IMPLEMENTATION OF SKILL TEST
(WEB BASED SKILL ASSESSMENT SYSTEM)
USING JAVA 2 PLATFORM FOR IKRAM SOLUTIONS

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IMPLEMENTATION OF SKILL TEST (WEB BASED SKILL ASSESSMENT SYSTEM) USING JAVA 2 PLATFORM FOR IKRAM SOLUTIONS

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ABSTRACT

Skill assessment is essential for organizations to profile candidate's skills before hiring. There is a need of pre assessment of candidate skills before job interview. Such pre assessment rates candidate's skill level and makes human resource managers to select the most suitable candidate for their organizations. Such pre assessment should be simple, easy to manage, easy to access and economical. Online pre assessment is the effective way of screening candidates for organization. Skill Test is a web based application for online screening of job candidate. Skill Test is based on the latest platform and technologies. Java was used to implement the Skill Test. Java has become the language of choice for implementing Internet-based applications and software for devices that communicate over a net work. The request-response model of communication was used to design the application. The servlet demonstrates communication between clients and servers. A client sends request to the server. The servlet container receives the request and directs it to be processed by the appropriate servlet. The servlet interacts with a database or other server side components such as other servlets, or JSPs. The servlet returns its results to the client normally in the form of HTML document to display in a browser. Java Server Pages were used to simplify the delivery of dynamic Web content. MySQL database was used to maintain application data. Skill Test gives complete test-customizing features with reliable performance using only a browser. It provides one such solution to conduct pre assessment tests online to get the highly qualified candidates quickly and easily and it saves time and money of the organization.

ABSTRAK

Penilaian skil sebelum mengupah seseorang calon yang sesuai amatlah penting untuk sebuah organisasi, tetapi kadar pengangguran yang tinggi telah merumitkan proses tersebut. Pra penilaian begini dapat digunakan untuk menilai kemahiran calon dan memudahkan pengurus organisasi tersebut dalam proses pemilihan calon. Penilaian ini haruslah mudah, senang dijaga, aksesnya mudah dan kosnya juga perlu berpatutan. Oleh demikian, penilaian yang dilakukan dalam laman web merupakan salah satu cara yang paling berkesan untuk menilai calon pekerja bagi sebuah organisasi. Skill Test merupakan salah satu aplikasi penilaian yang mengandungi unsur-unsur di atas yang dibina dengan mengguna teknologi yang terkini. Java yang amat popular untuk pembinaan aplikasi di laman web untuk berhubung di sebuah rangkaian telah digunakan untuk membina aplikasi pernilaian ini. Untuk aplikasi ini, model komunikasi yang digunakan ialah model mohon-balas. Servlet akan bertanggungjawab dalam perhubungan pelanggan dan pelayan web. Pelanggan web akan memohon permintaannya ke pelayan web. Servlet yang utama akan menerima permintaan tersebut dan menghantarnya ke servlet yang sesuai untuk diproses. Proses yang dilakukan akan menglibatkan pengkalan data (database) dan juga servlet-servlet yang lain ataupun JSPs. Hasil proses itu kemudian akan dipulangkan kepada pelanggan web dalam bentuk HTML yang akan dipaparkan dalam pelayar web (web browser). Java Server Pages digunakan dalam aplikasi ini untuk memudahkan paparan kandungan web yang dinamik. MySQL pula digunakan untuk mengurus data-data yang diperlu. Dengan teknologi-teknologi ini, Skill Test berupaya untuk menghasilkan ujian penilaian yang berkualiti mengikut keperluan sesebuah organisasi itu dengan menerusi pelayar web sahaja. Ia membolehkan organisasi tersebut untuk menjalankan penilaian yang sesuai untuk memilih calon pekerja dengan cepat dan mudah.

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LIST OF SYMBOLS

Db	-	Database class
DoD	-	Department of Defense
IEEE	-	Institute of Electrical and Electronics Engineer
Iks	-	Ikram Solutions Sdn. Bhd
ISO	-	International Standard Organization
Jb	-	Java Bean class
JSP	-	Java Server Pages
matm	-	Maintain Test Module
Mg	-	Manager Class
MIL_STD	-	Military Standard
petm	-	Perform Test Module
prtm	-	Prepare Test Module
SEI	-	Software Engineering Institute
Sr	-	Servlet Class
ST	-	Skill Test

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CHAPTER 1

INTRODUCTION

This chapter consists of company profile and project overview.

1.1 Company Profile

1.1.1 Legal form of company

Formed in 2001, Ikram Solutions Sdn. Bhd. is a limited partnership company. The company was founded by two partners: Mr. Abdul Hatta (a Malaysian citizen) and Mr. Tanveer Ikram (an Indian citizen).

1.1.2 Authorized and paid up capital

The paid up capital of the company is RM 250K and the authorize capital is RM 500K.

1.1.3 Business operations

Formed in 2001, Ikram Solutions places highly qualified consultants in IT departments in order to meet the ever-changing demands of today's technology environment. The full-time recruiters expertly match its elite pool of consultants to meet its clients' specific needs. Identifying the unique fit between client and consultant optimizes the productivity and growth of both the individual and the organization.

Ikram Solutions offers temporary worker, temp-to-perm, and direct placement throughout the Malaysia, and has successfully met the needs of the full spectrum of business, from small businesses to Fortune 100 companies. The company has wider connection in almost all the state in Malaysia.

1.1.3.1 IT Consulting and Services

Ikram Solutions Sdn. Bhd. has one goal, to provide quality staff at competitive rate to provide a superior return on investment (ROI). The key to its success is the academic and technical excellence of the staff. This company chooses its staff with closely monitoring of their work or recommendations from reliable source. Ikram Solution’ staffs are on high demand because of their superior technical skills. This company has its main recruiting market in India and it only goes for talented and experience workers.

Ikram Solutions has prospered by building long-term relationships with customers who are leaders and innovators in their industries. It has developed these relationships by providing an excellent, cost-effective service that matched the customers’ needs and expectations.

Followings are its areas of expertise:

- Application Architects
- Application Managers
- Database Administrators: Oracle, SAP& SQL Server
- Database
- Developers/Architects: Oracle, SAP & SQL Server
- Programmer/Systems Analysts
- Software Developers/Engineer: ASP, Cold Fusion, Java, J2EE, .net, Oracle, SQL, Visual Basic, Visual C++ & XML
- Database Managers
- Data Warehouse: Architect/Design, ETL Engineer & OLAP Engineer
- Quality Assurance Specialists
- Web/Internet: Architect, Administrator, Developer & Director
- ERP Software Integration and Implementation: JD Edwards, Oracle, PeopleSoft, SAP & Siebel

1.1.4 Organization Structure

1.1.4.1 Designation of Top Management

Ikram Solutions top management consists of following people:

- President/ CEO : Mr. Abdul Hatta
- Director of Operations : Mr. Tanveer Ikram
- Vice President : Mr. Rahman Ali Khan
- Operations Manager : Mr. Zamri Abdullah
- IT Manager : Mr. Meeran

- HR and Admin Manager : Mr. Tanveer Ikram

1.1.5 Project Involved

The following are the projects involved in:

- MIDA Project (MIIS: MIDA Integrated Information System)
- Tabung Haji
- ROC (SSM)
- **Etc**

1.2 Industrial Attachment Project

1.2.1 Project Objectives

The objectives of the project are:

- To decrease the time and cost involved in the recruitment process.
- To provide online skill test services for the HR department.
- To assist the HR Department in screening the right candidates through skill assessment.
- Providing customizable skill assessment services for different organizations.

1.2.2 Project Scope

The project scope encompasses:

- Analyzing the requirements for Skill Test system
- To develop software design for Skill Test
- To produce the Software Requirements Specifications (SRS) document and Software Design Document (SDD)
- Implementing Skill Test using Java 2 Platform (J2EE)

1.2.3 Project Planning

See chapter 3.

1.2.4 Deliverables

The following documents are produced during the industrial attachment:

- Analysis document
- Software Requirements Specification (SRS)
- Software Design Document (SDD)

1.3 System Overview

Conventionally, in searching for suitable candidates for any job vacancies within an organization, the employer only depends on the document submitted by the

candidates which includes the resume, the cover letter, certificates and other supporting documents. These documents will be used as a benchmark in assessing the candidates. However, such approach does not guarantee that the candidate is able to practically deliver all the skills mentioned in his resume. Based on this issue, Skill Test is developed to provide an online skill assessment service where candidates are required to undergo skill test such as writing a Java program or any other skill test related to the position. Skill Test is able to help HR Manager to filter out candidates who are not actually able to perform the required skills from attending the final interview process. Thus Skill Test can decrease the cost and the time required in the recruitment process.

1.3.1 Features of the System

The main features of the system are:

- Companies can register for test service
- Individual can register for test service
- HR can make test according to need for the candidate
- One or many tests can be made
- System will conduct the test
- System will monitor the test
- System will generate result of the test
- System can make report for HR
- System will keep record of candidates

ST is intended to provide a service to help HR mangers to find most suitable personnel for the organization for final interview. Unfortunately this service has not yet been used in Malaysia so far. Skill Test service will be covering all professional fields. It will be giving industries highly efficient and knowledgeable work force.

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