

FEE COLLECTION SYSTEM USING OPTIMAL HUMAN AUTOMATION INTERACTION MODAL

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Abstract

Fees collection management system is a real time application which is to be implemented in our institution. This is implemented in our institution for staffs and their interaction with our system is easy and user-friendly. Until now fees collection is a paper based work where the admin maintains tones of papers and registers in order to maintain the record. So this is implemented to change the paper based work to system based which would be easy to maintain and fetch the details accurately without any delay .Human and the computer interaction makes many harder human implementation just simple and accurate manner. Survey about 10 members is done and our system works efficiently without any discrepancies and delay. Moreover the members whom we had surveyed have only a preliminary knowledge and we educated about our system and they feel very comfortable and easy to work with our system. Earlier, Fees management System enrolls tones of paper and registers, which is very tedious process for the human to collect and save the record in a proper place. In emergency cases, retrieval of specific record takes more than a day to fetch the detail, because registers are very hard to maintain. Automation helps the human to easily fetch the records within a second and very helpful to maintain the records for future purposes. Thus optimal human automation interaction modal makes harder operations very simple manner. This is implemented using HTML, CSS moreover responsiveness is also taken in account and it is implemented using Bootstrap. Database implementation is done through PHP, MySQL and XAMPP.

Keywords: Record, Registers, Server, Automation.

I. INTRODUCTION

The main objective of the Fees Collection system is to compute the fees of a student studying in the institution. Also the objective includes maintenance of the records of the students in the institute. The main purpose of this project is to maintain easy circulation system using computers and to provide different fees structure reports. An institute may contain hundreds of students so to keep a record of all of them we need a system that is user friendly, easy to understand and operate. The objective also includes searching of a particular student easy and less time consuming than the traditional method where the records were maintained by hand and searching involved hours and reports are generated accordingly. In this paper a specific institution is selected and the fees maintenance system is generated in accordance with the list of records provided from the institution. Here, I have selected my own college named “Sri Ramakrishna Institute Of Technology” for the easy maintenance of fees management system. This system maintains regular, updated information pertaining to each student in the records. Maintenance is categorized in the following forms. They are Student - To keep the record of each student studying in the Institution. Daily Fees Collection

Register - Holds the information about the daily fees of each Department. Tuition Fees Collection Register –

Holds the information about the fees of each of the student. Miscellaneous Fees Collection Register - Holds the information about the breakage and other fees of each student. All the records for the above have to be maintained and updated regularly.

II. GENERAL CONCEPT

Automation is achieved by the maintenance of a centralized database with several files dealing with the different categories. They would provide with the central storage of data leading to several benefits for all users. The programmer would cater to all the entries and updates in the programming concepts developed. Hence automation would lead to the availability of precise and correct data with increased efficiency and easy availability. Hence the system would be competent and work with increased effectiveness. Input data are collected and organized into groups of similar data. Once when the data is identified and an appropriate input media is selected for processing, it is being implemented. A systems flow chart represents the overall functionality.

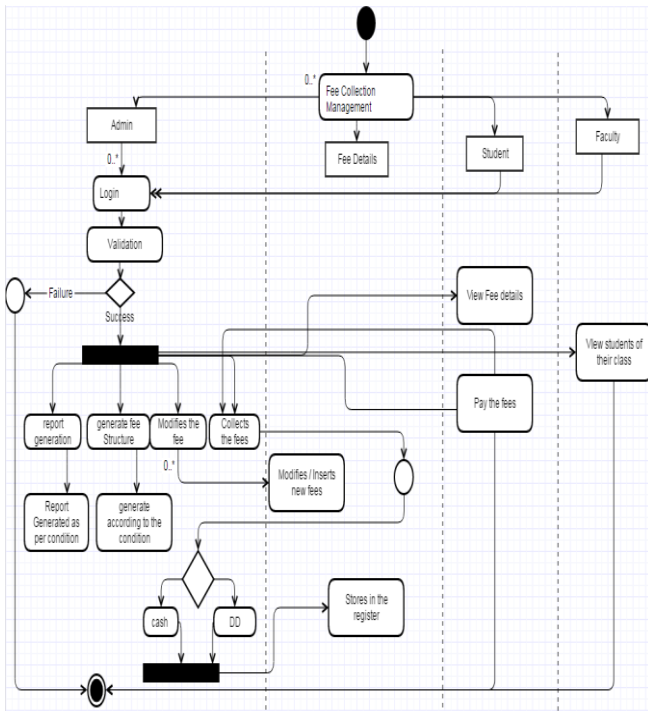


Fig. 1. Activity diagram

III. PROPOSED WORK ANALYSIS

Statistical report like Fees Pending and Forecasting helps to retrieve the unpaid student details and to analyze consolidated fees yet to collect in the Academic year (i.e. future). Detailed checklist of the Fees Structure – Class / Student type wise & Fees intimation slips can be printed to inform about the pending dues to the parents. Essential reports like consolidated daily fees collection, Student fee paid details can be taken instantly. Sensational pre - defined valuable reports can be exported to pdf format which leads you to prepare customized report as per our institutional requirement. The above activity diagram is processed using the XAMPP tool which serves as a channel between the frontend (HTML) and backend (PHP).

A. Login Details

Login Details fall under three categories. They are Administrator, Student and Faculty. Each type of users are given a unique Id as their username and password. Thereby authentication can be done easily and if there is a proper authenticated user, they will be allowed to progress to the respective session page. In case of inappropriate username and password an alert message will be displayed stating the wrong information and they are further not allowed to progress anymore. All the fields are checked such as user type, username, password and if all the details are correct they will be redirected to the concern privilege activity page. Redundancy and proper selection of data is selected to the almost care.



Fig. 2. Login page

B. Dashboard Details

In Dashboard the overall functionality of the user is mentioned and they can be directed to do that functions, just by clicking the buttons. Dashboard serves as an easy medium for the intended user to know their access rights and they are restricted to access only those functionalities. It serves as the map and guiding rule to get the work done in a simple and easy manner. According to the user type, Dashboard functionality will differ and serves as the main root of security.

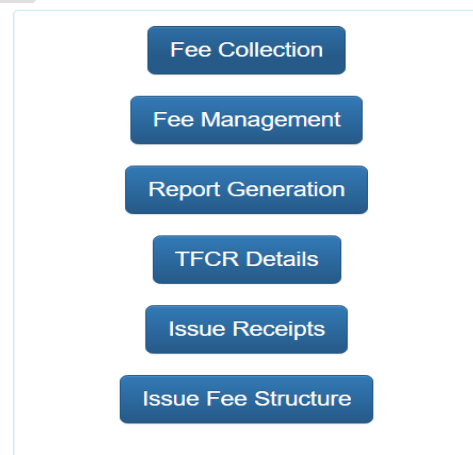


Fig. 3. Dashboard

IV. ADMINISTRATION RIGHTS

Administrator is the legal head and given all the rights and the specified rights are as follows. They are, Fee Collection, Fee Management, Report Generation, TFCR Details, Receipt Issue, Fee Structure Issue, View the student who has paid the fees, Fix the fine amount, Generate the report needed by the concern user and the reports are based on the daily, weekly, monthly, yearly fee payment details. Fee is of two type, Tuition Fee and Miscellaneous Fee. All the above functionalities are handled by the admin. All the details are fetched and

stored in a proper manner. Confidentiality and security is provided to enrich the safety transaction.

C. Tuition fee collection

In Tuition fee collection, Admin will collect the tuition fee. The fee collection is made simpler by making the admin to give only the student registration number, in order to fetch the student details as well as their respective fee amount. All the details will be generated automatically and human errors can be reduced tremendously. Tuition fee will differ to each student because it is calculated based on First Graduate, Government / Management Quota, Caste, Year(i.e., first, second, third, fourth), Graduate (i.e., under graduate, post graduate), Academic year. All these categories are checked automatically and fees will be displayed to the administrator. More over according to the student year of study, Dote fee, Book deposit and other fee will be collected by the admin. Tuition fee can be paid through Cash or DD (Demand draft). In case of cash only the total amount is mentioned and if in case of Demand Draft the particulars such as DD number, DD date, Bank name, DD amount everything is collected by the admin.

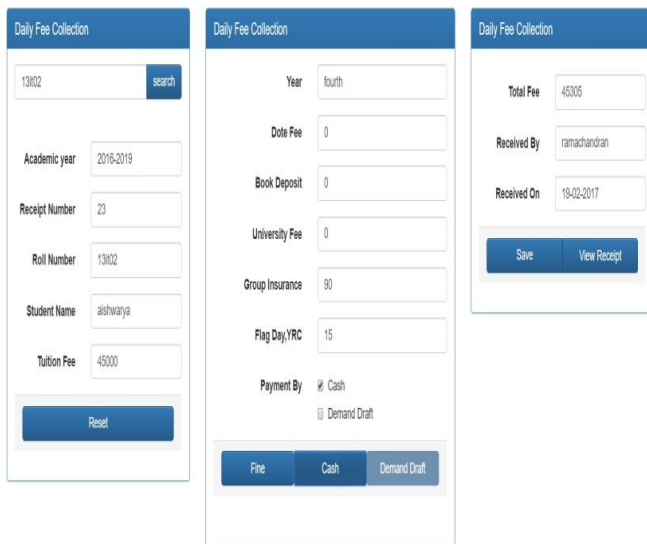


Fig. 4. Tuition fee collection

D. Miscellaneous fee collection

In Miscellaneous fee collection, Admin will collect the fee based on the individual as well as the common breakage amount fixed by their respective department. Admin is not having rights to change the common breakage amount because it is fixed and passed by the tutors of the respective department. In case of individual breakage by the student, respective tutor will fix an individual breakage amount for the product damaged by

the student and the individual breakage amount will be added to the common breakage for the particular student and the total amount is collected by the admin from the student. Miscellaneous fee includes the application fee, breakage amount, miscellaneous fee and others. It is paid only through cash.

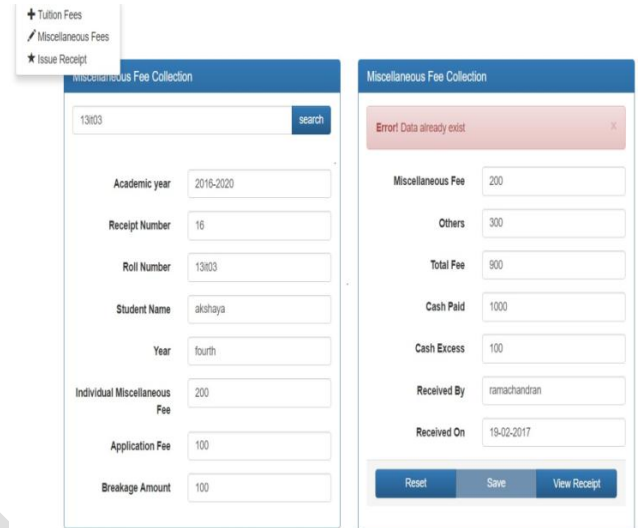


Fig. 5. Miscellaneous fee collection

E. Issue receipts

Admin has the rights to issue the receipt according to the fee paid by the student. If student pays the tuition fee, according to the student year of study fee receipt will be changed. If the student is first year, fee receipt includes the dote fee and book details and their corresponding amount whereas if the student is other than the first year, receipt includes the group insurance and flag day details. If student pays the miscellaneous fee, the receipt includes the miscellaneous fee details. Admin maintains a two copy of receipt such as student copy and office copy. Admin also has the record of students who received a copy of receipt for the future references.

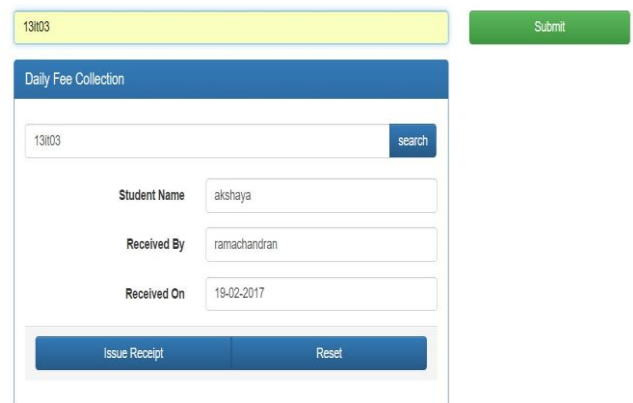


Fig. 6. Tuition fee receipt

F. Fees management

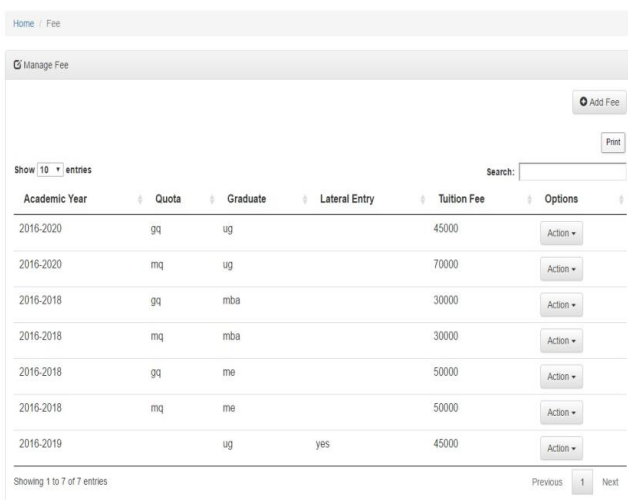
Admin has the right to modify the Tuition fee, Yearly fee and the Due date to pay the fee. Modification includes the insertion, updation and deletion of the fee amount. Fee modification helps the admin to add the fee amount in future years and our system will work efficiently without any discrepancies. If the admin inserts the wrong information and need to change it, then the updation factor helps to achieve the goal. Deletion of fee is also possible and everything is achieved through Data table.



Fig. 7. Fees management

G. Modified tuition fees

Modification of Tuition fee includes the insertion, updation and deletion of tuition fee. Insertion of Tuition fee in later years includes the category such as Academic Year, Quota, Graduate, Lateral entry and tuition fee amount will be fixed. This serves as the master record to fetch the fee amount for the student according to their own details. Any changes in fee can be updated easily and maintained in a proper manner. Deletion of tuition fee is also possible. Filtrations based on the following fields can be done and a particular record can be viewed easily.

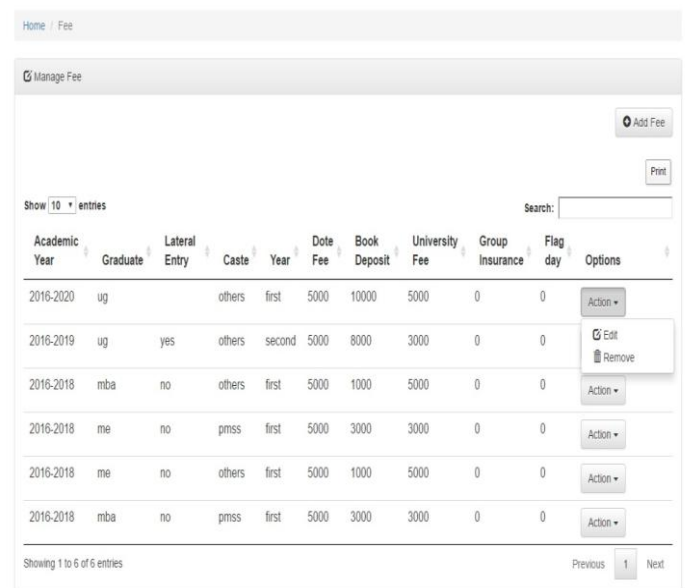


Academic Year	Quota	Graduate	Lateral Entry	Tuition Fee	Options
2016-2020	gq	ug		45000	Action
2016-2020	mq	ug		70000	Action
2016-2018	gq	mba		30000	Action
2016-2018	mq	mba		30000	Action
2016-2018	gq	me		50000	Action
2016-2018	mq	me		50000	Action
2016-2019		ug	yes	45000	Action

Fig. 8. Modified tuition fees

H. Modified yearly fees

Modification of Miscellaneous fee includes the insertion, updation and deletion of miscellaneous fee. Insertion of Miscellaneous fee in later years includes the category such as Academic Year, Graduate, Lateral entry, Caste, Year, Dote fee, Book deposit, University fee, Group insurance, Flag day. This serves as the master record to fetch the fee amount for the student according to their own details. Any changes in fee can be updated easily and maintained in a proper manner. Deletion of miscellaneous fee is also possible. Filtrations based on the following fields can be done and a particular record can be viewed easily.



Academic Year	Graduate	Lateral Entry	Caste	Year	Dote Fee	Book Deposit	University Fee	Group Insurance	Flag day	Options
2016-2020	ug		others	first	5000	10000	5000	0	0	Action
2016-2019	ug	yes	others	second	5000	8000	3000	0	0	Edit Remove
2016-2018	mba	no	others	first	5000	1000	5000	0	0	Action
2016-2018	me	no	prms	first	5000	3000	3000	0	0	Action
2016-2018	me	no	others	first	5000	1000	5000	0	0	Action
2016-2018	mba	no	prms	first	5000	3000	3000	0	0	Action

Fig. 9. Modified yearly fees

I. Modified due date

In modification of Due date includes the insertion, updation and deletion of due date. Insertion of Due date in later years includes the category such as Fee Type, Academic Year, Due Date, Set Fine. This serves as the master record to fetch the fixed fine amount and it will help to generate the fine amount for the student during the payment day. If the student is paying the fee after the due date according to the number of days from the due date, fine will be calculated and collected by the admin. If the student pays the fees before the due date fine amount will be zero. Any changes in due date and fine amount per day can be updated easily and maintained in a proper manner. Deletion of due date is also possible. Filtrations based on the following fields can be done and a particular record can be viewed easily.

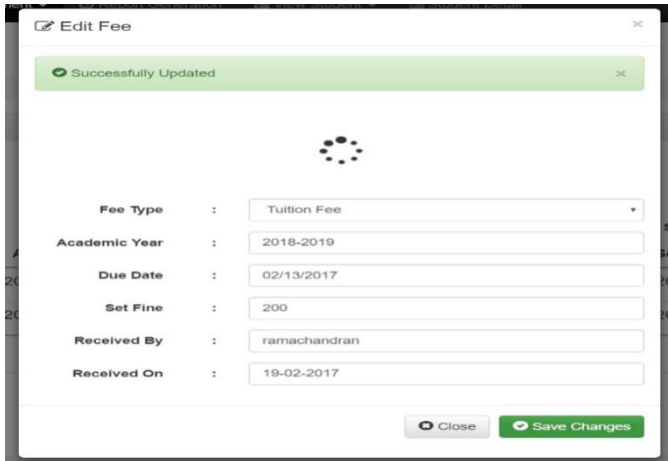


Fig. 10. Modified due date-fine allocation

V. STUDENT RIGHTS

Student is another user type. He / She is given rights to view their own details, such as tuition fee, miscellaneous fee amount and finally status of the fee payment whether he/she has paid the fee or not. Student can view only their own details and they do not have rights to view the other student details, it is made possible by viewing their details according to the username they are signing in. It helps the student to know their fee and the status of

Academic year	<input type="text" value="2016-2019"/>
Receipt Number	<input type="text" value="23"/>
Roll Number	<input type="text" value="13it02"/>
Student Name	<input type="text" value="aishwarya"/>
Tuition Fee	<input type="text" value="45000"/>

payment.

Fig. 11. Student view

VI. Faculty Rights

Faculty is also another user type. Faculties are allocated to each class by their respective department higher officials. According to that, Faculties will be able to view all the student of their respective class with their fee amount, status of the payment details and due date for the fee amount to be paid. Faculty has also the right to fix the common breakage amount and to insert the individual breakage amount in the respective student profile with a detailed note about them.

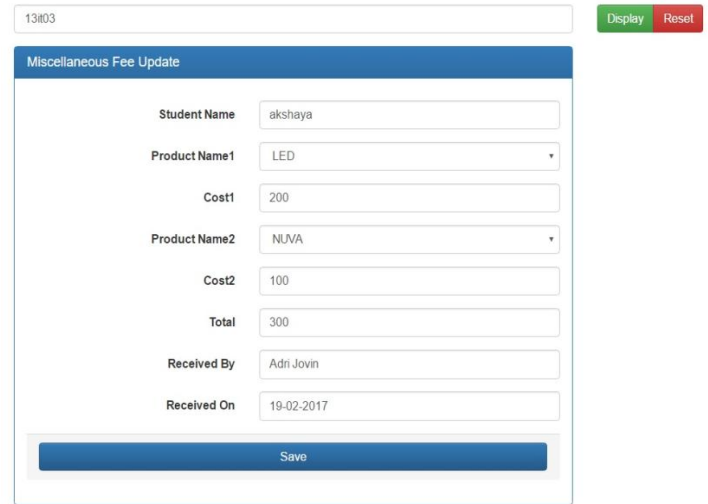


Fig. 12. Faculty miscellaneous updation

VII. CONCLUSION AND FUTURE WORK

This system supports large number of concurrent users executing a variety of database applications operation on the same data. It minimizes data connection and guarantees data concurrency. Sql server management maintains the processing features with a high degree of overall system performance. User doesn't suffer from slow processing performance. Safety requirements, Compatibility, Connectivity, Controlled availability is checked. In Future, examination fees and arrear fees will be in automation; hence it will be highly useful for all the user type.

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