

Exam Cell Automation System

Vishwesh Bhat¹, Saurav Dwivedi², Jignesh Kotadiya³, Chinmay Raut⁴

¹B.E Student, Dept. of Computer Engineering, UCOE, Vasai, India

²B.E Student, Dept. of Computer Engineering, UCOE, Vasai, India

³B.E Student, Dept. of Computer Engineering, UCOE, Vasai, India

⁴Asst. Professor, Dept. of Computer Engineering, UCOE, Vasai

Abstract: The exam form registration process of college is necessary on periodic basis in every educational institution. It should be accurate and less bulky. By introducing this system, the exam cell coordinators can easily conduct the registration of students and the generation of results systematically. It helps in bringing efficiency, scalability, and robust system. By automating, the results can be declared in a flexible manner and will be error free. Student registration, filling of exam form, KT form, generation of hall tickets and respective results are the main features. Students can check their marks for every practical, oral, term works, unit tests along with the final theory exam mark sheets. An attempt has been made to make it easy for exam cell staff as well as the students.

Keywords: -Examination; Exam; Automation; Student; Result; Gazette; Hall Ticket

Date of Submission: 13-04-2020

Date of Acceptance: 28-04-2020

I. Introduction

Most of the important processes within the institutes are administered manually like the registration of users, managing huge information about students, faculty members i.e. the teaching and non-teaching staff, managing documents for various entities which results in enormous bulk of labor work. This leads to poor efficiency, many documentations which again results in unmanageable data, tedious process and requires tons of your time and human resource. The main goal of the Exam Cell Automation System is to attenuate these workloads and make the Exam Cell process far more convenient to follow. The Exam Cell processes include the managing of student's academic status distinguished by the year, the departments, the classes also like reference to subjects. The Exam Cell process also includes the generation of hall tickets, exam forms alongside the K.T. forms, generation of results, gazette copies etc. These all processes are administered either manually or with the assistance of some third-party software.

The project aims to introduce a centralized system which will make sure the activities within the context of an examination that may be effectively managed. This system allows students to enroll themselves into the system by registering their names or by sharing details to admin. This is done by providing their personal and every one the required details like Name, email, examination, semester, etc. The provided details are then entered by admin into the system to make their hall tickets and also creates login id and password for them. After creating the hall ticket, the system mails the link of sentimental copy to each student who have registered. Admin is additionally liable for generation of mark sheets for each registered student. There will be total three to 6 semesters where each semester contains maximum seven subjects. Admin can enter the marks of each student into their respective mark sheet using the systems GUI or via Database entry. Every student mark sheet is going to be created and printed separately. Thus, on an entire it is going to be automated software which handles every tedious and sophisticated process handled during the examination times by the exam cell of a university.

II. Literature Review

The following research articles are selected for review, keeping in mind the traditional and conventional approaches of Exam Cell Automation system:

Tarbez Khan in 2016 published Exam Flex software which provides automation system but doesn't provide security.

Nikhil Muni in 2016 published Marksheet Generator but doesn't provides Exam Form facility.

Aditya Rao in 2015 published Exam Cell and result analysis Online Automation where Faculty Module isn't generated.

Srushti Simphi published PDF Mark sheet Generator where it Doesn't Provide Exam Form Facility

III. Proposed System

This project aims to bring in a centralized system that will ensure the tasks and activities related with the examination which can be effectively managed. This system allows the user to view their academic status. Students can perform different activities such as exam form or the K.T. formfilling, viewing of results etc.

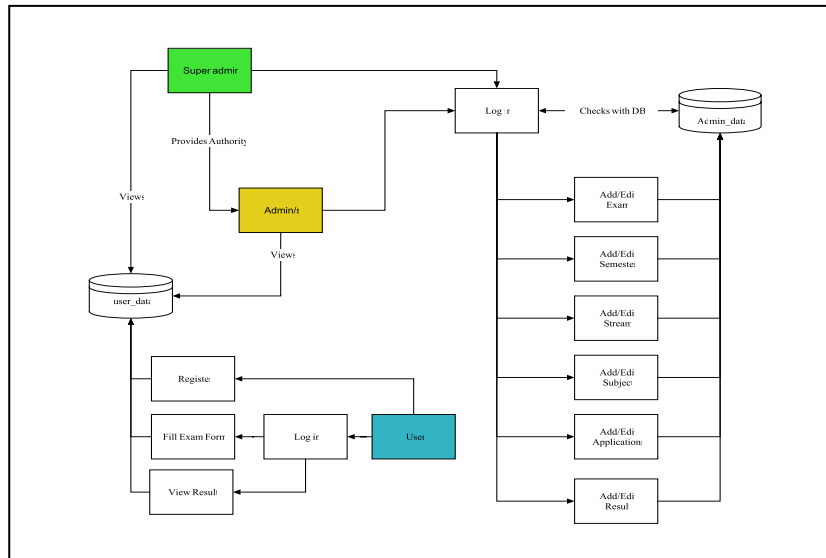


Figure 1. System Architecture

Following are the modules of this system:

a) Login Module

The Login module of the system is the initial stage of the system. It will check for the valid registered users. If the usernames and passwords match, the system will allow the user. Based on the verification and identification process the system will redirect the users to their respective homepages

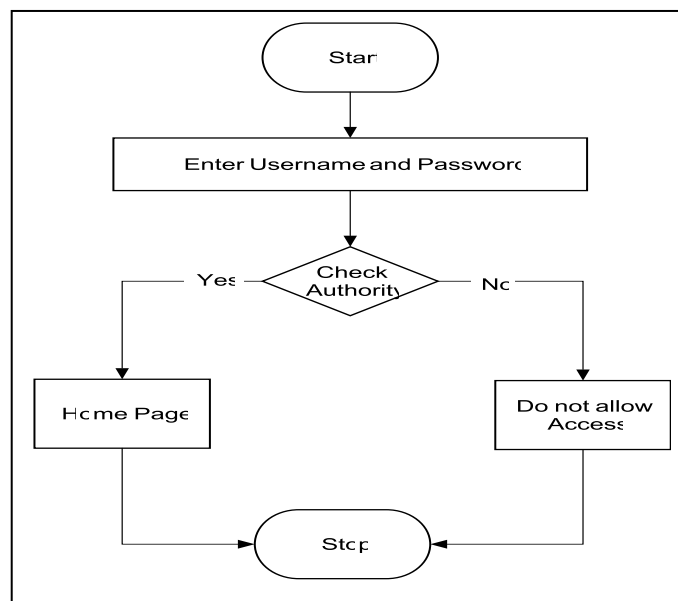


Figure 2. Login Module

b) Form Generation Module

The generation of Exam Forms or the K.T. Forms will depend upon the eligibility criteria and the result status for the student. If the student is eligible for the current semester, a regular form will be automatically generated whereas if the student is not eligible for current examination, a K.T. form will be generated. However,

if a student is eligible for the current semester but also has k.t. in previous semesters, both the Regular Exam Form as well as the K.T. Form will be generated.

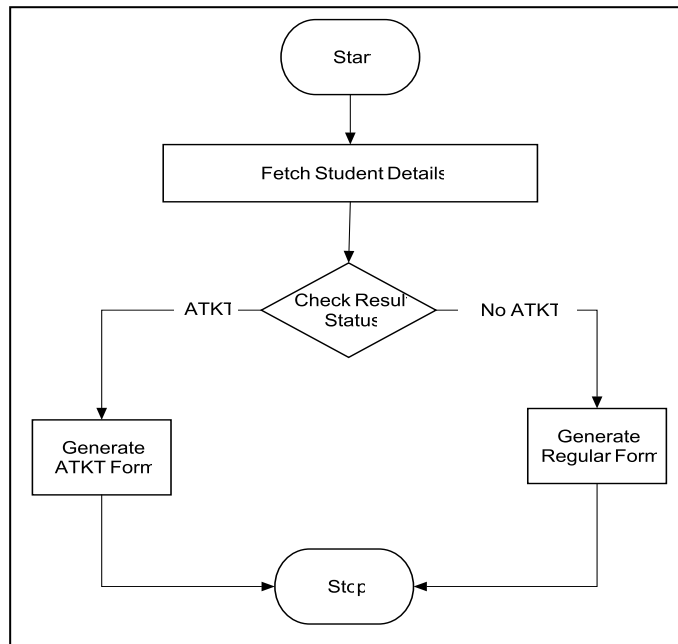


Figure 3. Form Generation Module

c) Emergency Light and LCD Display Screens

In advertisements in order to generate some revenue. This entire module functions with the help of Arduino UNO R3. [14]

c) Generation of Results Module

The Logged in student after the examinations doesn't need to stand in long queues for the collection of the result. The student needs to select the option for the Result, where the system will fetch all the required details for the particular student, the department, the semester, the marks, which will be filled in a standard mark sheet format along with calculated percentage and SGPI/CGPI

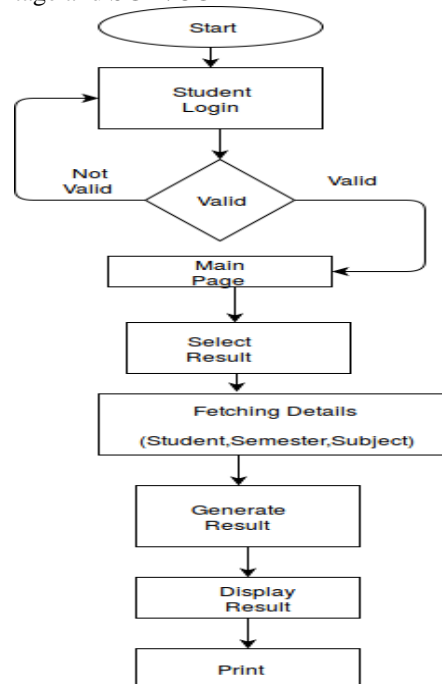


Figure4. Result Generation Module

IV. Results and Discussion

This section depicts the entire system of exam cell automation system. flood sensing circuit. All the components and screenshots depict the entire project.

Following are the screenshots of site:



Figure 5. Engineering administration.

Figure 5 depicts that Here admin can add engineering exams, semesters, streams, subjects, applications and can also add results for users.

Exam Records												
Exam	Subject	1a	1a Grade	2a	2a Grade	Or	Or Grade	Pr	Pr Grade	Tr	Tr Grade	
Exam: 2020 May												
Exam: 2020 November	CSC801 - Human Machine Interaction	11	E	11	E	11	E	11	E	55	P	
	HL8826 - Research Methodology	10	A	22	A	12	F	11	P	44	P	
	DLC8013 - Natural Language Processing	11	E	11	D	21	O	15	P	46	F	

Exam Form	
Exam	<input type="text"/>
Exam type	<input type="text"/>

Figure 6. Student's dashboard

Figure 8 shows that student can fill his exam forms and can see his previous exam records.

- Efficiency of the proposed system:

This system can generate the exam forms, results and also mark sheets for the students. If the student has any k.t. then k.t. form will be generated for the students. The marks will be entered by admin. The system will detect if the student is eligible or not then generates respective hall tickets. The users can view their results from any remote access, print their hall-ticket. The processes will be automated by implementing this system and the workload will be reduced to a great extent. The system will also generate the gazette copies for the student's results needed by the university through which the efficiency of the exam cell process will be increased, as there won't be any need to use multiple software.

V. Conclusion

Ultimately the results of the implementation of this project will cause reduce the workload of the exam cell, the users and therefore the exam-cell staff. The users are going to be ready to view their results, their academic status on the system itself. The admin can enter the marks for respective subjects for the students. The Exam-cell staff are going to be ready to enter the external examination marks of the students.

There won't be needing to use multiple different systems for various activities. The processes are going to be covered by the proposed system. This may reduce the tediousness of the manual processes and provides an opportunity for efficient, flexible and automatic processes.

References

- [1]. V .A. Generator
- [2]. KHUSHI: Exam Cell.
- [3]. Sanket Mandare, Tyagraj Sonawane, Aman Trivedi, K. T. V. Reddy PDF Marksheet Generator: I.J. Information Technology and Computer Science,2014
- [4]. Sompip Dey New Generation of Digital Academic-Transcripts using encrypted QR Code: IEEE
- [5]. Prof. D. V. Shinkar QR code Authentication System for confidential(digital Mark sheet) Encrypted data hiding and retrieval(Decryption): International Journal of Advanced Research in Computer and Communication Engineering
- [6]. Trisha Chatterjee, Tamodeep Das, Joyshree Nath, Shayan Dey, Asoke Nath Symmetric key crypto system using combined cryptographic algorithms – Generalized modified Vernam Cipher method, MSA method and NJJSAA method.

Vishwesh Bhat,etal. "Exam Cell Automation System." *IOSR Journal of Computer Engineering (IOSR-JCE)*, 22.2 (2020), pp. 20-24.