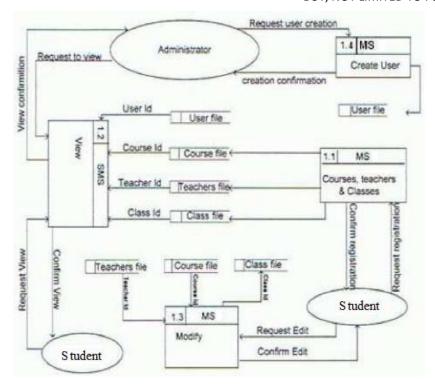
UNIVERSITY MANAGEMENT SYSTEM

UNIVERSITY PROCESSES - DATA FLOW DIAGRAM, ONE LEVEL AS SHOWN.

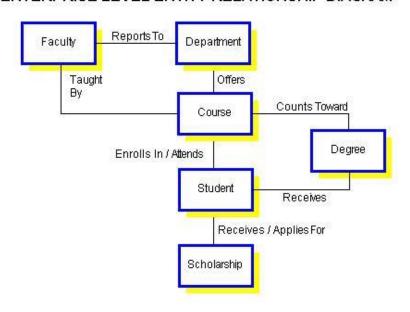
BUT, NOT LIMITED TO FOR PHASE 1 IMPLEMENTATIONS.



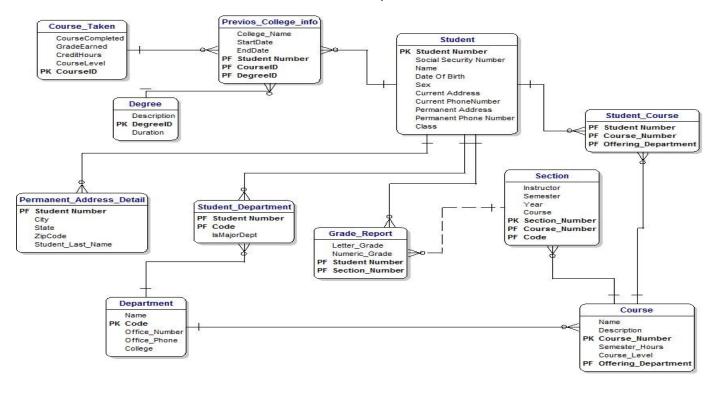
UNIVERSITY MANGEMENT SYSTEM ENTITY RELATIONSHIP - ERD

BUT, NOT LIMITED TO FOR PHASE 1 IMPLEMENTATIONS.

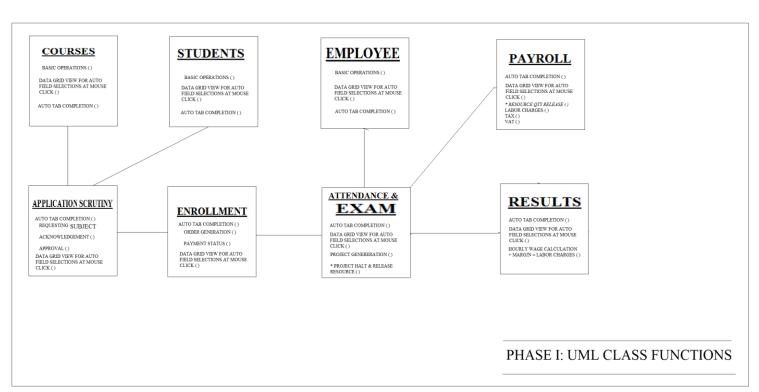
ENTERPRISE LEVEL ENTITY-RELATIONSHIP DIAGRAM



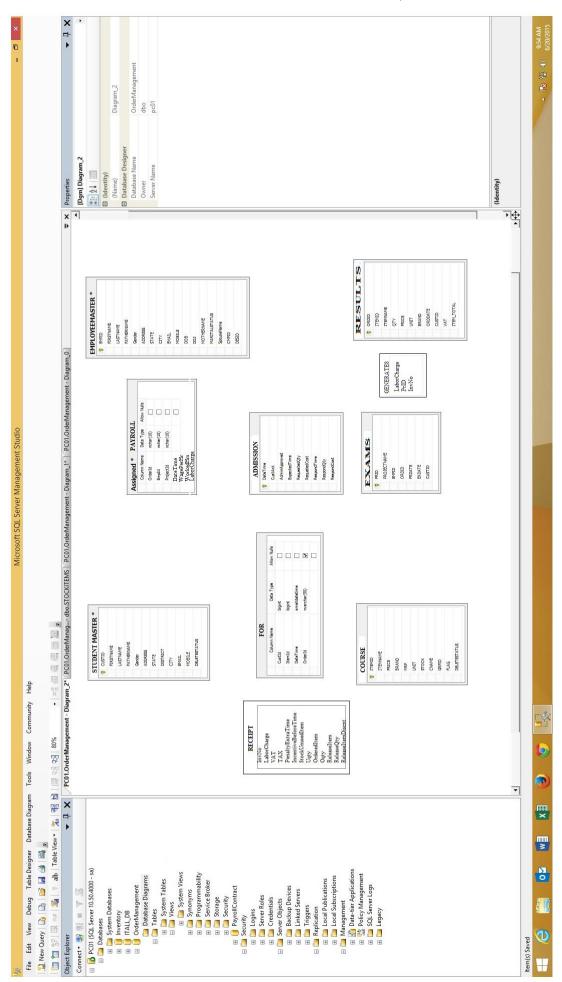
UNIVERSITY MANAGEMENT SYSTEM ER DIAGRAM, ENHANSED-



UNIVERSITY MANAGEMENT SYSTEM PAHSE I UML CLASS FUNCTIONS



DBMS Generated for UNIVERSITY MANAGEMENT SYSTEM in MS SQL Server 2008 R2 for Phase I.



We are Delighted in Presenting Software Proposal for UNIVERSITY MANAGEMENT SYSTEM.

We have derived the Software Engineering Models for Conceptualising the Current Scenario into Proposed Management System where in we have not only identified no. of improvements but also have made no. of Provisions to extend the current working capabilities of system.

We have identified Possible Automations & the necessary tools for making the system Fully Automated with Facilities of Online Admission Management & Tracking with Online Payments from Candidates to University | University to Supplier by Automatic Order Generation | University to Employees for their Salaries.

We also wish to Extend the Capabilities once the Proposed System is Deployed at University Premises with inclusion of Business Intelligence & Analytics for Precise Estimations on Growth Projection of University's Business.

However, In this Bigger Project the Opportunities so far Identified are following in University Process Model.

Project Automation is Completely Dependent on Required Devices which are as-

Door Access Control Handles & Magnetic Locks | Card Reading Android Device | CCTV Camera & Surveillance Device | Wi-Fi Routers | Either Possibly, Multiple Thin Clients with Monitor, Key board, Mouse or Android Tablets for Exam Module, E-Learning, E-Library Modules. | Dedicated System to Run Database Management System & IIS Server for Publishing This Project as in ASP.NET, Platform Independent Application.

We shall be Happy to Do the Initial Database Generation from Old Database of Excel, Word or other Picture Files together with Card Punching for Card Holders & For our DBMS.

Upon the Final Confirmation with Advance granted, we can start working on Development of Proposed Project in 4 Plus 1 Phases.

In current development of Phase I Beta Version we can keep further Provisioning of – ADD | MODIFY | DELETE | VIEW of CANDIDATES | EMPLOYEES | STOCKITEMS | LIBRARYBOOKS | ADMISSIONS | FEE COLLECTIONS | PAYROLL.

In this Beta Model, E-LIBRARY with Interactive E-LEARNING are Possible to be ADDED | MODIFIED | DELETED | VIEWED. We also have included EXAM MODULE With ATTENDANCE & CRIME CONTROL MODULES.

ADMISSION is Completed after taking respective values Automatically, from Database for FEECOLLECTION, Upon Completion of EXAM but currently for Beta Version, Automation in ADMISSION was not Possible but rather we have kept Manual Data Entry.

Further, On the basis of Software Engineering Models, we have constructed a Robust Database Management System to Accept Data & Present it in an Interactive way to the Management, Staff & Students.

In Phase I, We have made Provisions for Automated Data Entry As & Where Possible, with More Mouse over events rather Admins needing to Type complete info. This Also is Dependent on Usage of Required Device for Automatic Data Input Purpose.

The Interactive Forms are having Facility of Auto Tab Completion. Data grid view is for less typing & More Mouse hover & Mouse click Events.

In Phase I, we have made Provisions for Candidates to Interactively do the data inputs in Online | Offline Basis where by, Minimising the Efforts of College staff to do data entry. This will improve Students Faith in University System. As the Available Course structure with All detail on Fees will be Possible for them to find online & Finally Acknowledge for Admission Confirmation After Attaching Required Certificates.

However, All Attached Offline Documents | Forms | Certificates will be Provided with Immediate Validation Automatically at the Time of Data Entry from Candidates.

Hence, Decreasing Admin Efforts & Time on Candidate Scrutiny.

However, We Only Promise of Providing Near Accurate Validation Report But, Cant Verify for if Documents submitted are Fake or Not! This is Accurate Job, Best Done by Verification Agencies.

This Process will Generate Scrutiny Reports Immediately. Once Admin Approves the Scrutinised Candidate, Online Fee Payment Module will get Activated. Respective Candidate shall receive SMS or Mail for Online Payment. Initially, At Time of Form Submission, Payment is Disabled until Scrutiny Not Approved by Admin.

Further, Provisions of Online Payment Strengthen the Management System in Many ways!

After Fee Payment is Realised to the University As checked upon by Head Accountant, Admin Creates the Students Enrolments No. Further, He Creates Schedule | Time-Table for Courseware by Assigning Teacher to the respective Class | Course | Subject.

I had mentioned Multiple Modules in Entire Project with Economics Integration.

Modules Designed are as Follows- PHASE I | PHASE II | PHASE III | PHASE IV + INTERNET SITE.

- A- Attendance Management System- This will have three types of Logins namely- Employee-> for All Teachers | Admin=> for Principal, Head Accountants, IT Admin. | Students=> AS Temporary Profiles Available for Limited Period of 6 months- 3 years, depending Course Duration.
 - i- Upon Expiry of this Duration, Door Access Control won't Allow Access in to the Premise. Upon Max 5 wrong Attempts Alerts as SMS to Parents, Screen Flashing, Beeps, Emails can be made to Authority including Security or State Police As, the need might be.

- B- Admission Module- Integrated with Fees Collection in Cash at Counter or by Online using Credit card through Payment Gateway deployment with the local banks. Provision for Online Admission so as to bring the No. of days to Minimum. This would include system generated scrutiny reports of detailed forms submitted by candidates & validated by system from uploaded documents. Same Complete Validity Report then, can be used by selection committee for direct interview with the panels or for Entrance Exam for admission.
 - i- We have made Provisions for using Multiple Payment Modes like Online Credit Card by Payment Gateway | Cash Deposit in Bank A/c of University | Cash Deposit at University Admission Counter, during a single Admission.
 - Only After Admin Approval on Scrutinised Candidate from Automatically Generated Scrutiny Report, will the candidate be permitted for Fee Payment. And, Only after Full & Final Fee Payment, Will the Admin generate Enrolment No. It is Also, Possible to Cancel the Student Enrolment after generating Enrolment No due to Any reason found to be true from Management. Upon Cancellation Part of Full Fee Paid can be reversed to the candidate. Thus, Closing his Relation to the University.
 - iii- Same Course is also having Provision for Adding | Modifying Schedules for Regular Class room Lectures, Assignments, Exams & Important Events like Sports or Cultural Meet. All Financial Records are taken cared by Integration to Economics s/w & According Wage Calculation are devised for each employee working in these scenarios.
 - iv- Further, Provisions are devised for completing Course Partially & to release its resources like Class room Resources & Teachers to be used for other Course.
 - v- This Provision is based upon, If Customer don't pay 100% in Advance then, Course work shall be completed only for the amount which Students have paid. Upon receiving remaining payment Course will be reassigned. Hence, providing Dynamic Course Completion v/s Due Payment Reports on Interactive ways on Dashboard, in the form of Pie Charts & Line Graphs.
 - vi- Fee Payment Receipt will be Automatically Generated once Project Completion happens This happens in case of 100% Advance Payment received from Customer.
 - vii- Fee Payment Receipt is Generated Automatically Once, Total Course Completion Cost Equals Candidate's Advance Payment.
 - viii- Provision is Also made, for making Course Completion on 100% Credit basis only Upon Admin Approval. Here, Candidate Payment shall not be compared but, after Course Completion the Fee Payment Receipt will be Generated Automatically. This Provision is for Specially Privileged Candidates upon Recommendations from Higher Level Ministry of Province | Country or upon Scholarship based Candidates.

- C- Books Keeping with Staff Payroll & Rest of Payments
 All Financial Modules are recommended to be Integrated with Economics s/w to be provided by us together with Entire s/w. However, Subscription charges can be borne by clients, if needed. Else, it can be included in s/w charges from us to clients.
- **D-** <u>E-Learning Module</u>- Its Provided with Online (Inranet & Internet) Conference & <u>E-Library</u> of Audio, Video, pdf & Any other Imp Data This gives Assignment Provisions with Audio Video Lectures, Notes, References to upload file from Teacher, Staff & to download from Students.
 - i- Students can comment the queries or can upload .txt or .amr. 3gp audio to ask the same. the same can be first uploaded as video, audio recorded from teacher & stays as readily available FAQ for next batch of students.

Thus Better than online Education!

- E- Exam Module Online Exam with Automatic Scheduling.
 - i- Possibly with Online Exam Paper in similar to IT Vendors like Microsoft Providing VCE files, to be taken up by each candidate appearing in exam room, with Immediate Results. Each student even for same batch or class will get different questions of same subject which reduces possibility of cheating & bribing.
 - ii- Here, If Online Exam is thought to be less viable OMR Scanned Exam Papers also can be provided to include in this module.
 - iii- By this implementation, Exam Results will be declared at same day of the Last paper completion from the Candidate. Which helps opening Admissions to next batch from next day itself.

This Will Drastically Transform Business Growth of University in the Community!

- **F-** <u>Crime Alert System</u>- Its Achieved by s/w integration to Surveillance Equipment. This is also in integration with Door Access Control Devices in order to generate All Alerts Types!
- G- Interactive Reporting Solution with Profit Forecasting- Since, Economics Integrations are used in The S/w we also can include **Business Intelligence** to Make the Possibilities!

Hence, Course for Student can be Started, Halted, Partially Completed, Fully Completed based on Advance received from Student in Partial, In Full or Entirely on Credit based.

The Dashboard shall be made available in Phase II. But, Now in Beta Version it is Disabled.

The Dashboard is having Provisions to Interactively View All Process Modules of University Management System. Dashboard is Interactive Links to other Vital, Project related Pages.

Dashboard is Planned in Following Manner-

1st Frame shall show Admission Fee Info Dynamically in the form of Pie Charts & Line Charts with Direct Links to respective Candidate Page. The Conclusion of Course shall happen by Fee Receipts Generation Link, shown on Admission Management Dashboard. This Frame Correlates to Phase I Development.

2nd Frame will show Exam Scheduled, Teacher Assignments to Course & their Salary Modules, In case they are paid on Lecture Based. It will also interactively show the Productivity of Each Employee so as to take respective measurement step. This Frame Correlates to Phase II Development. While Implementing Phase I, this will remain either Disabled or Available only for Viewing. Further functions to make this Dashboard Frame, Interactive, will require Phase II to be Developed.

3rd Frame will show Interactive Information upon E-Learning, E-Library & related Resources Correlating to Phase III Completion Considered, Inventory Management System. This Frame will have Interactive Graphs to Connect Resource Module thus, generating Automatic Order Report upon depletion of Resource below a critical availability level. In Phase I again, this Frame will on will Show Resource levels but will not be providing further provisions.

4th Frame will show Interactive Information regarding Crime Tracked & its Conclusions with Reports on All Alerts generated & sent to respective individual.



In Beta Version Model, Admission & All the Master Information that of Employee, Resources are Entered Manually from Intranet Admins or Staffs of the University.

In Phase I Since, Provision is kept for Students to Enter their Information with Facility to Certificates Upload & Request for Online Payment thus Finally, Generating Enrolment No & Thus, Also to be Interacted Online in real time by Sales Staff. It is Highly Recommended that Development of Internet based Student Website also to be Started in Parallel to Phase I. If This, Student facing Internet based website is Started, Not Only Online Real time Interaction will be possible. But Also, Instant Online Funds Transfer from Students to company's Bank Account will be Possible. Thus, Increasing the Sales Productivity many folds & help in making the University Management System Automatic for Phase IV Onwards.

Phase IV will take into Account for Fully Automating the Initial 3 Phases of University Management System. This will be Possible by incorporating Biometric Fingerprint Attendance Devices for Phase I & Phase II Implementation with Long Range Rfid Devices & CCTV Surveillance Devices for scanning & Locking Signals from Users & real time Tracking of Crime, minimising such incidents in Premises from Phase II & Phase III Implementation.

However, after Phase I & Student centric Internet based website construction, we will be able to Link University's Bank Accounts to Payment Gateway hence, making the Faster Payments. Same Facility can be extended in Phase II & Phase III for Employee Automatic Payroll Calculation & Salary Credit with Automatic Stock Order Payments to be Transferred from University's Bank Account to the Employees & Suppliers.

We also have Provisions for Using Business Intelligence & Analytics from Phase 4 Onwards, In order to Precisely Provide Business Growth Forecasting, Identifying No. of Alarming Situation & thus Providing Remedies in Necessary Situations.

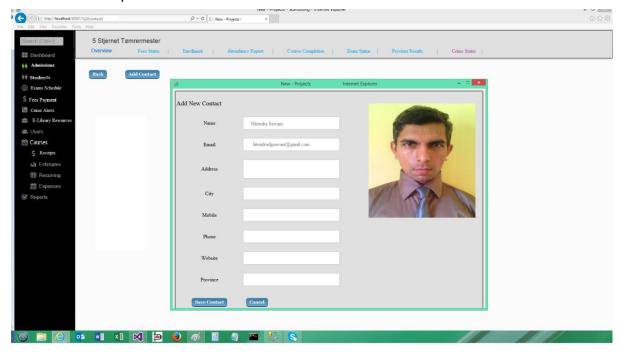
University Management Project Estimated Schedule, After Confirmation & Advance Payments-

45th Days: Beta Version Model – Few Data Entry Automation, Report Printing with Viewing.

50th Days: Phase II Development To Start.

Further Updates provided upon the Start of Phase I of University Management System.

Various Data Entry Forms in Phase I are as Follows-



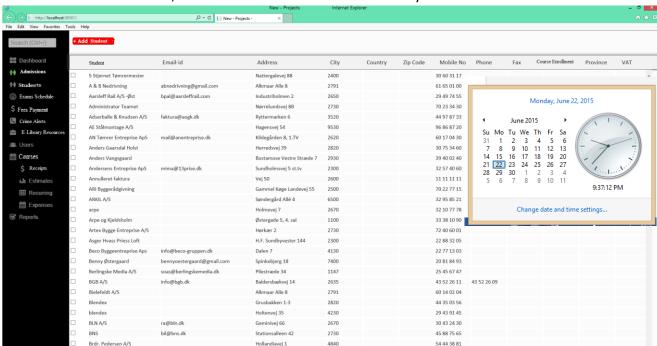
STUDENT ENROLLMENT PAGE. THIS IS PAGE-3 IN APPLICATION

Student Enrolments Id is Auto Generated Floating No. Representing Primary Key to be used in DBMS Integrations. Name, Phone, Email ID can be Mandatory fields without which Entry will not be saved in DBMS. Inquire Detail, will save the terms used in Field for Keyword Search options.

Certain Constraint Checks for Error & Exceptions Handling are:

- 1- SAVE CONTACT is Enabled, MODIFY is Disabled, VIEW is Enabled by Going BACK, DELETE is Disabled. Customer Id is Locked & Hidden Field & is always available at first click in Student Enrolments.
- 2- If Name is Blank And After Pressing SAVE Cursor Blinks at Name field as it is a Mandatory field. Until All Mandatory Fields Not Filled, SAVE Do Not Add Value in DBMS.
- 3- If Name is Blank And Pressing BACK for VIEW Student Id become Blank & SAVE is Disabled. Now Only, VIEW Remains Enabled. Here, Data Grid Shows All the Entries & After Clicking respective Row, All Info is Populated in Text Fields. SAVE will be Still Disabled. Hence, To Allow MODIFY or DELETE.
- 4- Since, DELETE will Erase Master Records which are Affiliated to Other Important Fields from FEES PAYMENT & EXAMS. Hence, DELETE Can Not be Made to Function for Record Deletion from DBMS. Instead, DELETE will keep Data In-Active So that, Upon Requirements from FEE RECEIPT or REPORTS the Record can be Re-Activated & Used in Normal way. *This is where we Provide Recycle Bin in the Project!*
 - a. Both the time of Pressing DELETE for a specific record & When Re-Activating the record Message will Pop Up, Informing the Action to the User.

- b. Besides Pop-up Message, Check box of "Not to Show the Message Again" Ensures No Irritation to User.
- 5- MODIFY Allows User to Add New Contents on Attributes but Can Not be Allowed to Replace Existing Values from Data Fields. Since, Old Values might be still in Co-relation to EXAMS, RESULTS, FEES PAYMENT & Other Important Reports.
 - a. Users when Pressing MODIFY, is Informed on this operation Every First time upon his login to the system in any day.
 - b. This Once in a day Pop-up while using MODIFY Ensures, User Appreciate the need to Safeguard the Existing Data Values. Hence, Ensuring Responsible Data Entry. Since, Pop-up is Only Appearing Once in a day while attempting MODIFY, Its doesn't irritates the user.
- 6- We can Navigate to All Important Students Issue from Above Page-3 To- FEE STATUS, ATTENDANCE, EXAMS REPORTS & CRIME STATUS If Any.



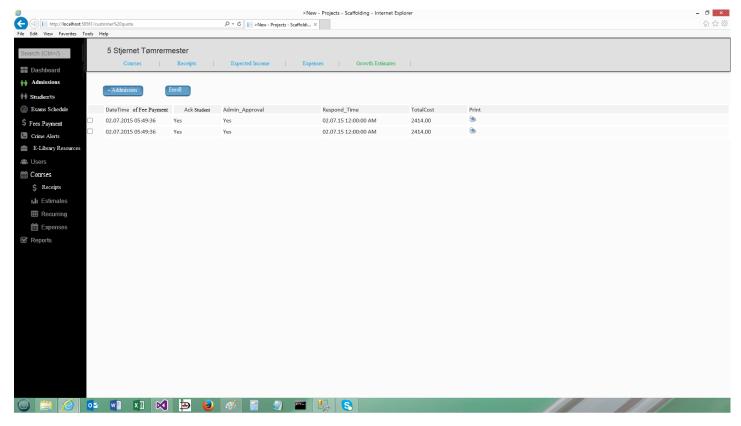
ADMISSIONS PAGE FOR ALL ADMISSIONS OF STUDENT IN SPECIFIC YEAR

THIS IS PAGE 1- DEFAULT PAGE FOR APPLICATION

This Page shows Scrutinised Applicants given Chance for Admission in their selected courses. When we select specific candidate, The Following Page-2 Appears To Know the Status of FEE PAYMENT. Only, After Admin Approval Can the Students can be Enrolled in Above Page-3.

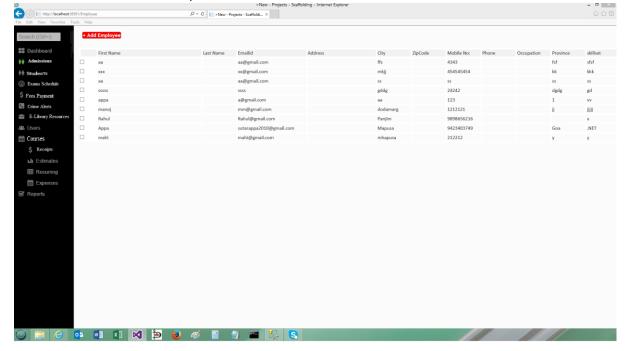
FEE PAYMENT Detail shows Auto Generated Time Stamp, Representing Primary Key to be used in DBMS Integration. Following Fields are Mandatory Fields Filled During the Admission & Fees Payment Process. ENROLL, will ADD selected FEE PAYMENT for Specific Student And, Will Open Above Enrolment Page.

MODIFY, VIEW and DELETE to work in Same Fashion as Mentioned Above as in the case of STUDENT ENROLLMENT.

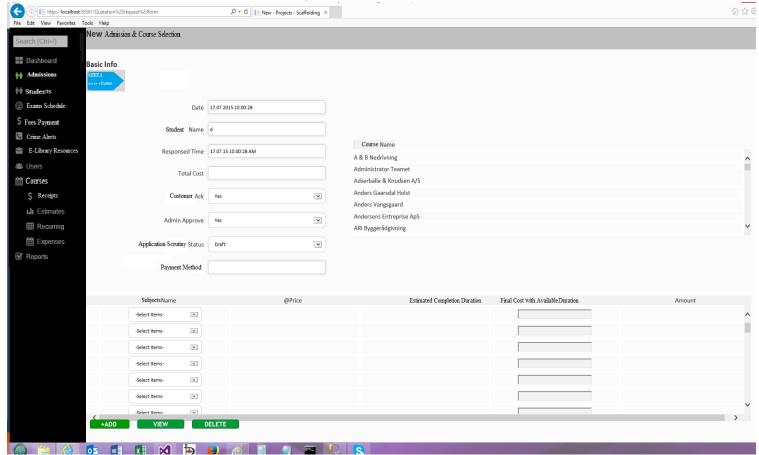


From This Above Page-2 we check for its SUBJECTS, PRINTING RECEIPTS, EXPECTED FUTURE INCOME from Selected Student, Possible Expenses for time period. Hence, the GROWTH ESTIMATES!

EMPLOYEE MASTER shall have similar functionality as for STUDENT ENROLMENT. This Page Will Further Lead to PAYROLL, COURSE ASSIGNMENTS & EXAMS SEGMENT.



After APPLICATION SCRUTINY is done, STUDENT COURSE MAPPING is Done with relevant informations like Total Fee he has to Pay.



Here, Rest Operations stay similar to Earlier Forms upon basic ADD, MODIFY, VIEW, DELETE function.

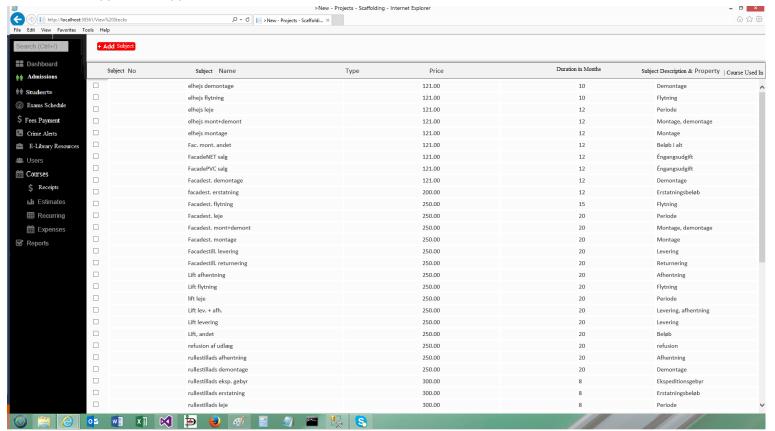
Here, STUDENT Information is Filled Automatically while Typing as In Auto Tab Completions as we keep Typing Name. The Specific STUDENT Info can be selected by Clicking the Specific Row from Drop Down. Right Side Data Grid Shows Courses. After Selecting Specific Course Specific Subjects with their detail in Lower Grid Appears. Due to Space Congestion Only Name is shown in this Example but, at working more Attributes will be available on Customer Text Fields.

Here, Subjects Items are Populated in same way on Right side Data grid so as to Fill the detail in Text Fields by Clicking Data grid or by Auto Tab Completion in respective fields. Its has Auto Calculation on Student Total Fee. This is Also Used to Intimate Student for Extra Fee He May have to Deposit After Enrolment Due to Any Possible Reason Like Switching or Selecting More Part Time Courses by Students or Increase in Price of specific Subject in the Course.

Once, This is ACKNOWLEDGED by Respective STUDENT, Admin has to Approve it so that it's Processed into DBMS of CONFIRMED ADMISSION giving its Entry in Above Page-2. Till then This Page is Only Updated to show Interactive Chats from Students & Admin.

The Respond Time is what is shown in Page-2 & is Mapped on Applicant Id, Course Id & Date: Time. This is a case of using Composite Key in DBMS.

Lastly, The Subject Master Table for a Course ware from where Student Can Select it to add in his Application Appears As Follows-



*. In Phase III Implementation Feature of Auto Key words Searching & Assigning the First Top Available Employee to Specific Course shall be Implemented where by Making the Management System Completely Automated from **Application Scrutiny, E-Library, Exam Scheduling**. Irrespective of Admin' Availability to do the Employee Selection & then Assignment. This is Function is Deduced for Use with **Business Intelligence & Analytics** for Accurate Business Forecasting.

In Phase I, RECEIPT will be generated dynamically after Completion of Admission for the Student.

Before Phase II it is Very much Possible to take the help of Payment Gateway Facilities on Student facing Internet website so as to Make Online Funds Transfer Possible. Hence, Not only Receipt will be generated automatically, but also the **payment shall happen in time**!

All Other Modules Are Not Designed At the Time But Shall Be integrated Further in This Project.

RECEIPT would be Presented as Following-

				First Previous 1 2
Course	Subjects	SKU \$	Type \$	Price \$
Deversus Software Inc.	iPhone 5s [?]	IP5s	Hardware	\$400.00-\$325.00 CAD/unit £440.00-£357.50 GBP/unit
Deversus Software Inc.	Mandatory Support Item [?]	MSPT	Support	\$60.00 CAD £66.00 GBP
Deversus Software Inc.	Optional Add-on Module [?]	OPT2	Add-ons	20% of Monthly Services
Deversus Software Inc.	Optional Support Module [?]	OPT1	Support	\$120.00 CAD £132.00 GBP
Deversus Software Inc.	Sample "Flat Fee Pricing" Item [?]	item-2	Sample Item Type 1	\$50.00 CAD £50.00 GBP
Deversus Software Inc.	Sample "Percentage Based" Item [?]	item-3	Sample Item Type 2	10% of Sample Item Type 1
Deversus Software Inc.	Sample "Tiered Per Unit Pricing" Item [?]	item-1	Sample Item Type 1	\$100.00-\$80.00 CAD/unit £100.00-£80.00 GBP/unit
Deversus Software Inc.	Sample Monthly Plan [?]	MTLY	Monthly Services	\$75.00-\$50.00 CAD/unit £82.50-£55.00 GBP/unit
Deversus Software Inc.	Server Software	SS1	Software	\$199.00-\$159.00 CAD/unit £218.90-£174.90 GBP/unit
Deversus Software Inc.	Socket [?]	socket	Monthly Services	\$0.00 CAD £0.00 GBP
Showing 11 to 20 of 34 entries				

- Software Engineering Conceptualisation, Documentation, DBMS Construction by Hitendra Sawant
- DBMS Integration & Management, USE CASE from ASP.NET by Appa Sutar
- Front End Construction with Design & Layout by Manoj Gawas

-Regards,

^{*} Thank you for your Attention, Hoping to Work on the Project As Soon As Possible.