

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Special Issue 10, May 2016

## Online Candidate Recruitment Process using SAP-ABAP

Nayana S B<sup>1</sup>, Pratibha Mishra<sup>2</sup>

M.Tech P.G. Student, Department of Computer Science & Engineering, BITM College, Ballari, Karnataka, India<sup>1</sup>

Assistant Professor, Department of Computer Science & Engineering, BITM College, Ballari, Karnataka, India<sup>2</sup>

**ABSTRACT:** Online candidate recruitment process is a software solution which allows particular company or institute to arrange, conduct and manages the overall recruitment process via an online environment in SAP software itself, this can be done through, internet, intranet or LAN through Server. The manual procedure used for conducting the exam is a time consuming process and error prone due to human limitations. It is an SAP software based using ABAP programming language for conducting examinations through internet or intranet (with in Organizations) for candidates who come to join the Companies, Banks, IT institutes etc.

**KEYWORDS:** LAN, SAP, ERP, ORA, ABAP, OCRP

### I. TECHNICAL BACKGROUND

#### A. About SAP Software

**SAP-** Systems Applications and Products in data processing is the world leader in enterprise applications in terms of software and software-related service revenue. Based on market capitalization, SAP is the world's third largest independent software manufacturer. In 1972, five entrepreneurs had a vision for the business potential of technology. With one customer and a handful of employees, SAP set out on a path that would not only transform the world of information technology, but also forever alter the way companies do business. Building on a track record of innovation and a vision proven true throughout every economic and IT shift, now more than ever, SAP is fueled by the pioneering spirit that inspired its founders to continually transform the IT industry.

#### B. About ABAP Programming language

ABAP is one of the many application-specific fourth-generation languages (4GLs) first developed in the 1980s. It was originally the report language for SAP R/2, a platform that enabled large corporations to build mainframe business applications for materials management and financial and management accounting. **ABAP** is abbreviated as **A**dvanced **B**usiness **A**pplication **P**rogramming. ABAP was one of the first languages to include the concept of Logical Databases (LDBs), which provides a high level of abstraction from the basic database level(s). The ABAP language was originally used by developers to develop the SAP R/3 platform.

### II. INTRODUCTION

Online Recruitment Application (ORA) is an overall Interview process consisting of all the three rounds. In the round 1, Multiple Choice Questions (MCQ) based examination system that provides an easy to use environment for both Test Conductors and Candidates appearing for Examination. The main objective of OEA is to provide all the features that an Examination System must have. It is an SAP based web application for conducting examinations through internet or intranet (with in Organizations) for candidates. Candidates are given limited time to answer the questions and after the time expiry the paper disables automatically and the answers are stored in the system. The system will evaluate the answer through automatic process and the result will be displayed to the candidate after the completion of online exam.

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Special Issue 10, May 2016

In round 2, candidates who are selected in round 1 are forwarded to round 2 and Technical round will go on with the set of 3 to 4 persons from the company and all the records of the candidate are uploaded in a SAP system with the zip file. Final is round 3, the Directors round, here candidates will have a casual personal round with Director of the particular company and Director have a right to SELECT/REJECT the particular candidate i.e. also through SAP system.

Finally, after sometime if the candidate is selected for a company means he/she will get an offer letter and joining letter through mail. And the details, all the relevant documents of particular candidate are store in SAP system till he/she will leave the job and the Candidates who not selected to the company, their records also stored in system and those candidates cannot apply for the particular company for 6 months or related to company standard. Candidates can give Interview without the need of going to any physical destination. They can view the result at the same time. Thus the purpose of the site is to provide a system that saves the efforts and time of both the Organizations and the Candidates.

This Recruitment process helps the candidates for appearing the Interview by online. Its mission is to offer a quick and easy way to appear the Interview and it also provide the result immediately after the process. Through partnerships with agencies/boards which are conducting the multiple choice type examination, it can provide special advantages to the applicants/candidates that can't be found anywhere else.

### III. LITERATURE SURVEY

The study of literature on “**Online Candidate Recruitment process using SAP-ABAP**” in general particular revealed several efforts made by the scholars in different discipline. The purpose of this study is to describe which aspects of course design and/or instruction are more effective and successful in the online environment than in the face-to-face (F2F) communication.

In this Interview process trying to bring out the challenges and some best solutions that may solve the problems. This system considers the Challenge of personal identity and unauthorized invention of other users in the network.

- (a) Challenge of personal identity
- (b) Unauthorized interference of other users in the network

To solve this challenge of candidates entering from different user ID's into the domain and applying for the job for candidates, here is a system, where to create a domain with the set of candidates user id's allocated by the company domain and each Administrator will add all the candidates user id's; then he/she will give them the specific permissions to login for the specific time of that particular process. The candidates who enter from the different ID's cannot use the allocated domain and thus the system is secure. A review of media comparison studies (MCS) covers the background of the base paper where there is only an Online examination conducting in the Companies, Banks, Institutes, Colleges, etc., 2014 [1]. The proposed methodology is the extension of overall process. In the reference paper [2], where there is an online web services provided for the advertisements to know the posts of the job. Online managing of the registered candidates are managed in a system manually which is difficulty and security issues may occur [3]. SAP system is capable of handling the huge number of information to be stored in the database [3] hence the idea came to obtain the Candidate Recruitment process completely. The Base paper [1] is referred to build this complete overall process which gives knowledge and information about the project. Online Based Computer Science Education system will provide the basic Computer knowledge to the Candidates by giving the Online Exams which explains in paper [5]. In this process there is a security provided to each login page i.e. for Master Admin page, Admin page and Candidate login page to give the exam [7], which gives the security to the whole system. The Complete system is user friendly and is robust to use the system.

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Special Issue 10, May 2016

## IV. THE EXISTING SYSTEM

The existing system is manual entry of updating the details of all the candidates who will register daily, it is difficult to conduct and maintain the exam manually using papers. It is very difficult to the candidates from far distance to reach the exam center for all the rounds each time carrying the documents. This system is required to prepare registration form, question paper for the candidates and required to print a lot of number manually. To calculate how many candidates registered, and verification of details of these candidates in a month by hand is very difficult.

This requires quite a lot of time and wastage of money as it requires quite lot of manpower to do that. Another factor that takes into account that is the possibility of errors and which requires verification and checking of data relating to various operations which is done manually. The limitation of existing system is that it is not all personalized. It cannot be used for personal and quick reference. Even the other staff members can make use of candidate information if the responsible person is not present and data will not be private. Keeping records of the candidate manually i.e. papers maintained in a company may have chances to lose.

## V. LIMITATIONS OF EXISTING SYSTEM

The main drawbacks of the existing system are not reliable and secure for maintaining manually the information. Here are some;

- It is not easy to access or give exam.
- It is not secure, efficient and safe.
- It takes more paper work in manual exam.
- Difficult to store all the result for future references.
- Manual work is more.

## VI. PROPOSED METHODOLOGY APPROACH

The main purpose of the system is to efficiently evaluate the candidate thoroughly with all the process rounds and this fully automated system is not only saves a lot of time but also gives fast results. It is a cost-effective and popular means of mass- evaluation system. The administrator of the system prepares all the rounds accordingly the tests and questions for each exam for each round. The candidates can login through the client computers with their user ID's number given to them and can take the exam in first round. A timer will monitor the time and after the time limit the system itself submit the test. If it is before time, candidates can submit it to view their result. The result analysis is very easy as it is done by the system. The invigilator has to be present to guide the candidates about online examination process where the Candidates take the test and easily clear all the rounds accordingly stated.

A request to receive assistance from information system can be made for many reasons, but in case a manager, employee, candidate or system specialist initiates the request. When that request is made, the first system activity preliminary investigation begins. The activity has two parts;

- Request clarification: The request from candidate may not be well stated. Sometimes the request may not be well defined. Therefore before any system investigation can be considered, the project request must be examined to determine precisely the actual requirements of the organization.
- Feasibility study: The basic idea of feasibility study is to determine whether the requested project is feasible.

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Special Issue 10, May 2016

## VII. SCOPE OF THE PROJECT

On-line Candidate Recruitment Process system is designed for Institutes (like Companies, IT Sectors, Banking, Colleges, training centres, etc); in which the system handles all the operations, and generates reports as soon as the exam finishes.

## VIII. OVERVIEW OF MODULES / COMPONENTS

A software system is always divided into several sub systems that makes it easier for the development. A software system that is structured into several subsystems makes it easy for the development and testing. The different subsystems are known as the modules and the process of dividing an entire system into subsystems is known as modularization or decomposition.

A system cannot be decomposed into several subsystems in any way. There must some logical barrier, which facilitates the separation of each module. The separation must be simple but yet must be effective so that the development is not affected. The system under consideration has been divided into several modules taking in consideration the above-mentioned criteria. The different modules are as follows:

- 1) **Candidate Module:** Initially candidates will get information for respected post for the job which is advertised in social media like Television, Newspapers, Mobile phones, People, Advertising etc., by checking their eligibility then they should apply to the post and should register them to the recognized organization by sharing their contact information through phone or email.
- 2) **Administrator Module:** Administrator should have their individual master authority to login to the system. After receiving Candidate details, Administrator should short list the candidates and should create all the short listed candidates' information in the SAP system and create unique id and password for each candidate to produce their Interview Examination process. They should examine all the necessary rules and regulations for the Interview process and first create the Instructions page to the candidates, upload question paper as per the format prescribed in the respected organization and Timer to set the timings. After completion of each round, Administrator should upload the marks of each candidate respectively.
- 3) **Question Paper Master Module:** Here the module describes the set of questions, multiple choices, viewing questions as per the groups divided, selecting one among the answer and finally the number of questions answered and not answered.
- 4) **Answer Paper Master Module:** This is designed for the particular question which is the one correct answer should be taken and evaluates the answer and assign the marks for correct answer.
- 5) **Candidate Login Module:** After short listing the candidates a mail is sent to them calling to the Interview process then in the first round, Administrator will provide a Login id and Password to them, then the candidate should provide the information and can step into the main instructions page of the examination and give their 1<sup>st</sup> round examination with the given instant of time and also can view their answer sheet i.e. number of questions answered and not answered of first round after few seconds of completion of the exam.
- 6) **Technical Interview Module:** If the candidate is selected from the performance and marks scored in first round, he/she should be eligible to second Technical round and be called from the company after a week from the date of 1<sup>st</sup> round exam and here in this round all the Technical persons are sitting together by viewing all the records of the particular candidate in the system in a softcopy and not in a hardcopy and enter the score of the candidate in the system by checking the technical skills of the particular candidate.

# International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Vol. 5, Special Issue 10, May 2016

7) **Director's Interview Module:** Finally in the Director's module, candidate is selected from round-II and now here to attend the Personal round with the Directors, here a select and reject radio button options are given to Director's and they can view all the scores performed by the candidate and as well as records in the system and then they can select the option based on the performance of all the rounds of the candidate and as well as by knowing the personal background of the candidate.

## IX. IMPLEMENTATION DETAILS

Implementation includes all those activities that take place to convert from the old system to the new. The old system consists of manual operations, which is operated in a very different manner from the proposed new system. A proper implementation is essential to provide a reliable system to meet the requirements of the organizations. An improper installation may affect the success of the computerized system.

### A. Implementation Methods:

There are several methods for handling the implementation and the consequent conversion from the old to the new computerized system. The most secure method for conversion from the old system to the new system is to run the old and new system in parallel. In this approach, a person may operate in the manual older processing system as well as start operating the new computerized system. This method offers high security, because even if there is a flaw in the computerized system, we can depend upon the manual system. However, the cost for maintaining two systems in parallel is very high. This outweighs its benefits. Another method is a direct cut over from the existing manual system to the computerized system. The change may be within a week or within a day. There are no parallel activities. However, there is no remedy in case of a problem. This strategy requires careful planning.

A working version of the system can also be implemented in one part of the organization and the personnel will be piloting the system and changes can be made as and when required. But this method is less preferable due to the loss of entirety of the system.

### B. The working of the project is as follows.

The working process consists of many procedures as if Candidates who is looking for a job they can apply for a particular post through company website and after calling for the Interview Candidates can appear for the Interview process involved in the company procedure. First the candidates in round 1 have to login for exam or by entering unique candidate id . After login, candidate will have many option whether they want to see the all instructions related to this exam or want to take a look to the type of exam then they can go through its demonstration session where they will get question number, question with options and for preview of next and previous question, two buttons are given with the NEXT and PREVIOUS name, one more feature is available there for candidates convenience, candidates can go directly to any other question of this exam and after getting it, they have to use EXITDEMO button for exit, or for instruction you can use INSTRUCTION button and after getting all ideas, they can go for main exam with the help of START EXAM button. The main exam format is same as demonstration of exam. Candidates can access easily or give this exam in a proper way. Candidates have some time limitation also according to the administrator. If they have completed their exam, they have to click SUBMIT button and then they will get response like number of questions attempted and in last final result. After this round, candidates who are selected in round 1 are called for round 2 after sometime they can appear for Technical round and if selected here can immediately go for final Directors round. This is the complete working of the Candidate Recruitment process.

### C. Entity-Relationship Diagram for OCRP

Entity-Relationship for OCRP system is represented below, the entities of the system is highlighted using rectangular box where the set of entities having individual set of attributes. There are six main entities involved in this diagram and relate to other entities with some relation/connection.

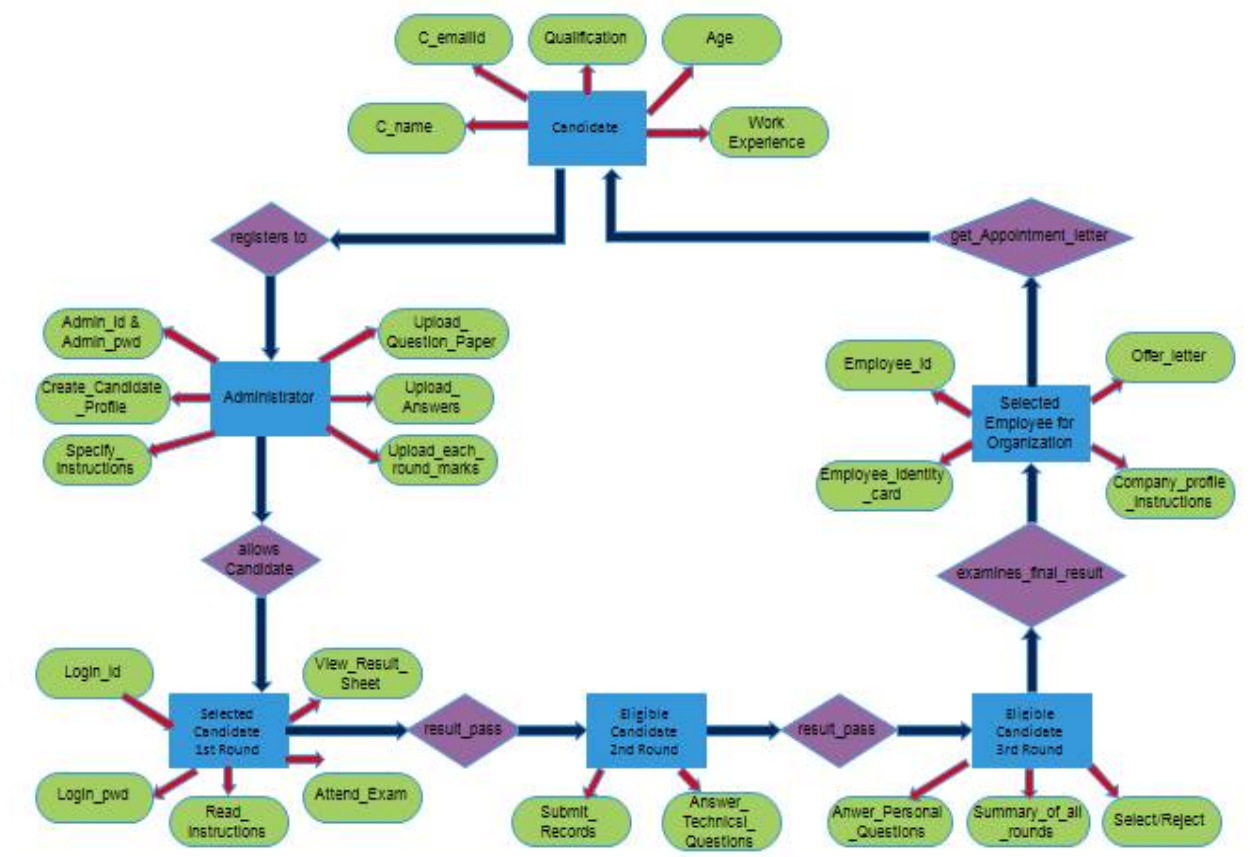


Fig. 1. Fig 1 E-R Diagram for OCRP

### X. CONCLUSION

The Online recruitment process System is being developed using SAP ABAP which fully meets the objectives of the system for which it has being developed. The complete system will reach a steady state where almost all possible bugs have been eliminated. The system will operate at a high level of efficiency, where the Organization will be benefited with this developing system. The system solves the overhead associated with manual type of examination. SAP software can be used by any Institute/Company as it can be modified easily; additional features can be added without interrupting the normal functioning of the system.

### REFERENCES

- [1] Shwetank Sharma, Ayushi chhabra, Sanjay Ojha, "Testing Methodology to test Online Examination Application developed in SAP-ABAP"- School of Management, Centre for Development of Advanced Computing (CDAC), Noida, Uttar Pradesh, India-IJEBEA, 2014.
- [2] S.P. Singh, "Literature survey for Examination" – Department of library and Information Science University of Delhi, India, 2010.
- [3] Tushar I Ghosh, "Implementation of Online Examination Interface", IT-452 Database Management Systems laboratory, April-2009.
- [4] Dr. Sheshadri, T.Chalama Reddy, N.Ashok kumar, "Web-Based-Secure-Online-Non-Choice-Based-Examination using Crptography", IJCSE-10 October 2011.
- [5] Yuan Zhenming, Zhang Liang, Zhan Grohua, "A novel Web-based Online Examination System for Computer Science Education, Frontiers in Education Conference, Boulder, CO, November 5-8, 2003.
- [6] V.Selvi, R.sankar, R.Umarani – "The Design and Implementation of Online Examination using Firewall Security", IOSR-JCE, Volume 16, Dec 2014.
- [7] Madhu Babu Anumolu, N.Bharadwaj – "Online Examination system using Wireless Security Application", IJEIT- September 2013.
- [8] LMU Hons in Computing, "Online Exam System" – IM250 project, 2005.