Identify Employee Performance Evaluation

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Abstract—**At present scenario performance evaluation of employee in industries is done manually, in which there are excess chances of mistakes. It is observed that manual employee evaluation system can not be efficiently analyzed performance of employee and also consumes more time. Hence, manual mistakes are wipes out the integrity of the performance evaluation system. Therefore, there is need to analyzed employee performance evaluation by automated system. The experimental evaluation depict the result that the proposed system evaluates the performance of employee efficiently and shows a performance improvement. The mathematical evaluation shows that correct evaluation of employee by the system effectively reskilling employee in favor of industry. Thus the proposed system effectively and efficiently automates the employee evaluation.**

Keywords— Employees, industry, performance evaluation

I. INTRODUCTION

Employees form an integral part of any commercial or noncommercial industry. The word industry here includes work environment for health care, business, supply chain, mining, transport, education, and many more. Despite the huge advancements in technology, performance appraisal of employees is still manual in most of the industries. The manual employee evaluation systems are highly susceptible to human biases since the supervisors are given great latitude to evaluate the performance of employees. Biases may arise due to human nature or when inadequate training is given to the supervisors to provide unbiased feedback. The supervisors usually focus solely on the most recent employee performance. The ranking gets from supervisors then automated system generates the graph and also create PDF and

send to the employee's email. if the supervisors are assumed to be providing accurate appraisals, the time gap after which the performance is evaluated is a major issue. Late appraisals deprive the employees from the knowledge of their weaknesses, and they might not realize how they can improve. Therefore, there is a need to evaluate the performance of the employees on a regular basis. Factors result in a biased performance appraisal, leading to dissatisfaction among those employees who are at the receiving end of biased feedback. Hence, an intentional or unintentional manual bias wipes out the integrity of the performance evaluation system. According to a research report, it was found that only of the employees were satisfied with the current performance evaluation system. Therefore, there is a need to eliminate human biases during

performance appraisals, and one of the alternatives to do so is to shift to an automated system for performance evaluation [1].

II. LITERATURE SERVEY

For years, employees have always grimaced at the thought of yearly performance reviews. Judged for a years' worth of work in a one-hour sitting, where we receive feedback based on what was documented or remembered by our manager. The reality is that today's workplace is changing and performance reviews won't keep up or be effective. Many companies allow employees to work remotely, and more employees want weekly or even daily feedback so that they can hone their skills. Performance reviews won't allow for this, and they argent working, according to employees.

III. HISTORY

Until the 1900s that employers started making the correlation between worker satisfaction and greater work productivity. At 1920s, Elton Mayo, the Father of Human Resources, measured the relationship between productivity and the work environment. As a result of the Great Depression, pensions, labor standards and minimum wages were instituted. Mayos work helped change the treatment of employees in the 1940s, where managers started acting more like leaders instead of taskmasters. The government chimed in about worker satisfaction in the 1950s with the Performance Rating Act (Outstanding, Satisfactory and Unsatisfactory) and the Incentive Awards Act, where government employees could be rewards for good work with cash and recognition. Pay for performance was introduced in the 1960s, but personable managers continued to evolve. The term performance management was coined by Aubrey Daniels in the 1970s. The 1980s brought about MBO, or management by objectives. In the 1990s, a Society for Human Resource Management survey shows that only 5 percent of companies were very satisfied with their performance review process.

IV. PROPOSED SYSTEM

The proposed system shows, the data is collected by supervisor are used to detect the actions of every employee in industry. Based upon the employee actions, their performance is evaluated. The automated system is then used to take decisions for employees. Although the type of decision taken is industry dependent, the proposed system uses the pay for

performance (PFP) system for decision making. PFP, also called gain sharing, rewards the employees who perform better. On the other hand, a penalty is imposed on the employees who work against the industries policies. Therefore, the decision is taken for selecting the employees for reward and penalty based on the employee performance [1]. Initially, various data is collect from the industrial infrastructure as well as from Supervisors. Various employee activities are then detected from the Supervisors to form activity sets. The participation of each employee in each activity is determined using an approach based methods by the supervisors which gives the performance of employees in industry. Automated decisions are then taken by the industry using performance information of the employees [1]. An automated system evaluate the graph by which the industry can take proper decision for employee future And the algorithms are perform an important role in making decisions. An proper direction is given by the proposed system to industry for employee to manage the intake of industry and manage the financial benefit. Fig shows system architecture.
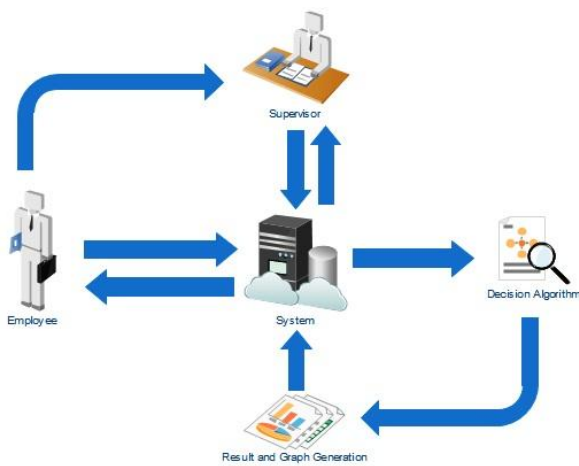

Fig. 1. Proposed System.

V.   IMPLEMENTATION DETAILS

The approach of system to analyze the performance of employee and make decision for level of employee it may be divide into four levels Superior, Higher, Middle, Lower. For making decision through decision algorithm through that decision is takes place. In this system supervisor giving ranking to employees and submit the ranking into System at that time the ranking is analyzed by the system and System makes graphs for employee through the ranking given by supervisor. After analyzing the ranking of employee PDF report is generated and send to the employees email address through that employee gets its report instantly and watching his performance.

A. Decision Algorithm

In the Decision algorithm, System gets data from database and analyzed the raking given by the supervisor and making a decision for levels of employees.   Levels are Superior, Higher Middle and Lower. The employee ranking was analyzed and system give decision for levels.

- Get Percentile from Database

- If percentile is less than 25

- Print level lower

- If percentile in between 26 and 50

- Print level Middle

- If percentile in between 51 and 75

- Print level Higher

- If percentile is greater than 75

- Print level Superior

B. Graph Generation

For Graph generation we used JFreeChart Library in Java through that generate the graphs with the help ranking given by Supervisor. In graph generation, there should be various types of graphs such as line chart, bar chart, pie chart. These charts show the performance of employee in the form of graph so user can easily understand level of employee and its working.

- Get Ranking from Database

- Define the JFreeChart library

- Pass the data for chart generation

- Display chart on panel

Fig. 2. Shows the performance of employee yearly. The fig shows type of index chart. Various graphs are shown below which is merge in PDF file and send to email provide by the employer.
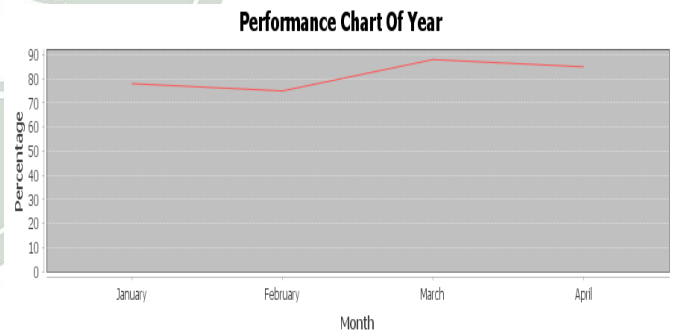

Fig. 2. Performance of year.

Fig. 3. Shows the Attribute bar chart indicate performance month wise. Also fig shows index graph, particular values indicated by the bars.
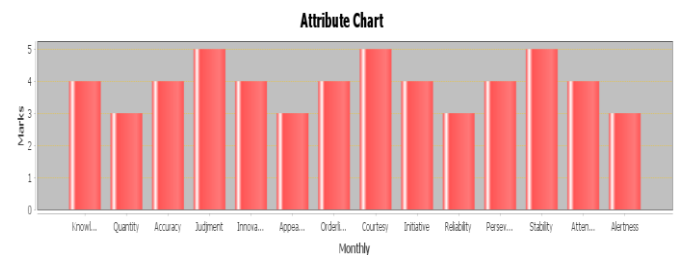

Fig. 3. Performance of month.

Fig. 4. Also Shows the attribute but in the form of pie chart. Several of base attribute marks is shown by chart which help employer to analyze the weakness and drop it.
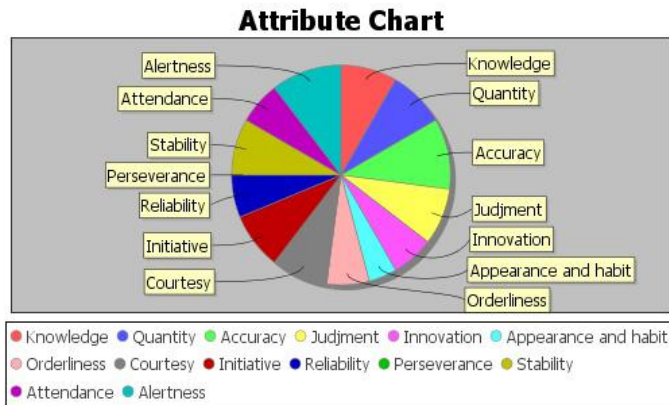

Fig. 4. Performance from piechart.

C. PDF Generation

Many applications demand dynamic generation of PDF documents. Such applications range from banks generating customer statements for email delivery to readers buying specific book chapters and receiving them in PDF format. The list is endless. In this section, we will use the iText Java library to generate PDF documents. We'll take this in system application so you can do it yourself and understand it better [2]. In the PDF generation we use Document classes for generating PDF.

D. PDF Sending through email

For sending PDF through email to the particular employee. We used code for send PDF automatically through SMTP server of Gmail. In that System automatically check the Gmail ID of employee and then send to Respective employee.

- By properties object enable SMTP author, host and specific port.

- Creating new session object where properties contains all important properties e.g. authenticate hostname and port of SMTP server.

- Create MimeMessage object by passing Session object. To set different properties such as recipient email address, subject, email body, attachments etc. [4].

- Use javax.mail. Transport to send the email message by calling static method send(email),where email can be MimeMessage [4]

VI. TEST CASES AND TEST RESULTS

Table I and II shows different test cases have to be applied for testing the proposed system. Test cases are applied either to pass the system or fail it. The test cases applied and test results generated are represented by both the tables. Table I shows the test cases for employee panel. Table II shows the test cases for Supervisor panel.

TABLE I.   TEST CASES FOR EMPLOYEE PANEL

Test ID	Test Case	TestCase Description	TestCase Expected Result	TestCase Actul Resut	TestCase Pass/Fail
1	Login	It should be check Employee ID and Password	Accept Employee ID and Passwod	It accept Emploee IDandPassword	Passed
2	Profile	It should be compare data with login Employee ID	Compare data with login EmployeeID	Itcompared data withlogin EmployeeID	Passed
3	View Performance	It should be view performance of Employee ID monthly and yearly	View performance of Employee ID successfully	Viewed performance of Employee ID monthly and yearly	Passed

TABLE II.   TEST CASES FOR SUPERVISOR PANEL

Test ID	Test Case	TestCase Description	TestCaseExpectedResult	TestCase ActualResult	TestCase Pass/Fail
1	Login	It should be check Employee ID and Password	Accept Employee ID and Password	Itaccepted Employee IDand Password	Passed
2	Profile	It should be compare data with login Employee ID	Compare data with loginEmployee ID	Itcompareddata with login EmployeeID	Passed
3	Manage Employes	It should be manage Employee ID add or remove	Employee should be add or remove from particular supervisor	Itmanaged Employees properly	Passed
4	Give Ranking	Supervisor should be give ranking manually	Itshould begiveranking bysupervisor	Ranking submitted successfully	Passed
5	View Performance	It should be Viewperformanceof Employee ID monthly and yearly	Viewperformance of Employee ID successfully	Viewed performance of Employee ID monthly and yearly	Passed

CONCLUSION AND FUTURE WORK

Industry wants to maximize its profit by encouraging employees, work for the upliftment of the industry. Performance evaluation of system showed that the system is able to masterly motivate the employees in addition to effectively evaluating their performance. Employees feel motivated by amount of incentives received by them for their co-operation with the industry. The equal status shows that the reward strategy of the industry for the cooperation strategy of the employees becomes the stable action set. The other action profiles tend to perish with time. Thus, the relationship

between the employee and the industry is strengthened by using the system. It is believed that the system can be used to make other strategic decisions in industry. Hence, the future work includes the use of the system in other decision-making processes in industry.

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