

Employees' Performance Evaluation

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Abstract:

Employee Performance Evaluation is considered to be the most important tool for any organization, the information that it offers is widely used for decision making, such as promotion. Linking performance metrics also gather information and processes that provide a basis for assessing the effectiveness of staff decision-making, such as training compensation. The assessment studies the impact on the individual performance assessment as well as on the organization. Thus, this study presents the development of a computerized employee evaluation system for Saudi Airline company. In this study, the users of the system are comprised of four categories, which are human resource (HR) admin, call center (CC) head, supervisor and employee. For this work, SQL server, visual studio, photoshop CS and Snagit were used for the development of the employee performance appraisal system. Furthermore, cascading style sheet (CSS) were used for designing the controls in the appraisal system by applying the classes of the cascading style. The test result of the system showed that for each use case, the performance evaluation system worked according to the expected behavior and all the final results were achieved accordingly.

Keywords: Employee, performance, evaluation, mobile application, company, Saudi Arabia

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1. INTRODUCTION

Employees are known to be the fundamental driving workforce in any work industry such as healthcare, engineering, business, automation, manufacturing, education and others [1]. Employees are one of the important resources for companies to support their organization objective by utilizing their aptitudes, work experience and knowledge to conduct and complete their task. Their individual

capacity and commitment add to the overall outcome of the business in whole [2].

The manual employee assessment frameworks are exceptionally exposed to human inclinations since the administrators are given incredible scope to assess the performance of representatives [3]. In any organization, the board of employee performance assessment should consolidate with the vital objective of the enterprise, organizational

advancement, consumer loyalty and development of representatives while conducting the employee assessment [4]. Inclined to misappropriation, the manual employee assessment process depends solely on the staff's recent work contribution and outcome. By ignoring the various autonomous measures for offering examination to a representative, it can further create a sense of demotivation among the best and predominant performing workers in the organization [5].

This kind of assessment of the plans may lead to negative results, which may further affect the company's presentation standards [6]. In general, a worker's psychological contract must incorporate the following seven requirements, which are work place environment, consistency between work and career direction, safety and job security, compensation, appreciation, possibilities of training and advancement, and continuous career growth [7]. The need for structured, automated and persistent representative assessment criteria is of great importance to each industry [8]. This will enable organization to execute proper employee evaluation procedures that is error free. This will be beneficial for both employee and the organization as it will a point of reference for any job related activities such as increment, bonuses, and work promotions [8].

Several previous works have been reported with regards to employee performance evaluation. Sharma et al.[9] analyzed the effectiveness of employee performance evaluation system, and found that with the implementation performance evaluation system, the outcome of the performance assessment were more accurate. Prasana and Raj [10] presented a review on performance evaluation system and found that automated evaluation system are gaining popularity among the organization due to its robust assessment structure and stated that in due course, most of the industry will adopt to these types of systems. Iqbal et al. [11] examined the efficiency of employee performance appraisal tool and found that organization were able to evaluate

the performance of their employee in a more fair manner. Oyewobi et al.[12] recommended an integrated assessment system to assess the performance of employees in the construction company and found that employees were more satisfied with the assessment structure as it comprised all the performance-related details of employees. The usage of integrated system has provided the staff with evidence to reflect their assessment given by the organization. Haghighi et al.[13] examined the employee performance in supply chain network using integrated performance evaluation system. The findings showed that the system was able to identify indicators that influence and contribute to the performance of the employee.

For the airline organization in Saudi Arabia, self-assessment of employees is a constructive process that recognizes the performance of employees. Most airline companies have a formal employee assessment system on paper, in which employee performance is rated on a regular basis, usually once or twice a year. At present, the airline organization in Saudi Arabia can benefit greatly from a good employee assessment system. It helps direct employee behavior towards organizational objectives by letting employees know what is expected of them, and provides information for decision-making on employment, such as pay increases, promotions and discharges. Therefore, this work was done to develop a computerized employee evaluation system for Saudi Airline Company.

2. SYSTEM ANALYSIS

2.1 User Characteristics and System Environment

For the Saudi Airline company, the users of the system are comprised of four categories, which are human resource (HR) admin, call center (CC) head, supervisor and employee. Figure 1 shows the user characteristics and system environment. Based on Figure 1, the HR admin has few sets of

responsibilities, which includes viewing employee evaluation status, delegate the employee appraisal, define the department and modify information related to the department, and can hire new employees in the system. For the CC head, the responsibilities include viewing and approving any pending task for appraisal. In addition, the supervisor can raise the appraisal once the appraisal period is defined by HR admin. Furthermore, the supervisor can view previous history of appraisal. Likewise, for the employee, they can raise the appraisal once the appraisal period is defined by HR admin. Moreover, for the employee, the supervisor has to fill one part of appraisal forms for self-evaluation.

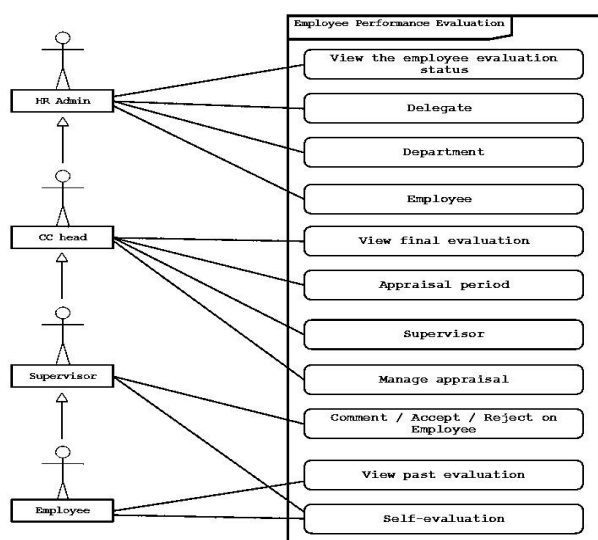


Figure 1. User characteristic and system environment

2.2 Functional and Non Functional Requirement

The functional requirement for the employee evaluation system is shown in Table 1.

Table 1. Functional requirement

Process	Requirement
Self evaluation	1. The employee clicks the evaluation tab on his page. 2. The system shows the employee the 1st part of the evaluation. 3. The Employee chooses his answers from radio buttons rating system (1-5).
Submit the	This use case uses the submit button. This

evaluation	the system to calculate the answers the Employee's chose.
View past appraisal	The system presents a table of the employee past appraisal with the final comments and the final results.
View the employee evaluation.	1. The supervisor selects to view the employee's evaluation results and status. 2. The supervisor checks the date of submission.
Comment/ Accept/ Reject and Comment	1. The Supervisor checks the employee's evaluation. 2. The supervisor decides whether to accept or reject the evaluations result and add comments.
Delegate	1. The HR Admin selects to view the employee's evaluation. 2. The HR Admin allows choosing the employee which belongs to him to determine the workflow. 3. The system allows the 2nd appraiser to confirm the employee evaluation.
Initiate Evaluation	1. The CC Head click the Initiate tab on his page 2. The CC Head chooses the start date and set the deadline date
View final evaluation	The CC Head click the view evaluation status.
Approve evaluation	1. The CC Head click the approve tab on his page. 2. The CC head can add final comments for future promotions.

The non-functional requirement for the employee evaluation system is shown in Table 2.

Table 2. Non-functional requirement

Requirements	Description
System requirements	SQL, Visual studio
Performance requirements	High speed and memory space 2 GB RAM.
Environmental requirements	Need to connect to Tamkeen Corp Network
Security requirements	Need the PRN number and password to authenticate the person
Reliability requirement	The system should be reliable and dependable at all times.
Maintainability requirement	The system should be easy to maintain.

2.3 Data Flow Diagram

Figure 2 shows the data flow diagram. Based on Figure 2, the assessment system requires the user to log in to the system by his current credential, then the system will recognize the user type, either the user is a normal user to be considered as an employee, or the HR-User to be considered as the system administrator, or the supervisor to be considered as the employee supervisor. In the event that the user is an employee, the system will automatically forward him / her to the assessment form in order to submit the assessment. In the event that the user is a supervisor, the supervisor must press the evaluation tab to submit the assessment. In the event that the user is a HR-User, the HR-User must press the evaluation tab to submit the assessment.

Once a user submits an assessment, they will automatically assign a process number called the Task ID that will be stored in the system with an accumulated result. The task will be redirected to the next level by the supervisor, and the supervisor must be the current supervisor of the employee.

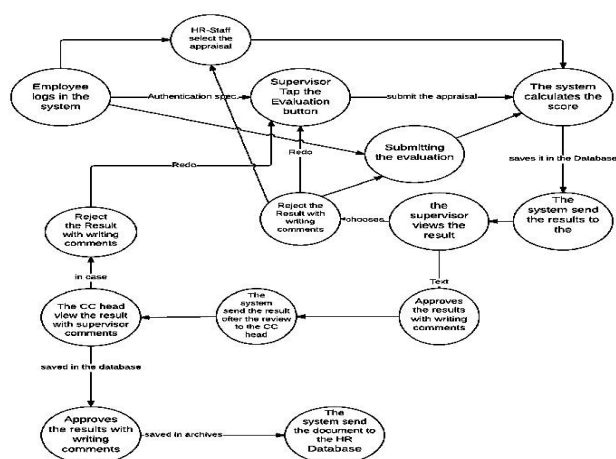


Figure 2. Data Flow Diagram

The supervisor must log in to the system by his current credential, the system will automatically redirect him to the approval page, and the supervisor will see all employees under his supervision, and then must click on each employee to either approve the process or reject it. If the

supervisor approves the process, he or she will forward the process to the department head of the current employee for final approval and update the supervisory information in the system, otherwise the employee will have to submit the process again and the employee could be any.

CChead must log in to the system with its current credential, the system will automatically redirect it to the approval page, and the CChead will view all employees within its department. CChead must then click on each employee to either approve the process or reject it, if the CChead approves the process it will consider as final approval, otherwise the employee will have to submit the process again, and the employee could be any.

3. IMPLEMENTATION AND TESTING

For the implementation of the employee evaluation system for Saudi Airline company, SQL server, visual studio, photoshop CS and Snagit were used. In this work, separate master page for each user type was designed. For each user, there is variation in terms layout for each of the user, which are employee, supervisor, CC head and HR-department. Furthermore, cascading style sheet (CSS) were used for designing the controls by applying the classes of the cascading style. Likewise, the connection string in each page was assigned. The connection string in the web configuration file was assigned with a unique name and the call the name on all pages. This was done just in case if it requires to change the connection string in the configuration file and it will reflect in all pages. Figure 3 shows the login page of the appraisal system. The login screen is the main screen for accessing the system, so each user must log in with his or her access credential. The system automatically redirects the user to his / her role, either the user has incorrect credentials or the user is inactive on the system that does not allow access.



Figure 3. Login page

In this appraisal system, there are four user role. The details of the user role are discussed as follow. First it is all the staff, who are under the Human Resource Department, they are considered as admin of the system. Second user is supervisor, followed by department head and finally, normal user. Figure 4 shows the employee information screen. This screen has little staff profile functionality, just to update / insert employees in the system. Any user who is enrolled in the Human Resources Department must select a field if they do not, the system will then send an error message with the highlighted field. The system will not allow duplicate username in the system, it is for the security purpose. The user has filled in a certain field to add the records, and when all the required fields are filled in and click the save button, the message will show that the record has been successfully added. Users can update the employee's information by clicking the Select button, then the information will appear in the associated field, then click the Save button, and update the employee's information.

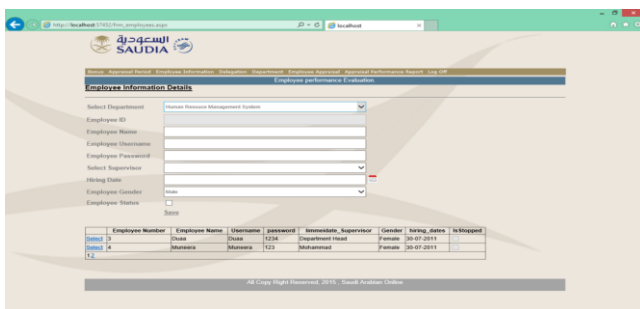


Figure 4. Employee information screen

Figure 5 shows the delegation screen. Any user who is enrolled in the Human Resources Department may delegate the approval task to any

employee within the department on behalf of the current supervisor. To delegate a task user, enter the employee ID of the supervisor in order to delegate a task, then his name will appear and the names of all employees who are enrolled in the same department will be displayed, and then click the save button. Users can only add / delete the truncation on this screen. At a time, only one supervisor can be delegated. Once another supervisor is entered and click the Save button, the information will be stored in the system and the message and delegate information will be displayed.

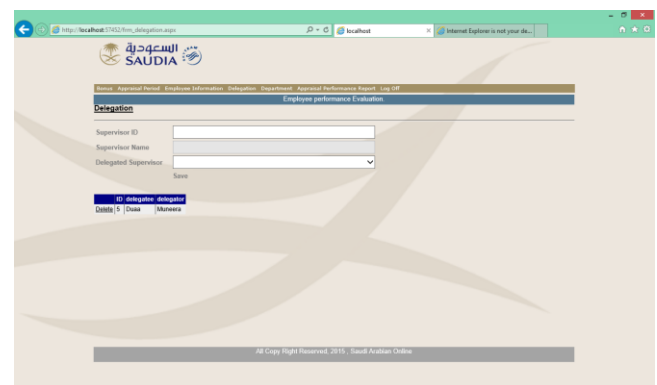


Figure 5. Delegation page

Figure 6 shows the department page. Any user who is enrolled in the Human Resources Department may only save information from the new department and also update the department head of any department if the department head status changes to in-active. The completed data will be shown in the list and the confirmation message will be displayed, the user can select the data and then update the data.

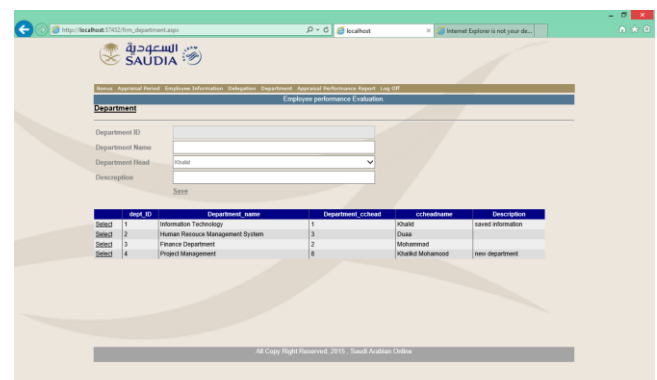


Figure 6. Department page

Figure 7 shows the appraisal performance report page. Any user who is enrolled in the Human Resources Department may view the history of the assessment with the status of each assessment. This screen is very important because the user can follow up with approval, as well as view the total score of each assessment to the selected staff.

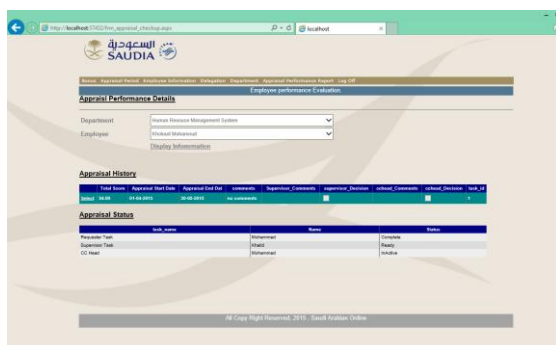


Figure 7. Appraisal performance report page

Figure 8 shows the department head approval page. In this page, the department head and HR will be in-charge of approving the performance appraisals.

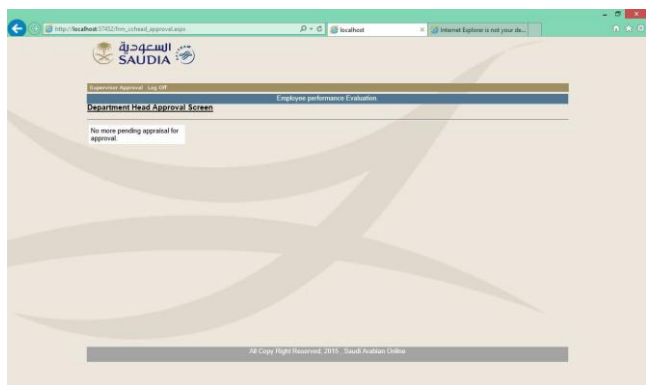


Figure 8. Department head approval page

Table 3 shows the test result for the employee evaluation system. Based on Table 3, the employee evaluation system was examined under various test scenarios for each use case. The outcome of the test has shown that the performance evaluation system has worked according to the expected behavior and all of the results were attained accordingly. Therefore, the employee performance evaluation system has exhibited the good test output. The comprehensive details of the test are shown in Table 3.

Table 3. Employee evaluation system test results.

Use Case	Scenario	Expected System Behavior	Actual System Behavior	Results
Log in	Employee =employee Password =Password	Authorized to access the system according to the privileges	Authorized to access the system according to the privileges	Success
Log In	Employee =notemployee Password = Password Employee =employee The password =password is not correct	Not Authorized to access the system according to the privileges	Not Authorized to access the system according to the privileges	Success
Approval Page	Employee = supervisor/ cthead	The employee is authorized to access the approval page in case the employee is supervisor of CC head.	The employee is authorized to access the approval page in case the employee is supervisor of CC head.	Success
Approval Page	Employee = normal employee	The employee is not authorized to access the approval page.	The employee is not authorized to access the approval page.	Success
Department	Employee = enrolled in the HR Department	The employee is authorized to add	The employee is authorized to add	Success

		/modify the department information.	/modify the department information.	
Department	Employee = not in the HR Department	The employee is not authorized to add / modify the department information.	The employee is not authorized to add / modify the department information.	Success
Delegation	Employee = enrolled in the HR Department	The employee is authorized to add / modify the department information.	The employee is authorized to add / modify the department information.	Success
Delegation	Employee = not enrolled in the HR Department	The employee is not authorized to add / modify the Employee information.	The employee is not authorized to add / modify the Employee information.	Success
Employee Record	Employee = enrolled in the HR Department	The employee is authorized to add / modify the Employee information.	The employee is authorized to add / modify the Employee information.	Success
Employee Record	Employee = not enrolled in the HR Department	The employee is not authorized	The employee is not authorized	Success

	nt	to add /modify the Employee information.	d to add /modify the Employee information.	
Appraisal Period	Employee = CC head of Human Resource Department	The employee is authorized to add /modify the appraisal period information.	The employee is authorized to add /modify the appraisal period information.	Success
Appraisal Period	Employee = not CC head of HR Department.	The employee is not authorized to add /modify the appraisal period information.	The employee is not authorized to add /modify the appraisal period information.	Success

4. OVERALL DISCUSSION

In this work, a computerized employee evaluation system for Saudi Airline Company was designed and developed. It will help supervisors to monitor the evaluation status and results of their employees, and will also enable supervisors to delegate one of their employees on their behalf to receive the evaluation score reports. This evaluation system was tested for each use case under different scenarios. The test results have shown that the performance evaluation system functioned well according to the expected outcome. This performance assessment system can therefore be used by the Saudi Airline and will improve the data management and accuracy of the assessment process. The findings of Gianni et al.[14] has confirmed that automated employee performance evaluation system necessary for the organization to

have a solid work evaluation structure and enhanced management of organization's sustainability.

5. CONCLUSION

This study has presented the development of a employee performance evaluation system for Saudi Airline. In this work, this system was test and it has been successful in accessing the performance evaluation. The Saudi Airline may measure the performance of employees and evaluate their contribution to the objectives of the organization through the assessment system. Furthermore, the developed assessment system will assist the organization to retain good employees the company that have different skills and abilities. This will be beneficial for the organization in the long run.

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