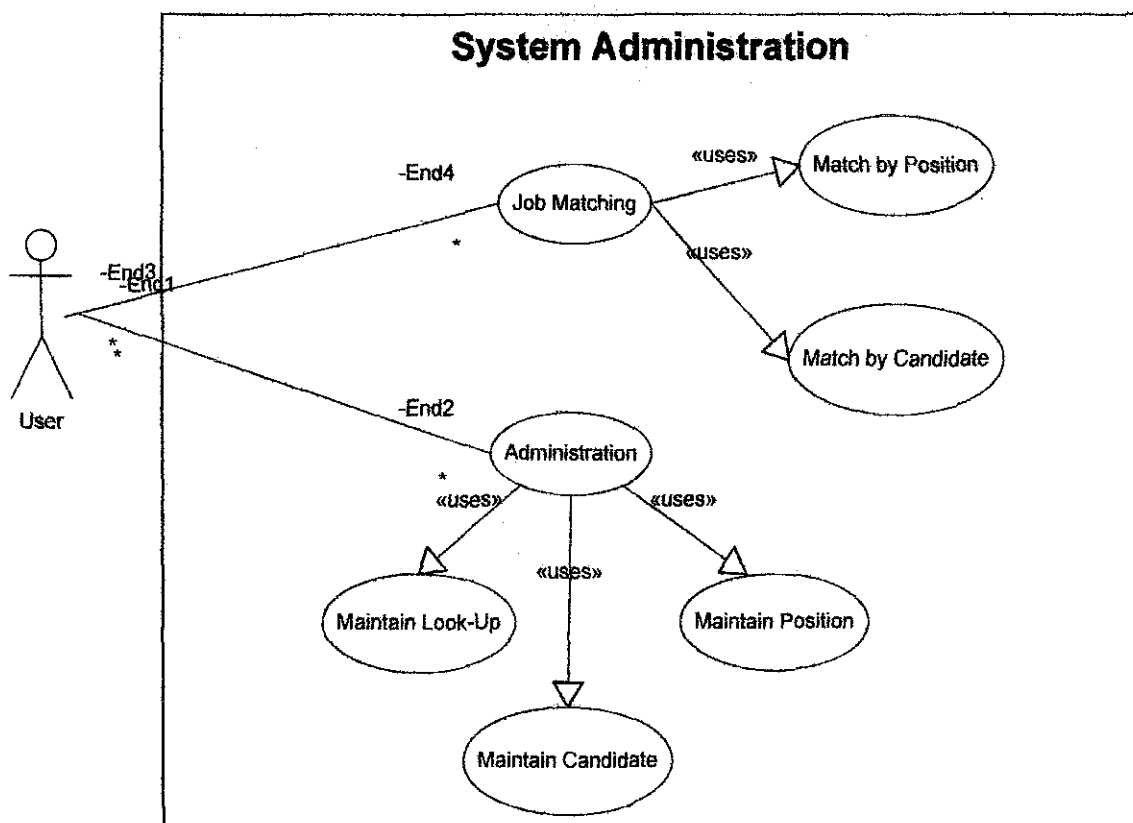


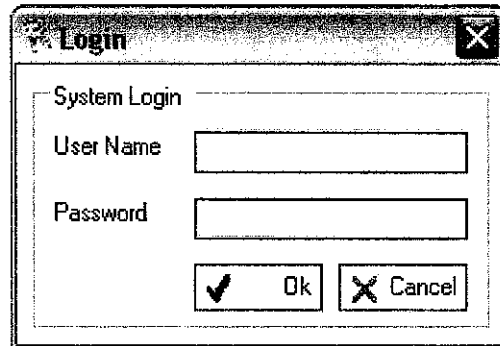
Figure 4.3 UML Use Case Diagram

The diagram above represents the use case diagram. This diagram is somewhat similar to the data flow diagram. The user can either enter the job matching section or the administration section where job matching section is to match a job with all candidates or to match a candidate with all available positions.

The administration section is where all the maintenance process was done. Here in the administration section, there are three types of maintenance. First is to maintain look up. This means that administrator is responsible to maintain the job requirement and competencies. Second is the candidate maintenance. Here, the administrator is responsible to add, edit or delete candidate's information and details as well as their qualifications. The third maintenance is to maintain the available position. Here, it is

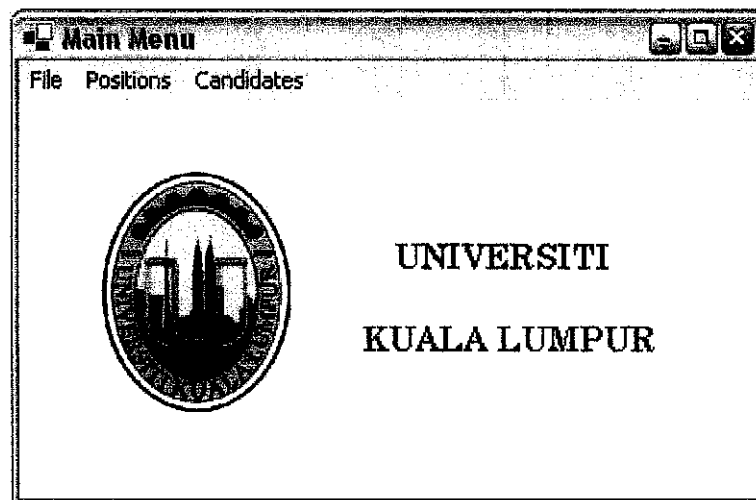
similar with maintaining the candidates; administrator is responsible in adding new vacancies, editing available positions or deleting any positions that have been filled.

#### 4.4 Screen Capture and Description



*Figure 4.4 Login Interface*

Every system must have its security. Otherwise all the information can be publicly viewed and the interview results can be tampered by unauthorized personnel. The above figure is the login page for the user to key in in order to enter the system.



*Figure 4.5 Main Menu Interface*





The figure above is the main menu for the system. It is a simple main page with main menu for the user to choose in order to complete their task. The main page should not be filled with many items or information or it will become heavy. I create a main page that is suitable to use in large and small companies.

Under File is log off and exit the application, under positions is edit/add positions available, view all available positions and match by positions, under candidates is edit/add candidates, view all candidates and match by candidates, and a report menu.

The image shows two side-by-side windows from a software application. The left window is titled "Positions Available" and contains a "Positions Database" form. It has input fields for "Name" (with the value "Customer Service Supervisor"), "Department" (with "Sales/Marketing"), "No. Of Vacancies" (with "1"), and "Job Description" (with "Direct the activities of Customer Service Dept to ensure customer"). Below these is a "Requirements" table with 10 rows and 2 columns of input fields. The right window is titled "Candidates" and contains a "Candidates Database" form. It has input fields for "Candidate ID", "Position ID", "Name" (with "Aisyah Sultina Ahmad"), "IC No" (with "830793-11-8394"), "Phone No" (with "012-9641330"), and "Address" (with "Kuala Terengganu, Terengganu"). Below these is a "Qualifications" table with 7 rows and 2 columns of input fields. Both windows have navigation buttons ("<< First", "< Previous", "Next >", "Last >>") and a set of icons (a hand, a cross, a folder, a printer, and a power button) at the bottom.

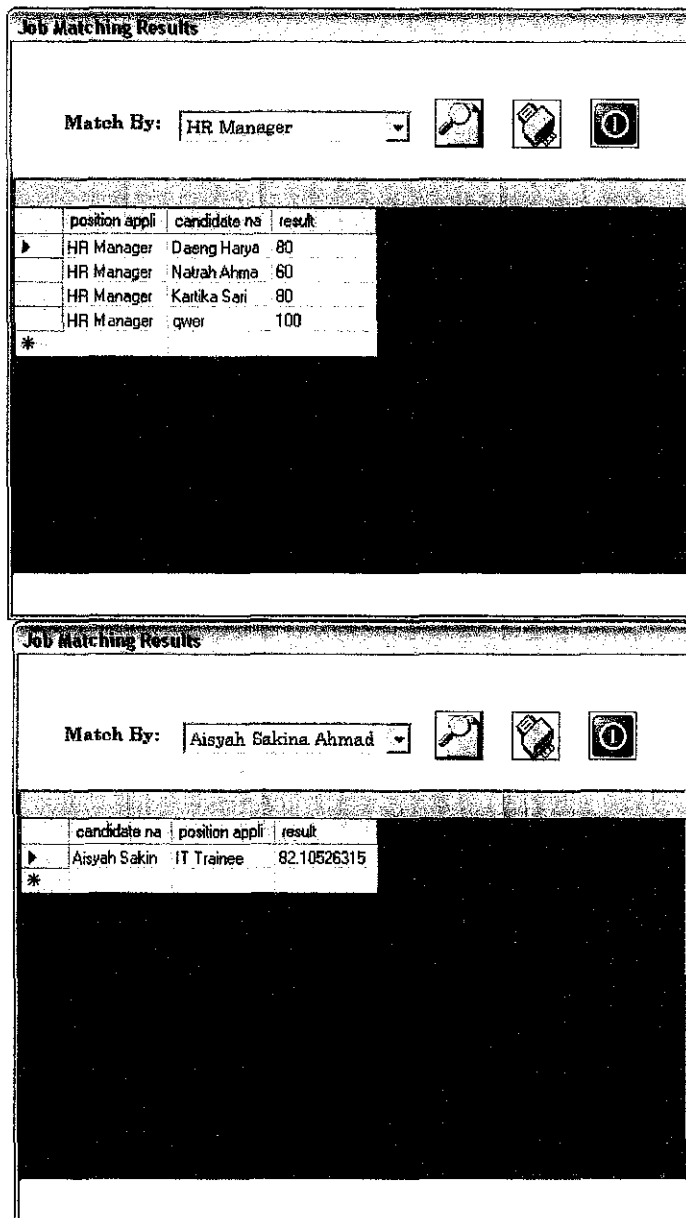
Figure 4.6 Add/Edit Form Interface

The figure above is the add/edit page. This page is for the administrator to add any new candidates or new vacancies in a position. Administrator can also edit any new information in the candidates' details or the positions details.

Positions Available	Candidates																												
<h3>Positions Database</h3>																													
Enter Search key by Name : <input type="text"/>  																													
Name : <input type="text" value="Customer Service Supervisor"/>																													
Department : <input type="text" value="Sales/Marketing"/>																													
No. Of Vacancies : <input type="text" value="3"/>																													
Job Description : <input type="text" value="Directs the activities of Customer Service Reps to ensure customer"/>																													
<table border="1" style="width: 100%;"> <thead> <tr> <th colspan="4">Requirements</th> </tr> </thead> <tbody> <tr> <td>Education :</td> <td><input type="text" value="5"/></td> <td>Character :</td> <td><input type="text" value="5"/></td> </tr> <tr> <td>Experience :</td> <td><input type="text" value="5"/></td> <td>Communication :</td> <td><input type="text" value="5"/></td> </tr> <tr> <td>Appearance :</td> <td><input type="text" value="5"/></td> <td>Motivation :</td> <td><input type="text" value="5"/></td> </tr> <tr> <td>Personality :</td> <td><input type="text" value="5"/></td> <td>Mentality :</td> <td><input type="text" value="5"/></td> </tr> <tr> <td>Leadership :</td> <td><input type="text" value="5"/></td> <td>Impression :</td> <td><input type="text" value="5"/></td> </tr> <tr> <td>Job Stability :</td> <td><input type="text" value="5"/></td> <td>Recommendation :</td> <td><input type="text" value="5"/></td> </tr> </tbody> </table>		Requirements				Education :	<input type="text" value="5"/>	Character :	<input type="text" value="5"/>	Experience :	<input type="text" value="5"/>	Communication :	<input type="text" value="5"/>	Appearance :	<input type="text" value="5"/>	Motivation :	<input type="text" value="5"/>	Personality :	<input type="text" value="5"/>	Mentality :	<input type="text" value="5"/>	Leadership :	<input type="text" value="5"/>	Impression :	<input type="text" value="5"/>	Job Stability :	<input type="text" value="5"/>	Recommendation :	<input type="text" value="5"/>
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<h3>Candidates Database</h3>																													
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Name : <input type="text" value="Arwan Sakina Zaman"/>																													
IC No : <input type="text" value="830713-11-5354"/>																													
Phone No : <input type="text" value="012-9641330"/>																													
Address : <input type="text" value="Kuala Terengganu, Terengganu"/>																													
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<input type="button" value=" &lt;&lt; First"/> <input type="button" value=" &lt; Previous"/> <input type="button" value=" Next &gt;"/> <input type="button" value=" Last &gt;&gt;"/>																													

*Figure 4.7 View Positions and Candidates Interface*

The figure above is the view all positions and candidates page. This page is similar with the add/edit page. In order to use the same form flag syntax is being used. Flag 1 for add/edit and flag 2 for viewing. And for flag 2 (viewing), I made false for the visibility of the buttons that is in the add/edit page.



*Figure 4.8 job matching interface*

The above figure is the job matching form where the user will select any positions or any candidate to be matched. As you can see the interface is the same because I used the flag syntax again in this form.

## **CHAPTER 5**

### **CONCLUSION**

#### **5.1 Conclusions**

Recruitment Managers in most companies regardless of size face the same problem when it comes to recruiting an employee for an available position. Selecting the best employee that fits the job requirement is important business decision.

The system should minimize the problems faced by the human resource department. Not only will it save time and cost, it will also give the best result where the person in charge for recruiting could choose the best fit employee from a list of highly rank potential employees.

#### **5.2 Suggested Future Work for Expansion and Continuation**

There are a few suggestions and recommendations that can be done to this project and the system, so that it can be expanded in the future to produce more reliable and practical.

It would be better if the system user type is divided into two categories. One is a normal user and another is the administrator. Normal user can only view the candidates and the available positions and also do the matching functions whereas the administrator can have access to all the functions in the system, the administrator can also update the information of candidates and positions.

To make things easier, it would help a lot if the user can only view certain job matching result. For example, the user would only want to view the matching result with percentage 85% and above. With that the ones with lower percentage result will not be viewed. This can make the selection decision a lot better.

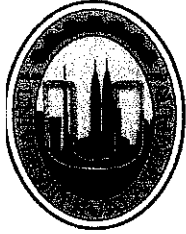
Other than that, for management purposes, a crystal report should be design in order to show how many candidates and positions are being stored in the database. All of these will help the administrator to forecast for the next month selection making.

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## APPENDICES



## Interview Rating Form

Candidate's Name :

Position

Applied For :

Interviewer's Name :

Designation :

### PLEASE TICK THE APPROPRIATE BOXES

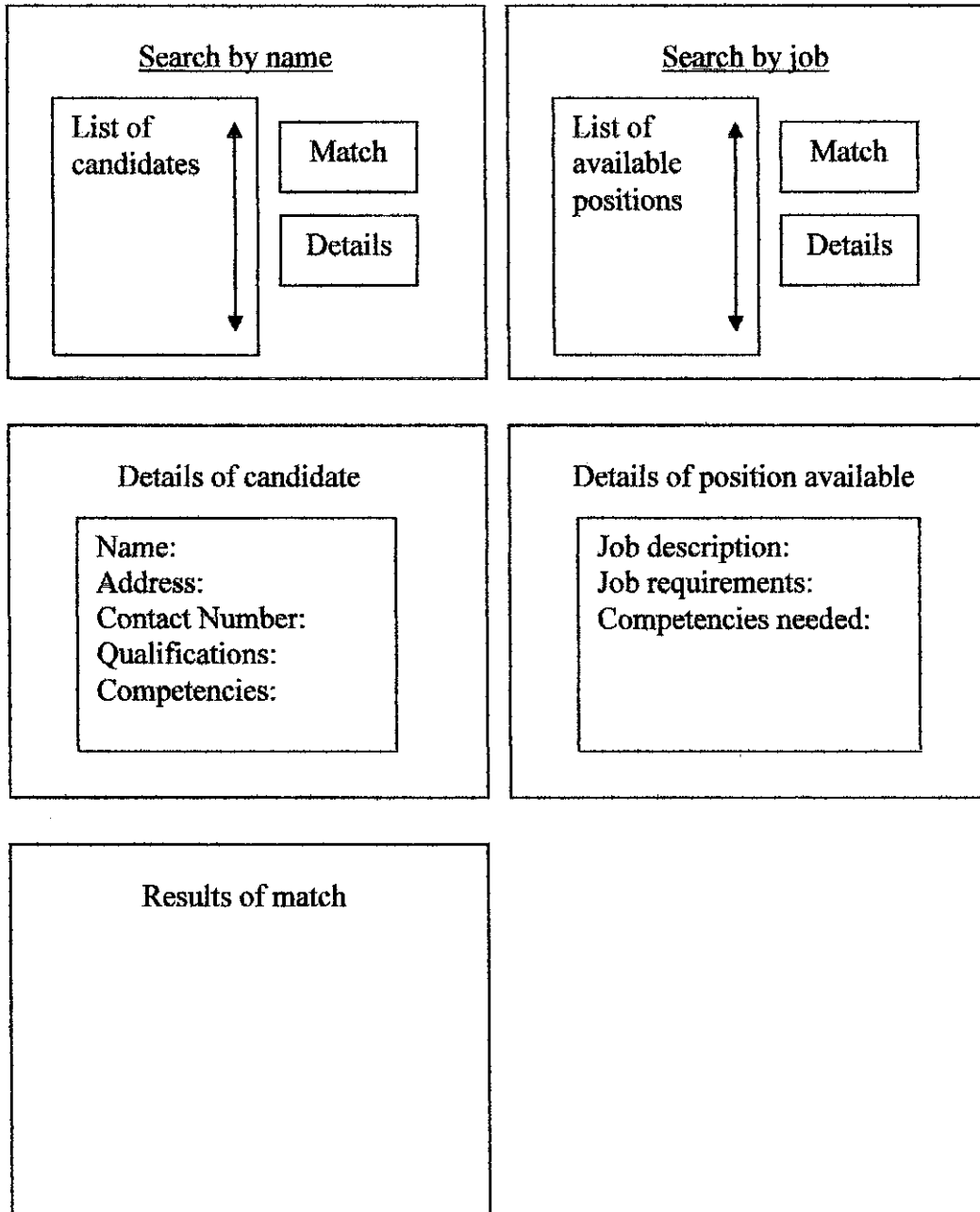
- |  | 1   | 2  | 3  | 4   | 5  |
|--|---|--|--|---|--|
| 1. EDUCATION & TRAINING<br>(Sufficient education, relevant appropriate for the job)  | <input type="checkbox"/> Unqualified<br>(Sufficient grades of subjects, qualifications) | <input type="checkbox"/> Insufficient or Inappropriate | <input type="checkbox"/> Sufficiently Qualified with Normal Grades | <input type="checkbox"/> Sufficiently Qualified with Outstanding Grades | <input type="checkbox"/> Qualified for Higher Jobs in Future |
| 2. WORK EXPERIENCE<br>(Technical/Supervisor/Administrative experience)   | <input type="checkbox"/> None   | <input type="checkbox"/> Non- Relevant Experience      | <input type="checkbox"/> Some Relevant Experience                  | <input type="checkbox"/> Extensive Relevant Experience                  | <input type="checkbox"/> Experience Perfectly Fits the Job   |
| 3. APPEARANCE<br>(Neat, pleasant, smart, sloppy, sickly, robust)   | <input type="checkbox"/> Poor   | <input type="checkbox"/> Fair                          | <input type="checkbox"/> Average                                   | <input type="checkbox"/> Above Average                                  | <input type="checkbox"/> Outstanding                         |
| 4. PERSONALITY<br>(Cheerful, sociable, likeable, assertive, sense of humour, confident, outgoing, polite, shy, unresponsive) | <input type="checkbox"/> Poor   | <input type="checkbox"/> Fair                          | <input type="checkbox"/> Average                                   | <input type="checkbox"/> Above Average                                  | <input type="checkbox"/> Excellent                           |
| 5. CHARACTER/TEMPERAMENT<br>(Sincere, trustworthy, responsible, mature, passive, weak, indecisive)                           | <input type="checkbox"/> Not Impressive   | <input type="checkbox"/> Quite Impressive              | <input type="checkbox"/> Sufficiently Impressive                   | <input type="checkbox"/> Very Impressive                                | <input type="checkbox"/> Exceptionally Impressive            |
| 6. ABILITY TO COMMUNICATE<br>(Coherent, persuasive, able to listen, fluent, long-winded)                                     | <input type="checkbox"/> Unable to Express  | <input type="checkbox"/> Some Difficulty               | <input type="checkbox"/> Acceptable                                | <input type="checkbox"/> Effective                                      | <input type="checkbox"/> Very Effective                      |
| 7. MOTIVATION<br>(Reason for application : enthusiastic, conscientious, indifferent)   | <input type="checkbox"/> Disinterested  | <input type="checkbox"/> Needs to be Pushed            | <input type="checkbox"/> Sufficiently Motivated                    | <input type="checkbox"/> Self-Starter                                   | <input type="checkbox"/> Highly Motivated                    |
| 8. MENTAL ALERTNESS<br>(Intelligent, reasoning, judgement, naive, slow)  | <input type="checkbox"/> Poor   | <input type="checkbox"/> Fair                          | <input type="checkbox"/> Alert                                     | <input type="checkbox"/> Very Alert                                     | <input type="checkbox"/> Exceptionally Alert                 |

9. LEADERSHIP QUALITIES (Ability to motivate, human relations, leadership traits) Camp Follower Requires Training for Present Role Sufficient for Present Role Has Potential for Bigger Role Natural Leader
10. JOB STABILITY (Steady record, job-hopper) Not Stable Quite Stable Stable, with Lateral Moves Stable, with Career Advancement Very Stable Record
11. OVERALL IMPRESSION Poor Fair Average Good Outstanding
12. ADDITIONAL COMMENTS : \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
13. INTERVIEWER'S RECOMMENDATION : NOT RECOMMENDED / RECOMMENDED / HIGHLY RECOMMENDED / RESERVED

\_\_\_\_\_  
 INTERVIEW DATE

\_\_\_\_\_  
 INTERVIEWER'S SIGNATURE

# Storyboard



## Summary of Recruitment and Selection Process and Responsibilities

Retrieved from <http://admin.iop.kcl.ac.uk/personnel/downloads/>

<b>Process</b>	<b>Responsibility</b>
HR and R&G/Management Accounts are advised that a vacancy has arisen Draft job and person specification sent to HR	Departmental Manager/Grant Holder
Recruitment documentation is forwarded to R&G/Management Accounts +ECF if necessary	Departmental Manager/Grant Holder
Financial approval is sought to advertise the vacancy	Departmental Manager/Grant Holder
Financial approval is given	R&G /Management Accountant
Advert and further details are finalized Agree recruitment plan (panels, dates)	Grant holder/Recruiting Manager HR (for advert) Grant Holder/Recruiting manager, with HR
Internal advert is placed on KCL/IoP website and internal bulletin	HR
The advert closes and applications are collated, equal opportunity info detached and applications passed to the Department for short listing.	HR
If no applications advert is advertised externally (reflecting recruitment plan)	HR following instruction by Grant Holder/Departmental manager
The external advert closes and applications are collated, equal opportunity info detached and applications passed to the Department for short listing	HR
A short list is drawn up and candidates are invited to interview	Grant Holder/Recruiting Manager
The interview takes place	Head of Department and/or Grant Holder and/or Supervisor
Post interview references are sought for the successful candidate	Grant Holder/Recruiting Manager (or HR on request)
HR are informed of the successful candidate, rejection letters are sent and all CV's, forms and interview notes are sent back to for storage	Grant Holder/Recruiting Manager
A salary assessment is made, taking account of financial approval	HR

An offer letter is sent to the successful candidate (offer pack to include medical questionnaire and disclosure application form where applicable)	HR
Once medical clearance (and a satisfactory disclosure check) has been received a contract of employment is written	HR
Handover preparation – resources : finalise arrangements for phone, IT, room	Departmental Manager/Grant Holder
Handover preparation – the job: prepare induction plan	Departmental Manager/Grant Holder
An application for an Honorary Contract at the relevant NHS Trust should be made for <b>all</b> Clinical staff.	Supervisor to HR (for Slam research) Supervisor to NHS trust (all others)
Initial induction and the completion of employee forms, such as bank details etc.	HR
Employees details are entered onto HRMS	HR

## APPENDIX J

### Recruitment and Selection Checklist

Retrieve from [http://www.ucl.ac.uk/hr/docs/download\\_forms/](http://www.ucl.ac.uk/hr/docs/download_forms/)

#### Stage 1 – Preparation and Advertising

- Review the necessity for the job
- Review and revise the details of the role (Job Description / Person Specification)
- Seek financial approval to fill the vacancy
- Prepare the advert
- View the redeployment website and consider suitable redeployees
- Advertise the post
- Prepare the pack of further particulars
- Plan the process for application packs being requested and received
- Select the members of the Interview Panel
- Plan the interview arrangements – devise interview questions, selection tests, presentation details etc; set date(s); book room
- Prepare the shortlisting form

## Stage 2 – Shortlisting and Interviews

- Start the EO monitoring process
- Shortlist
- Write to successful / unsuccessful candidates
- Conduct the interviews / selection tests / presentations etc

## Stage 3 - Selection

- Make the selection decision
- Complete the EO monitoring process
- Verbally make a conditional offer to the preferred candidate
- Complete the appointment paperwork and send it to HR with the completed EO monitoring form and other required documentation (e.g. financial approval, advert, job description, and application form/CV and reference letters if available)
- Write to unsuccessful candidates
- Check qualification certificates / permission to work (birth certificate, passport or P45)