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1. ABSTRACT

TITLE OF PROJECT: COLLEGE AUTOMATION TOOL (CAT)

Introduction:

CAT is used to administrate the entire College management web enabled. Which deals with student attendance, timetable, and examinations, staff information, Accounts, fees collections, welfare activities (games, sports), and progress records etc.

Project Analysis:

This application consists of following modules

1. Students Module
2. Staff Module
3. Accounts Module
4. Web Administration

Module I: Students Module:

- In the Student Module that maintains the complete student registration, hostel maintenance, Examination details and marks awarded.

Module II: Staff Module:

- In the Staff Module that maintains about the staff Information about the classes timetable, events, attendance etc.

Module III: Accounts Module

- In the Accounts module that contains Asset, Student fees details, payrolls of staff etc.

Module IV: Web Administration

- In the Web Administration module that contains about school information, student attendance, list of holidays, events, achievements, awards, sports information, examination information-hall tickets, marks awarded etc.

2.

Software requirements:

Operating System : Windows 7
Technology : .Net
Web Server : IIS
Database : SQL Server 2008
Software's : Microsoft Visual Studio 2012

Hardware requirements:

Hardware : Pentium based systems with a minimum of P4
RAM : 1 GB (minimum)

N.S.SEKHAR BABU

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3. ORGANIZATION PROFILE

Name of the Organization: ELECTRONICS CORPORATION OF INDIA LTD.

Website: <http://www.ecil.co.in/ecit/>

HISTORY

ECIL was setup under the Department of Atomic Energy on 11th April, 1967 with a view to generate a strong indigenous capability in the field of professional grade electronics. The initial accent was on total self-reliance and ECIL was engaged in the Design, Development, Manufacture and Marketing of several products with emphasis on three technology lines viz. Computers, Control Systems and Communications. Over the years, ECIL pioneered the development of various complex electronics products without any external technological help and scored several 'firsts' in these fields prominent among them being country's

- First Digital Computer
- First Solid State TV
- First Control & Instrumentation of Nuclear Power Plants
- First Earth Station Antenna
- First Computerized Operator Information System
- First Radiation Monitoring & Detection Systems
- First Automatic Message Switching Systems
- First Operation & Maintenance Center For E-108 Exchange
- First Programmable Logic Controller
- First Solid State Cockpit Voice Recorder
- First Electronic Voting Machines

The company played a very significant role in the training and growth of high caliber technical and managerial manpower especially in the fields of Computers and Information Technology. Though the initial thrust was on meeting the Control & Instrumentation requirements of the Nuclear Power Program, the expanded scope of self-reliance pursued by ECIL enabled the company to develop various products to cater to the needs of Defense, Civil Aviation, Information & Broadcasting, Telecommunications, Insurance, Banking, Police, and Para-Military Forces, Oil & Gas, Power, Space Education, Health, Agriculture, Steel and Coal sectors and various user departments in the Government domain. ECIL thus evolved as a multi-

product company serving multiple sectors of Indian economy with emphasis on import of country substitution and development of products & services that are of economic and strategic significance to the country.

VISION

To develop country in achieving self-reliance in strategic electronics.

MISSION

ECIL's mission is to consolidate its status as a valued national asset in the area of strategic electronics with specific focus on Atomic Energy, Defence, Security and such critical sectors of strategic national importance.

OBJECTIVE

- To continue services to the country's needs for the peaceful uses Atomic Energy, Special and Strategic requirements of Defence and Space, Electronics Security Systems and Support for Civil Aviation sector.
- To establish newer technology products such as Container Scanning Systems and Explosive Detectors.
- To explore new avenues of business and work for growth in strategic sectors in addition to working for realizing technological solutions for the benefit of society in areas like Agriculture, Education, Health, Power, Transportation, Food, Disaster Management etc.
- To progressively improve shareholder value of the company.
- To strengthen the technology base, enhance skill base and ensure succession planning in the company.
- To re-engineer the company to become nationally and internationally competitive by paying particular attention to delivery, cost and quality in all its activities.
- To consciously work for finding export markets for the company's products.

4. PROBLEM DEFINITION

The Workflow in Road Transport Authority is to maintain all the required applications from customers, details of employees and customers in the form of papers or files. A big problem arises, if those papers are lost, as they are essential for all the works to get done. Re-construction of all the lost work requires much time and more man power.

In order to make a perfect and secured workflow, we have to use new way, which is completely through online. This should include all the required tasks like Customers applying for vehicle registration, fitness certificate, learning license and their Renewals and Employees issuing all the certificates to customers who have applied for it. Admin has the details of all the employees, he gives the tasks to do to the employees.

To design this site, Security issues are to be considered with care, Providing complete security to all the users and data is essential.

5. SYSTEM ANALYSIS

System Analysis will be performed to determine if it is Feasible to design information based on policies and plans of the organization and on user requirements and to eliminate the weakness of the present system.

- The new system should be cost effective
- To augment management, improve productivity and services.
- To enhance user/system interface.
- To improve information quality and usability.
- To upgrade system reliability, availability, flexibility and growth potential.

1.1 EXISTING SYSTEM

All the details of the applicants are maintained as files and records in this system. There will be no online access between RTA people and applicants. Large amount of files and records are to be handled in this system. It does not provide accurate results and is not secure. It is not flexible in generating reports.

Drawbacks of Existing Systems:

- It includes much manual process and time consuming.
- It is not user friendly.
- Maintains local Database.
- It does not generate accurate reports.
- Not secured.
- Searching particular information of an applicant will be difficult as there is large collection of files.
- More time needed.
- If a paper is lost, the data or a detail of an applicant is lost.

1.2 PROPOSED SYSTEM

To overcome the problems in the existing system a new RTA services “Road Transport Authority” is proposed after study of system wherein the details are get stored in the RTA database. Through online, RTA can convey any messages to all the applicants within a short time span.

Advantages:

- Facilities ease of operation.
- Ensures data integrity and security.
- Less manpower
- Generate accurate reports.
- Accurate handling of multiple details of multiple customers.
- Modification of data can be done if there is any change in details.
- Searching of required data of any applicant can be done easily.
- There is no chance of data loss as it is stored in a database.
- Time consumption is too low in this system along with less man power required.
So, more work can be done in less time.

6. FEASIBILITY STUDY

Feasibility is a practical extent to which a project can be performed successfully. To evaluate feasibility, a feasibility study is performed, which determines whether the solution considered to accomplish the requirements is practical and workable in the software or not. Such information as resource availability, cost estimate for software development, benefits of the software to organization, and cost to be incurred on its maintenance are considered. The objective of the feasibility study is to establish the reasons for developing a software that is acceptable to users and adaptable to changes.

1.3 TYPES OF FEASIBILITY:

Economic Feasibility:

Economic analysis is the most frequently used method for evaluating the effectiveness of a new system. More commonly known as cost/benefit analysis, the procedure is to determine the benefits and savings that are expected from a candidate system and compare them with costs. If benefits outweigh costs, then the decision is made to design and implement the system. An entrepreneur must accurately weigh the cost versus benefits before taking an action.

“All the software’s are available for free of cost. Hence the project is economically feasible.”

Operational Feasibility:

Operational feasibility is a measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development. This feasibility is dependent on human resources and involves visualizing whether or not the software will operate after it is developed, and be operated once it is installed.

“The project is operationally feasible since it can be operated in any web browser and the user need not have any prior knowledge of the software used for the project.”

Technical Feasibility:

Technical Feasibility assesses the current resources and technology, which are required to accomplish user requirement in the software within the allocated time and for this, the software development team ascertains whether the current resources and technology can be upgraded or added in the software to accomplish specified user requirements. Under technical feasibility the developer should analyze the technical capabilities of the software development team members and determine whether the relevant technology is stable and established.

“ECIL provides sufficient technology to accomplish the specified user requirements.”

Legal feasibility:

Determines whether the proposed system conflicts with legal requirements, e.g. a data processing system must comply with the local data protection Acts. This factor help the system developers not to get law suited.

Schedule feasibility:

A project will fail if it takes too long to be completed before it is useful. Typically this means estimating how long the system will take to develop, and if it can be completed in a given time period using some methods like payback period. Schedule feasibility is a measure of how reasonable the project timetable is. Given our technical expertise, are the project deadlines reasonable? Some projects are initiated with specific deadlines. You need to determine whether the deadline is a mandatory or desirable.

7. PROJECT OVERVIEW

The primary aim of the project, RTA (road transport authority) is to give all the required information regarding registrations of vehicles, checking vehicle condition, issuing fitness certificate and learning license to the customers. In this, the above task can be done online for easy access and clients can receive all his documents issued by RTA.

First, all the customers who need a service from RTA should get registered in RTA's website. Employees are appointed and are given tasks by Admin. The primary and optional necessary details of customers and employees are stored in database. Then, all customers should apply by giving some personal details for registration certificate for their vehicles, fitness certificates and learning license. They can see their status whether it is accepted by employee or rejected by the employee in their application status by entering the unique registration number issued to him/her. If the status accepted then he/she can take their certificate. The certificate has a unique registration number which is used further for any reference. Next, the site also maintains a module for renewal of certificates. This is repeated for every particular period of time i.e., few months or years. After that period of time from issue of registration, the customer should again apply for its renewal.

For fitness application, the customer has to provide all the questioned details based on vehicles condition. To check the correctness of the given information, the authority people check the physical condition of vehicle. If mismatching of given details and actual condition occurs, the issue of fitness certificate is rejected. If they accept, customer can take a print out from site. In all the application forms, RTA asks for the date and time for the test. Here, registration number is used as a reference. For learning license, customer should write a test, if he passes, he can get a print out. Else, it gets rejected.

1.4 PROJECT MODULES:

Module 1: Vehicles Registration & Renewal:

This module consists of a process which is used to get a registration number of a vehicle and thus, the vehicle gets registered in the government record. For this, the person should give all his details including personal and questioned information to RTA through online. This data is stored in a database. Then, rta checks all the given details and if they seem to be correct, the registration is done by allotting a unique number to that vehicle. The registration number is used as a reference for all the further purposes. For all kinds of security reasons, this registration number is valid only for some specific period of time. After that period, renewal of that certificate is to be done. The Registration number is invalid after that period of time, if it is not renewed. So, this module includes the task in which a customer can apply for renewal of vehicle registration. Then, RTA issues a certificate of renewal which has a new expiry date.

Module 2: Fitness Certificate & Renewal:

In this, a customer can apply for a fitness certificate of his vehicle, which describes its physical condition. So, in application form, a customer is asked to give all the possible details regarding vehicles condition. After that, RTA people checks the condition personally on the given date in the application form. If they find the condition perfect, they issue a fitness certificate. This is also valid for a specific period. So, after that period, customer should again apply for renewal.

Module 3: Issue of Learning License:

In this, the customers who wish to get a learning license should apply for it, in which they have to give date and time to attend a test. The applicants write the test and if they passes in it, they will be issued their learning license. The license has a unique number which is used as a reference to apply for original license.

8. DEFINITIONS, ACRONYMS AND ABBREVIATIONS

ABBREVIATIONS:

CED : Computer Education Division
ECIL : Electronics Corporation of India Limited
HTTP : Hypertext Transfer Protocol
HTML : Hyper Text Markup Language
URL : Uniform Resource Locator
SRS : Software Requirements Specification
WWW : World Wide Web
RTA : Road Transport Authority

DEFINITIONS:

HTTP:-

Hypertext Transfer Protocol is the set of rules for transferring files text, graphic images, sound, video, and other multimedia files on the World Wide Web.

HTML:-

Hypertext Markup Language (HTML) is a language to specify the structure of documents for retrieval across the Internet using browser programs of the Worldwide Web.

XML:-

The Extensible Markup Language (XML) is a general-purpose markup language. It is classified as an extensible language because it allows its users to define their own tags.

9. SYSTEM REQUIREMENTS

1.5 Software Requirements:

Operating system : Windows XP server pack 2
Technology : .Net
Web Server : IIS
Database : SQL server 2005
Software : Microsoft Visual studio 2005, MS Office 2003

1.6 Hardware Requirements:

Hardware : Pentium based System with a minimum of P4
RAM : 256MB (Minimum)

10. TECHNOLOGIES

1.7 Introduction to .net:

The .NET Framework introduces a completely new model for the programming and deployment of applications. .NET is Microsoft's vision of "software as a service", a development environment in which you can build, create, and deploy your applications and the next generation of components, the ability to use the web rather than your own computer for various services through the .net services. Microsoft introduced great technologies like COM, DCOM, COM+ etc. to enable reuse of Software. Although these technologies are very powerful to reuse Software, they required a huge learning curve. According to this aspect, Microsoft realized that its time to come up with a new Technology, a better one, an easier one, a new Framework, within which each Programming Task is easy accomplished.

1.7.1 .NET FRAMEWORK:

Microsoft changed all complex tasks with the new .NET Framework. That was a huge advantage for all developers. Most of the Win32 API was now accessible through a very simple Object Model. Most of the features and functions of C++ were added to Visual Basic. A new Programming Language C# was introduced, which offered flexibility and productivity. ASP.NET also called ASP+ replaced ASP.

It provides the easiest and most scalable way to build, deploy and run web services. ASP.NET server controls enable an HTML-like style of declarative programming that let you build great pages with far less code than with classic ASP. VB, C++ and C# Code can be used in other languages f. e. code written in VB can be easily used in C# or in VC++. Also another benefit is that you can step between the languages in the debugger.

.NET COMPILATION STAGES

The Code written in .NET isn't compiled directly to the executable, instead .NET uses two steps to compile the code. First, the code is compiled to an Intermediate Language called Microsoft Intermediate Language (MSIL). Second, the compiled code will be recompiled with the Common Language Runtime (CLR), which converts the code to the machine code. The basic Idea of this two stages was to make the code language independence.

1.7.2 FEATURES OF THE COMMON LANGUAGE RUNTIME:

The common language runtime manages memory, thread execution, code execution, code safety verification, compilation, and other system services. These features are intrinsic to the managed code that runs on the common language runtime.

The runtime enforces code access security. For example, users can trust that an executable embedded in a Web page can play an animation on screen or sing a song, but cannot access their personal data, file system, or network. The security features of the runtime thus enable legitimate Internet-deployed software to be exceptionally rich.

The runtime also enforces code robustness by implementing a strict type-and-code-verification infrastructure called the common type system (CTS). The CTS ensures that all managed code is self-describing. The various Microsoft and third-party language compilers generate managed code that conforms to the CTS. This means that managed code can consume other managed types and instances, while strictly enforcing type fidelity and type safety. In addition, the managed environment of the runtime eliminates many common software issues.

The runtime also accelerates developer productivity. For example, programmers can write applications in their development language of choice, yet take full advantage of the runtime, the class library, and components written in other languages by other developers. Any compiler vendor who chooses to target the runtime can do so. Language compilers that target the .NET Framework make the features of the

The runtime is designed to enhance performance. Although the common language runtime provides many standard runtime services, managed code is never interpreted. A feature called just-in-time (JIT) compiling enables all managed code to run in the native machine language of the system on which it is executing. Meanwhile, the memory manager removes the possibilities of fragmented memory and increases memory locality-of-reference to further increase performance.

Finally, the runtime can be hosted by high-performance, server-side applications, such as Microsoft® SQL Server™ and Internet Information Services (IIS). This infrastructure enables you to use managed code to write your business logic, while still enjoying the superior performance of the industry's best enterprise servers that support runtime hosting.

1.7.3 .NET FRAMEWORK CLASS LIBRARY:

The .NET Framework class library is a collection of reusable types that tightly integrate with the common language runtime. The class library is object oriented, providing types from which your own managed code can derive functionality. This not only makes the .NET Framework types easy to use, but also reduces the time associated with learning new features of the .NET Framework. In addition, third-party components can integrate seamlessly with classes in the .NET Framework.

For example, the .NET Framework collection classes implement a set of interfaces that you can use to develop your own collection classes. Your collection classes will blend seamlessly with the classes in the .NET Framework.

For example, you can use the .NET Framework to develop the following types of applications and services:

- Console applications.
- Windows GUI applications (Windows Forms).
- ASP.NET applications.
- XML Web services.
- Windows services.

1.7.4 .NET FRAMEWORK ARCHITECTURE:

VB	C#	C++	JavaScript	J#
Common Language Specification (CLS)				
	ASP.NET			Windows Forms
Web forms	web services			
ADO.NET and XML				
Base Class Library				
Common Language Runtime				
Operating System				

1.7.5 WEB SERVICES:

Web Services provide data and services to other applications.

Future applications will access Web Services via standard Web Formats (HTTP, HTML, XML, and SOAP), with no need to know how the Web Service itself is implemented.

Web Services are main building blocks in the Microsoft .NET programming model.

1.7.6 APPLICATIONS OF .NET:

.NET is used for various purposes. Some of the applications of .NET are:

- Windows Applications – Single user interface, used for designing the web pages.
- Web Applications – Multi-user access application.
- Web Services – Application to Application.
- Console Applications – These Applications are executed in DOS mode.
- Mobile Applications – These are wireless devices, Just as web applications.
- Smart Devices - These are wireless devices, Just as web applications.
- Class Libraries – It is a Collection of classes that we build on a project/program and complied as data link layer.

1.7.7 COMPONENTS:

The components are:

- Common Language Specification.
- Common Type System.
- Garbage Collector.
- Exception Handler.
- MSIL code.
- Security: It is achieved by code access system.

MANAGED CODE : It is understandable by Common Language Runtime.

UNMANAGED CODE: It is not understandable by Common Language Runtime.

1.7.8 APPLICATIONS ARCHITECTURE:

Collection of all programs is an Application.

- Each Application has 3 layers.
 - PRESENTATION LAYER: Designing of all the screens is done.
 - BUSINESS LOGIC LAYER: Coding is done here.
 - DATABASE LAYER: Storage of required data.

Different types of Architecture are:

- ▶ 1-tier Architecture
- ▶ 2-tier Architecture
- ▶ 3-tier Architecture
- ▶ n-tier Architecture

The arrangement of all the three layers is architecture of application. This arrangement is done in database which acts as backend.

We used .NET with c#, which is front end and database is backend.

1.7.9 CHALLENGES OF .NET:

Whether you are an experienced .NET developer or considering your first .NET program, it is essential that you learn to conquer the challenges you face when developing test and control applications on the .NET platform. With the emergence of .NET in 2002, Microsoft introduced a completely new technology that brings many benefits to engineers, especially for Web and database connectivity. As with many disruptive technologies, .NET presents new challenges, especially because it was not designed from a test and control engineer's perspective, but from that of a system and IT developer.

Some of all the challenges of .NET are:

- Language Interoperability.
- Language Independence.
- Platform Independence.
- Device Independence.
- Security Independence.
- Globalization and Localization.

1.7.10 BENEFITS:

The Benefits of .NET

.NET brings a completely new set of benefits to your applications, including connectivity to the Web via Web services, support for many languages, object orientation, and a managed environment with garbage collection. Web services enable instant communication between distributed applications, allowing different departments to share test data over common standards such as HTTP and XML. With support for more than 20 languages including C#, Visual Basic .NET, and FORTRAN .NET, .NET provides a framework for development teams to share and reuse code from multiple programming languages in a single application. Object orientation is another major benefit of .NET, allowing programmers to encapsulate real-world test hardware, such as data acquisition devices and instruments, as objects. For example, a data acquisition class could contain properties such as sampling rate and methods such as read. In addition, .NET

handles many low-level tasks such as memory management -- programmers can allocate new memory on demand, and then rely on the garbage collector to dispose of the memory when it is no longer needed.

With these broad benefits, however, come challenges. When .NET was designed, the needs of test and control engineers were not at the forefront. Here are some common challenges that you may face, and how to successfully conquer them.

The following list includes some benefits of having the .NET Framework installed:

- **Easier installation of commercial applications**

Many commercial applications from Microsoft and from third-party companies rely on the .NET Framework to support their core functionality. If you have the .NET Framework installed, commercial applications are easier to install.

- **Easier updates**

After the .NET Framework is installed, it is updated automatically by the Microsoft Update service. If you receive Automatic Updates through Control Panel, any versions of the .NET Framework that are installed on the computer will always be up to date with the latest service packs.

The following are only some new features that are available in the .NET Framework 3.5:

- WCF and WF integration
- Durable WCF services
- Partial trust support for WCF in targeted scenarios
- WCF Web programming model (JSON)
- WCF Syndication (Atom and RSS)
- WF rules improvements
- WCF interoperability for updated standard XAML Browser Applications (XBAPs)
- WPF Interactive 3D API and 2D on 3D API
- Increased WPF XBAP integration with browsers to enable unified cookie access
- WPF UI Add-Ins Model
- Firefox support for XBAPs

For more information about the Microsoft .NET Framework, visit the following MSDN Web site: <http://msdn2.microsoft.com/en-us/netframework/default.aspx>

1.8 Introduction of SQL server:

Microsoft SQL Server is a [relational database server](#), developed by [Microsoft](#): it is a software product whose primary function is to store and retrieve data as requested by other software applications, be it those on the same computer or those running on another computer across a network (including the Internet). There are at least a dozen different editions of Microsoft SQL Server aimed at different audiences and for different workloads (ranging from small applications that store and retrieve data on the same computer, to millions of users and computers that access huge amounts of data from the Internet at the same time).

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Primary key: Primary key should not contain null values and a table allows only one primary key in database.

Foreign key: It is a primary key in one table and is used as reference key in another table.

Unique key: It is similar to primary key but the difference is: it allows null values.

11. SYSTEM DESIGN

1.9 UML DIAGRAMS:

Unified Modeling Language (UML) is a standardized general-purpose modeling language in the field of object-oriented software engineering. The standard is managed, and was created, by the Object Management Group (OMG). It was first added to the list of OMG adopted technologies in 1997, and has since become the industry standard for modeling software-intensive systems.

UML includes a set of graphic notation techniques to create visual models of object-oriented software-intensive systems.

The Unified Modeling Language (UML) is used to specify, visualize, modify, construct and document the artifacts of an object-oriented software-intensive system under development.

USE CASE DIAGRAM:

A use case is a set of scenarios that describing an interaction between a user and a system. Use case is used in almost every project. They are helpful in exposing requirements and planning the project. During the initial stage of a project most use cases should be defined, but as the project continues more might become visible.

CLASS DIAGRAM:

Class diagram are widely used to describe the types the types of objects in a system and their relationships. Class diagrams model class structure and contents using design elements such as classes, packages and objects. Class diagrams describe three different perspectives when designing a system, conceptual, specification, and implementation. These perspectives become evident as the diagram is created and help solidify the design. Classes are composed of three things: a name, attributes, and operations.

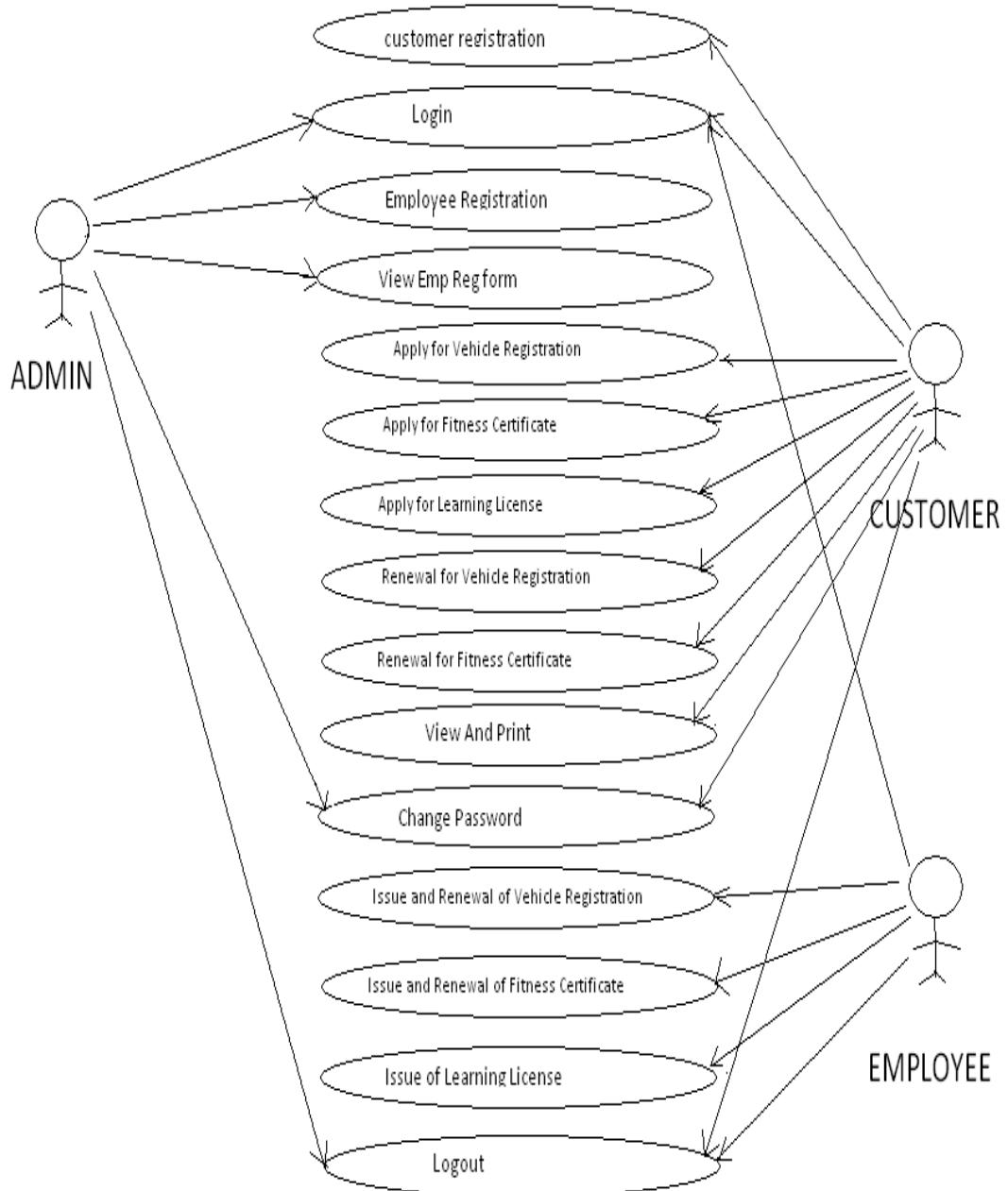
ACTIVITY DIAGRAM:

Activity diagram describe the workflow behavior of a system. Activity diagrams are similar to state diagrams because activities are the state of doing something. The diagrams describe the state of activities by showing sequence of activities performed. Activity diagram can show activities that are conditional or parallel. Activity diagrams should be used in conjunction with other modeling techniques such as interaction diagrams, state diagrams. The main reason to use activity diagram is to model the work flow behind the system being designed.

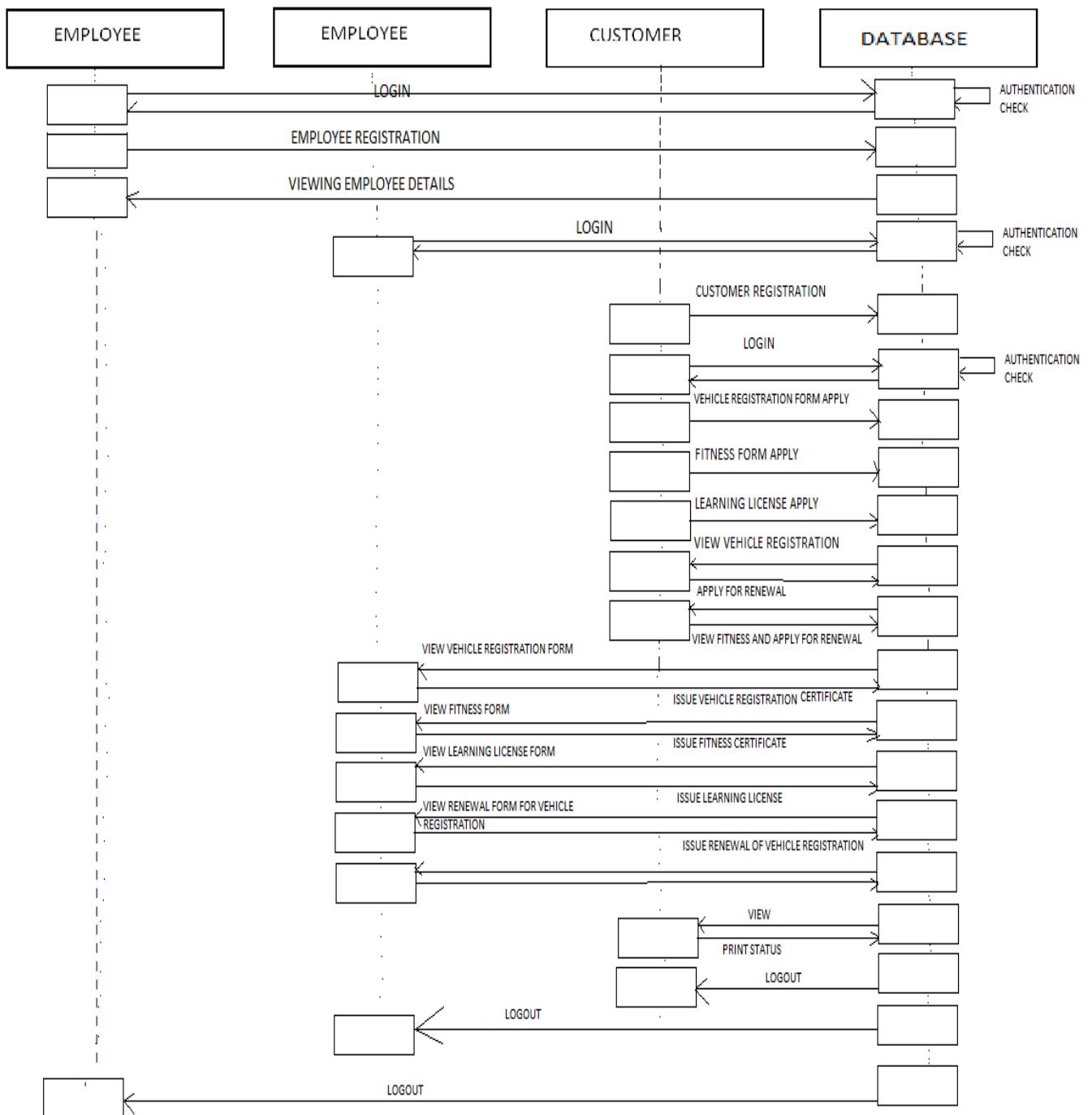
SEQUENCE DIAGRAM:

The sequence diagram is used primarily to show the interaction between objects in the sequential order that those interactions occur. Much like the class diagram, developers typically think sequence diagrams were meant exclusively for them. However, an organization business staff can find sequence diagrams useful to communicate how the business currently works by showing how various business objects interact.

1.10 Usecase diagrams:

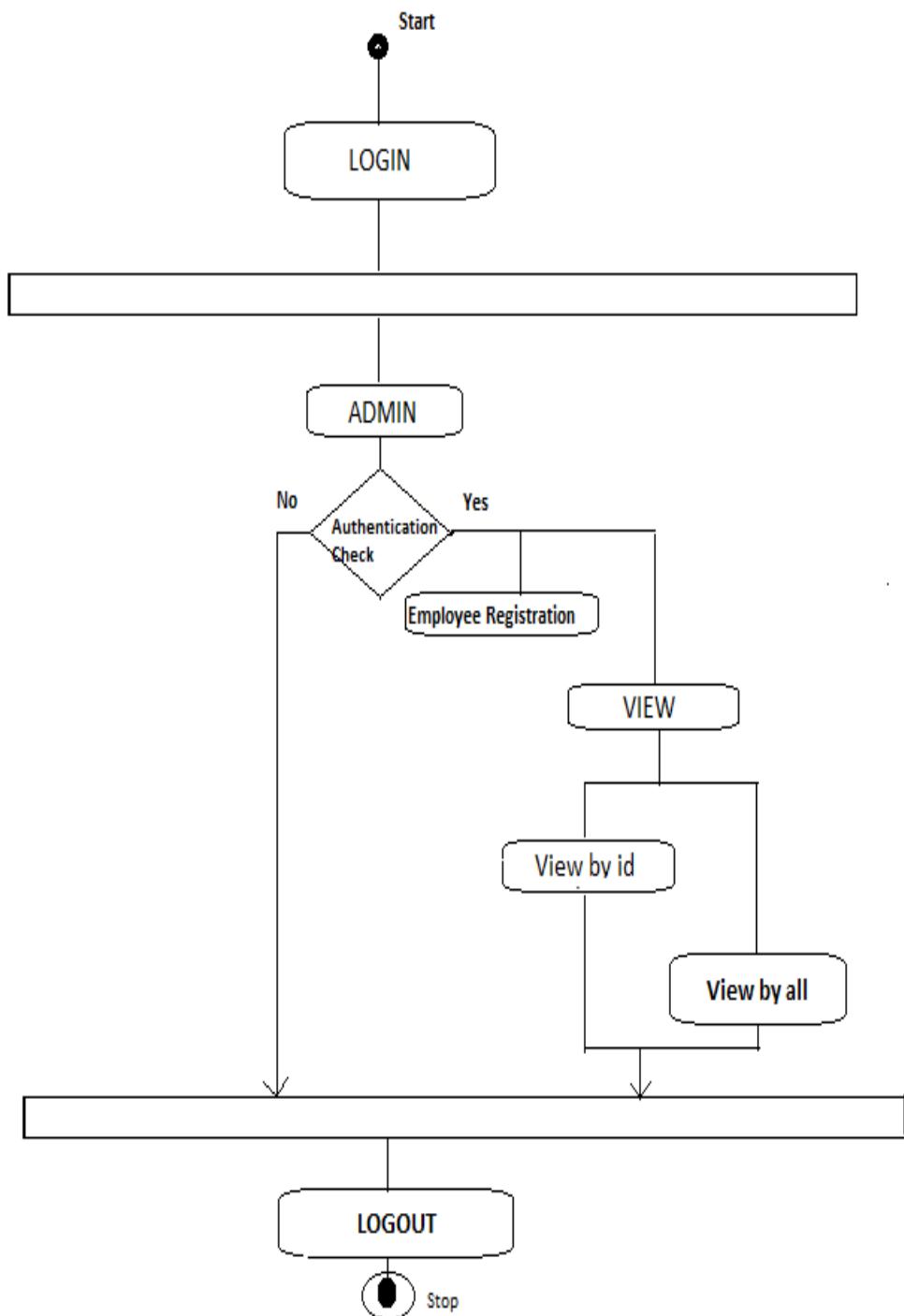


1.11 Sequence Diagrams:

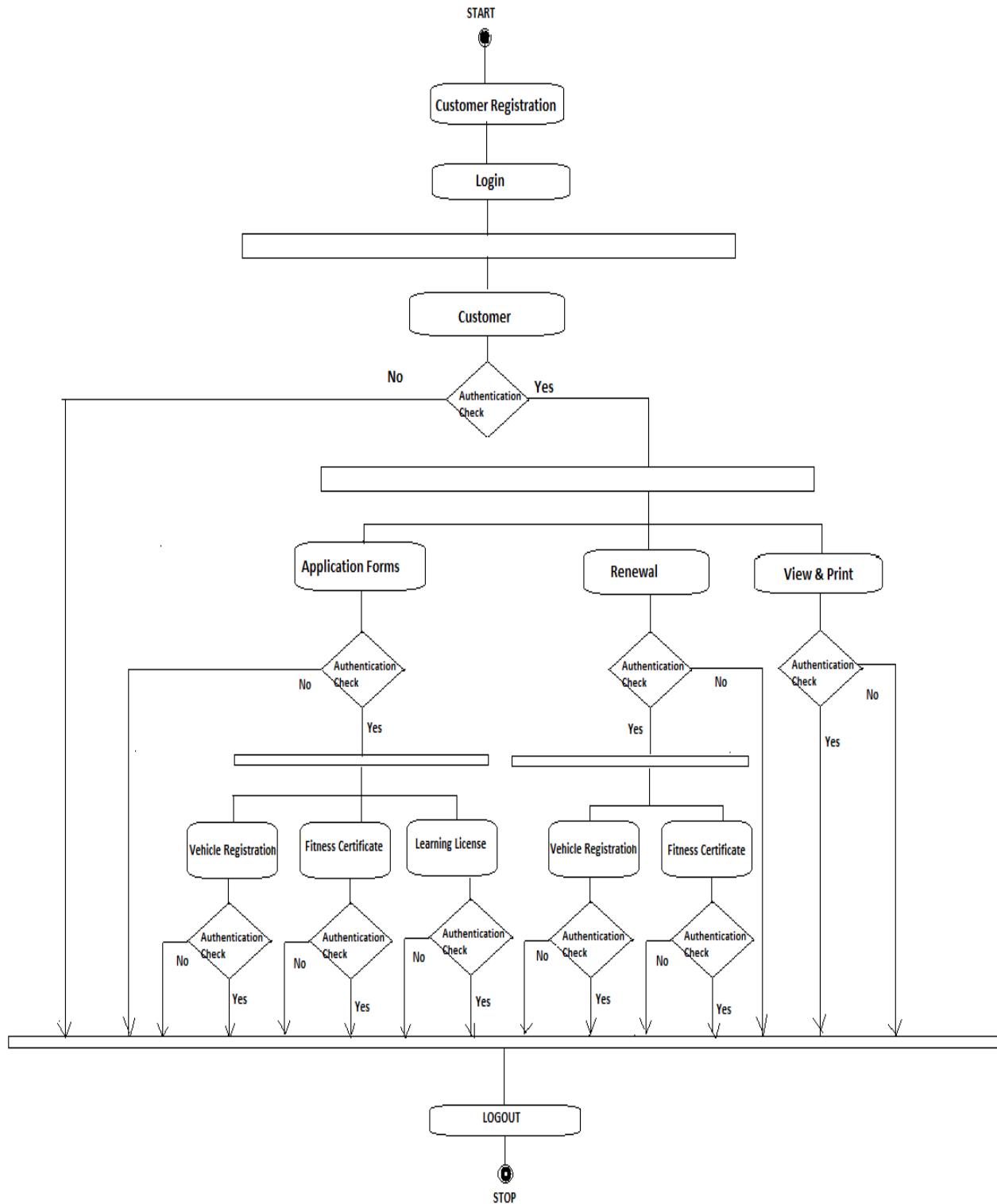


1.12 Activity Diagrams:

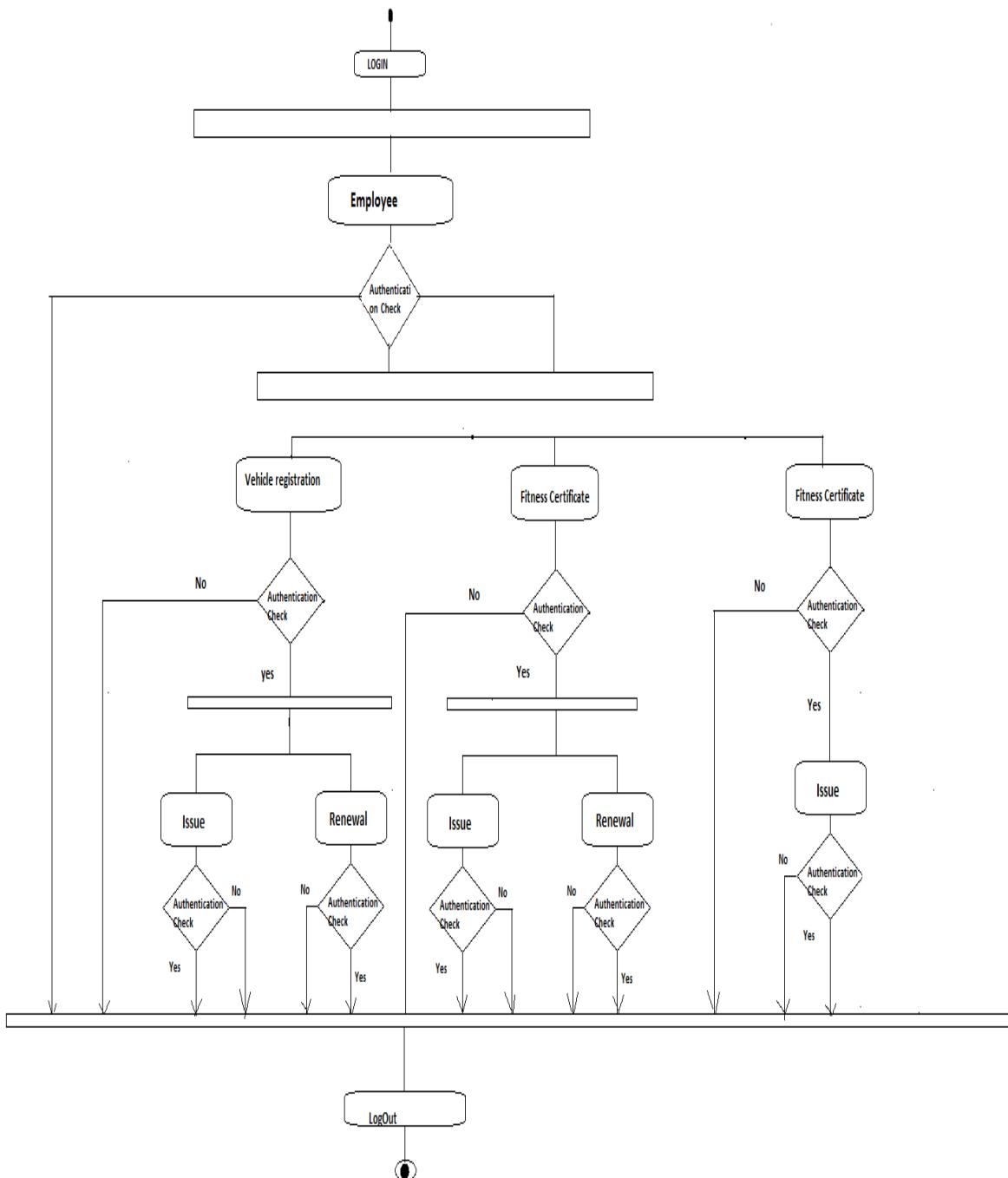
(1) Admin:



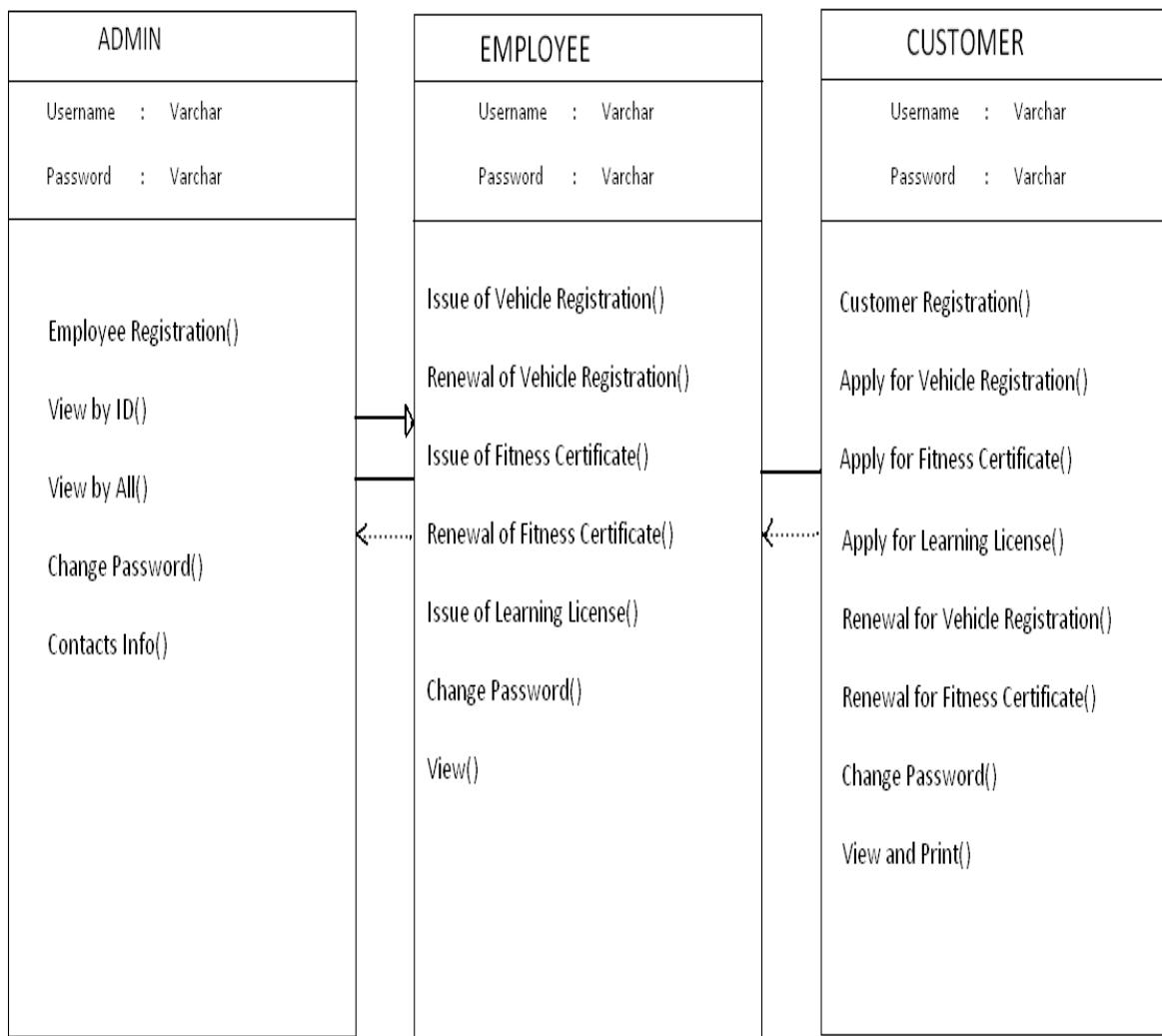
(2)Customer:



(3)Employee:

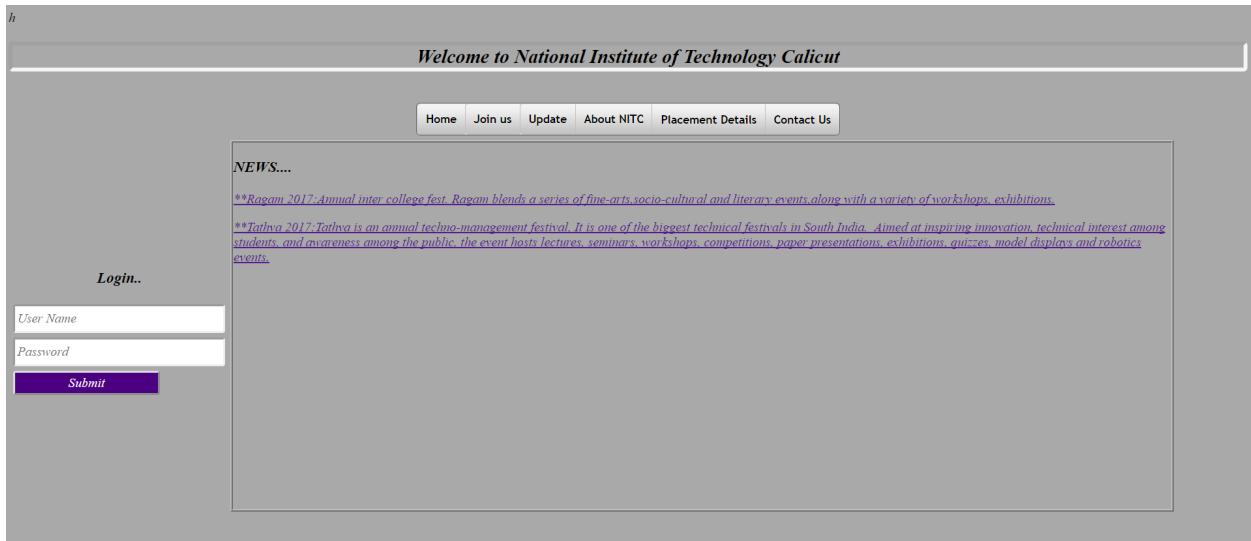


1.13 Class Diagrams:



12. SCREENS

Home PAGE



USER NEW REGISTRATION

h

Welcome to National Institute of Technology Calicut

Home Join us Update About NITC Placement Details Contact Us

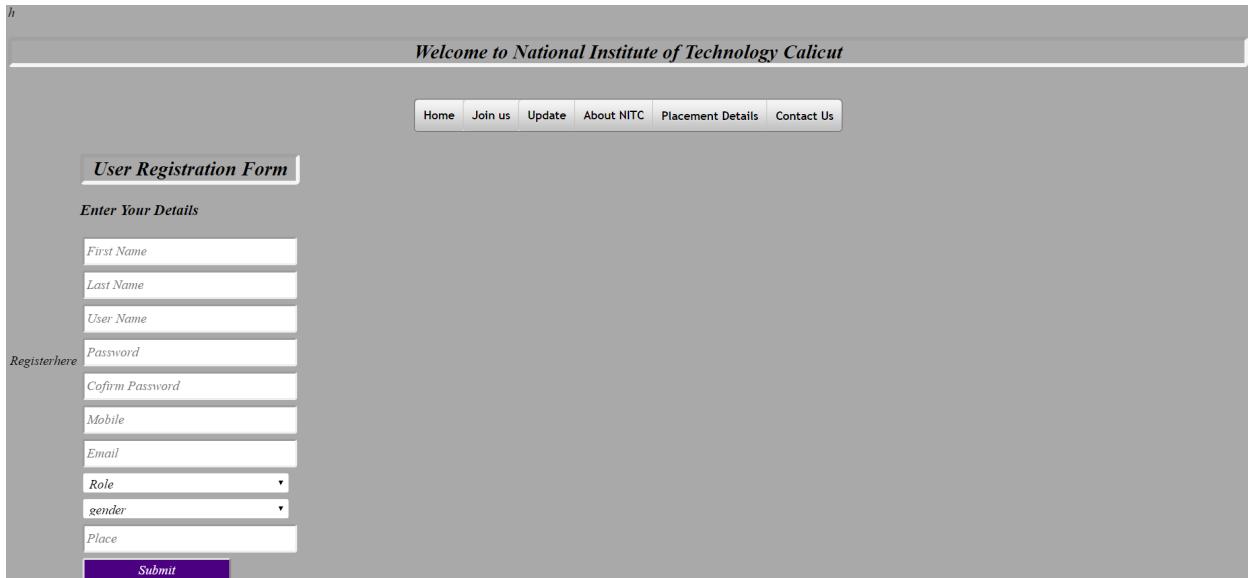
User Registration Form

Enter Your Details

First Name
Last Name
User Name
Password
Confirm Password
Mobile
Email
Role
gender
Place

Register here

Submit



STUDENT HOME

Welcome to National Institute of Technology Calicut

Home Semester Registration Administration Workshops view

Registration Details

cgpa	branch	sem
1	1	1

attendance

1

Course- wise marks

c1	c3	c2	c4	c5	c6
1	1	1	1	1	1

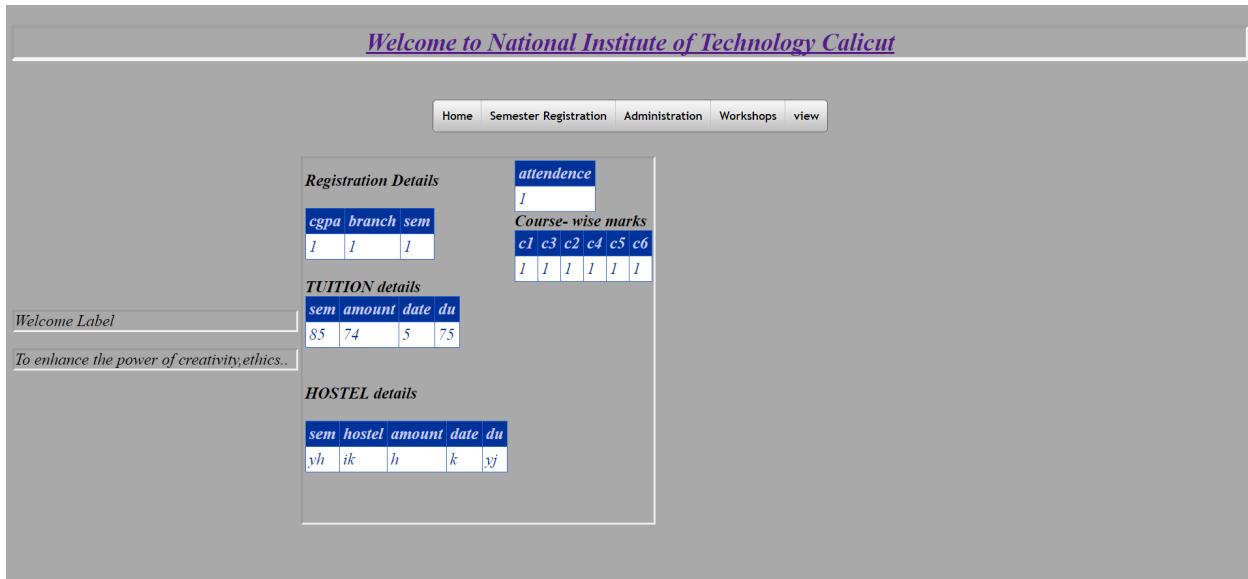
TUITION details

sem	amount	date	du
85	74	5	75

HOSTEL details

sem	hostel	amount	date	du
yh	ik	h	k	yj

Welcome Label
To enhance the power of creativity, ethics..



HOSTEL FEE ENTERING PAGE

Welcome to National Institute of Technology Calicut

[Home](#) [Semester Registration](#) [Administration](#) [Workshops](#) [view](#)

Fee Paymet Details

Enter Your Details

<i>Welcome Label</i>	<i>Semester</i>
<i>To enhance the power of creativity,ethics..</i>	<i>Hostel</i>
	<i>AMOUNT</i>
	<i>Date</i>
	<i>DU Number</i>

submit

WORKSHOPS PAGE

Welcome to National Institute of Technology Calicut

[Home](#) [Semester Registration](#) [Administration](#) [Workshops](#) [view](#)

Welcome Label

To enhance the power of creativity,ethics..

**Cloud computing
**Robotics
**Machine learning
**AI
**big data
**electronics
**Satellite communication
**database management
**android
**debian
**selenium

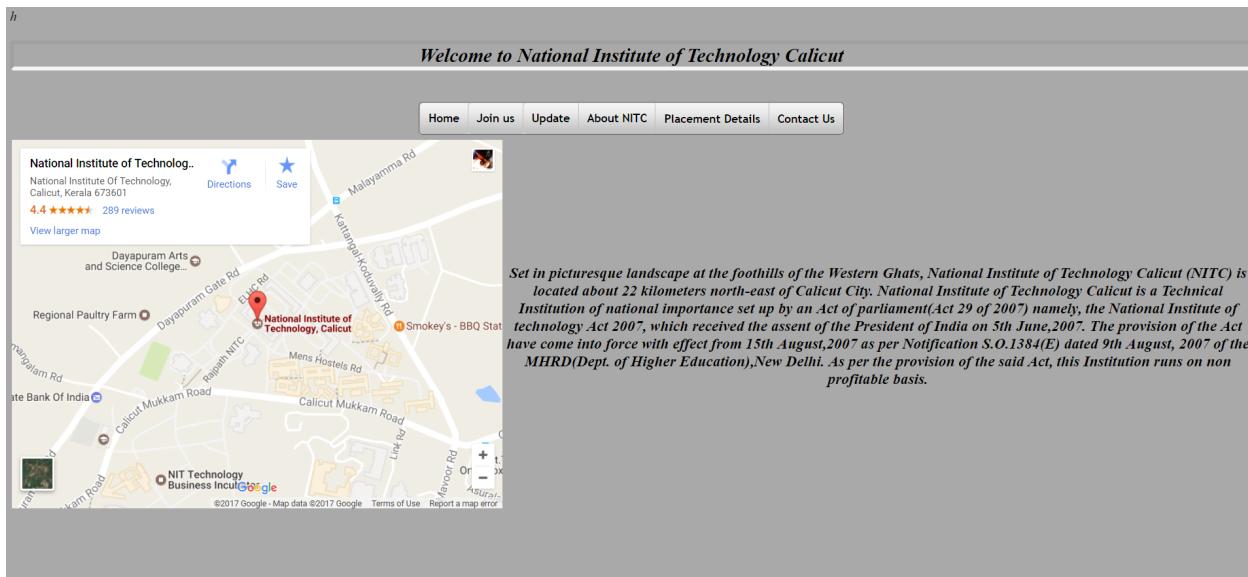
PLACEMENTS PAGE

Welcome to National Institute of Technology Calicut

Home Join us Update About NITC Placement Details Contact Us

OUR COMPANIES	REGISTER HERE	Achievements
**GOOGLE **FACEBOOK **MICROSOFT **TCS **WIPRO **COGNIZANT click company to get their requirements **LENOVO **DELL **APPLE **HP **INTEL	<input type="text" value="UserName"/> <input type="text" value="CGPA"/> <input type="text" value="Company's Name"/> <input type="text" value="Resume link"/> <input type="button" value="submit"/>	

ABOUT



STAFF HOME

Welcome to National Institute of Technology Calicut

[Home](#) [View](#) [Student](#) [Contact Us](#)



welcome to your staff page.....
 We teach our children to share, to cooperate, to play nicely--to be good citizens who work together to make their world a better place. In business, we emphasize teamwork, encourage community spirit, and build relationships. Yet the traditional picture of teaching is an insulated classroom where teachers are left alone to do their jobs, with an emphasis on individualism and isolationism. Why don't we make it easier for our children's teachers to have the same opportunities that we demand for our children and in our professional lives? Teachers often aren't given the opportunity to collaborate with their peers, and (I would argue) they, perhaps more than any other professionals, benefit from professional collaboration and support. And, by extension, the children benefit as well.

STAFF VIEW

Welcome to National Institute of Technology Calicut

[Home](#) [View](#) [Student](#) [Contact Us](#)



Time Table

column1	column2	column3	column4
elhc-203	nlhc-401	eclc-802	ssl-305

Pay Slip

month	gross	cuts	net
april	1000000	1000	999000

STAFF STUDENT PAGE

Welcome to National Institute of Technology Calicut

Home View Student Contact Us

Enter marks of student

Student's name
Course 1
Course 2
Course 3
Course 4
Course 5
Course 6
Attendance

Submit



CONTACT PAGE

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Home Join us Update About NITC Placement Details Contact Us

xxxx@nitc.ac.in

ACCOUNTANT HOME

Welcome to National Institute of Technology Calicut

Home Student Staff

Accountants and auditors prepare and examine financial records. They ensure that financial records are accurate and that taxes are paid properly and on time. Accountants and auditors assess financial operations and work to help ensure that organizations run efficiently.



ACCOUNTANT PAYING SLIP

Welcome to National Institute of Technology Calicut

Home Student Staff

pay slip..

staff's name
month
gross_amt
cuts_amt
net



ADMIN HOME



ADMIN STUDENT PAGE

Welcome to National Institute of Technology Calicut

Home Files Student Events DEL

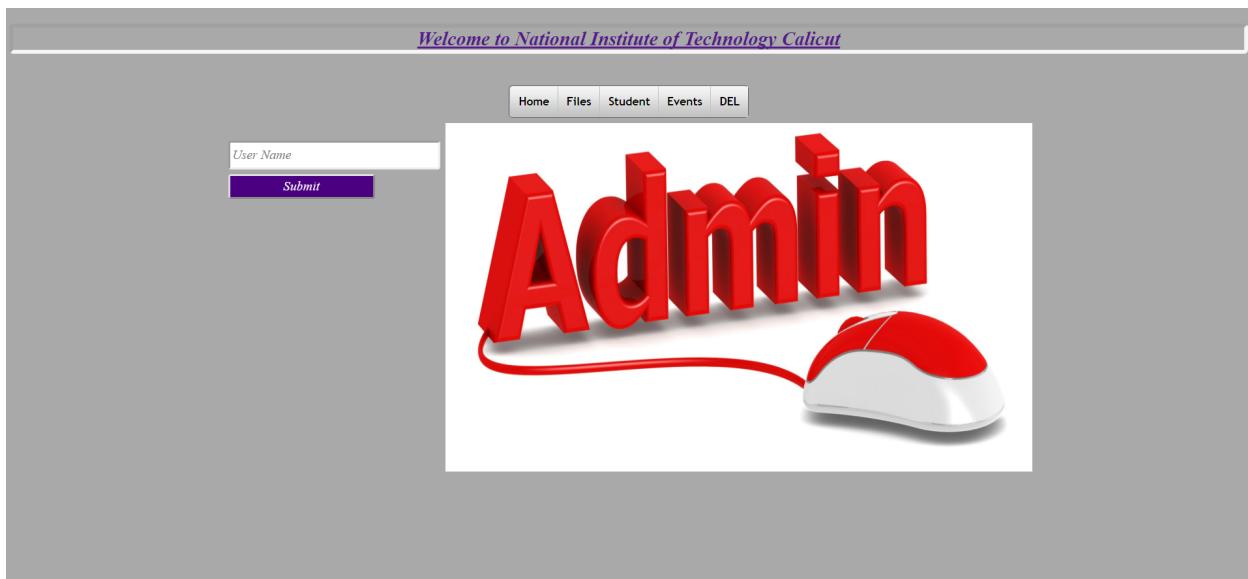
Student Marks

Student's name
Course 1
Course 2
Course 3
Course 4
Course 5
Course 6
Attendance

Submit

This screenshot shows a web page titled "Welcome to National Institute of Technology Calicut". On the left side, there is a sidebar with a heading "Student Marks" and a list of fields: "Student's name", "Course 1", "Course 2", "Course 3", "Course 4", "Course 5", "Course 6", and "Attendance". Below this list is a purple "Submit" button. To the right of the sidebar is a large, stylized red 3D text graphic spelling "Admin" with a white computer mouse at its base.

ADMIN DELETE PAGE



13. DATABASE DESIGN

12.1 TABLES

1.HOSTEL DETAILS,REGISTRATION

The screenshot shows the SSMS interface with two database objects open:

- dbo.hostel [Design]**: A table with columns: uname (nvarchar(50)), sem (nvarchar(50)), hostel (nvarchar(50)), amount (nvarchar(50)), date (nvarchar(50)), du (nvarchar(50)). It has a primary key constraint named PK_hostel.
- dbo.reg [Design]**: A table with columns: fname (nvarchar(50)), lname (nvarchar(50)), uname (nvarchar(50)), pass (nvarchar(50)), mobile (nvarchar(50)), role (nvarchar(50)), email (nvarchar(MAX)), gender (nvarchar(50)), place (nvarchar(50)).

Below the designs, the T-SQL scripts for creating these tables are displayed:

```
CREATE TABLE [dbo].[hostel] (
    [uname] NVARCHAR (50) NOT NULL,
    [sem] NVARCHAR (50) NOT NULL,
    [hostel] NVARCHAR (50) NOT NULL,
    [amount] NVARCHAR (50) NOT NULL,
    [date] NVARCHAR (50) NOT NULL,
    [du] NVARCHAR (50) NOT NULL,
    CONSTRAINT [PK_hostel] PRIMARY KEY CLUSTERED ([uname] ASC)
);

CREATE TABLE [dbo].[reg] (
    [fname] NVARCHAR (50) NULL,
    [lname] NVARCHAR (50) NULL,
    [uname] NVARCHAR (50) NOT NULL,
    [pass] NVARCHAR (50) NULL,
    [mobile] NVARCHAR (50) NOT NULL,
    [role] NVARCHAR (50) NULL,
    [email] NVARCHAR (MAX) NULL,
    [gender] NVARCHAR (50) NULL,
    [place] NVARCHAR (50) NULL,
    CONSTRAINT [PK_reg] PRIMARY KEY CLUSTERED ([uname] ASC)
);
```

2.STAFF TIMETABLE,PAYSLIP

The screenshot shows the SQL Server Management Studio interface with two table designs side-by-side.

dbo.staff_ps [Design]

Name	Data Type	Allow Nulls	Default
uname	nvarchar(50)	<input type="checkbox"/>	
month	nvarchar(50)	<input checked="" type="checkbox"/>	
gross	nvarchar(50)	<input checked="" type="checkbox"/>	
cuts	nvarchar(50)	<input checked="" type="checkbox"/>	
net	nvarchar(50)	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	

dbo.staff_tt [Design]

Name	Data Type	Allow Nulls	Default
uname	nvarchar(50)	<input type="checkbox"/>	
1st	nvarchar(50)	<input checked="" type="checkbox"/>	
2nd	nvarchar(50)	<input checked="" type="checkbox"/>	
3rd	nvarchar(50)	<input checked="" type="checkbox"/>	
4th	nvarchar(50)	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	

Script T-SQL:

```

CREATE TABLE [dbo].[staff_ps] (
    [uname] NVARCHAR (50) NOT NULL,
    [month] NVARCHAR (50) NULL,
    [gross] NVARCHAR (50) NULL,
    [cuts] NVARCHAR (50) NULL,
    [net] NVARCHAR (50) NULL,
    PRIMARY KEY CLUSTERED ([uname] ASC)
);

```

```

CREATE TABLE [dbo].[staff_tt] (
    [uname] NVARCHAR (50) NOT NULL,
    [1st] NVARCHAR (50) NULL,
    [2nd] NVARCHAR (50) NULL,
    [3rd] NVARCHAR (50) NULL,
    [4th] NVARCHAR (50) NULL,
    PRIMARY KEY CLUSTERED ([uname] ASC)
);

```

3. STUDENT MARKS, SEM REGISTRATION

The screenshot shows the SQL Server Management Studio interface with two table designs side-by-side.

dbo.student_marks [Design]

Name	Data Type	Allow Nulls	Default
uname	nvarchar(50)	<input type="checkbox"/>	
c1	nvarchar(50)	<input checked="" type="checkbox"/>	
c2	nvarchar(50)	<input checked="" type="checkbox"/>	
c3	nvarchar(50)	<input checked="" type="checkbox"/>	
c4	nvarchar(50)	<input checked="" type="checkbox"/>	
c5	nvarchar(50)	<input checked="" type="checkbox"/>	
c6	nvarchar(50)	<input checked="" type="checkbox"/>	
attendance	nvarchar(50)	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	

dbo.student_sem_reg [Design]

Name	Data Type	Allow Nulls	Default
uname	nvarchar(50)	<input type="checkbox"/>	
sem	nvarchar(50)	<input checked="" type="checkbox"/>	
cgpa	nvarchar(50)	<input checked="" type="checkbox"/>	
branch	nvarchar(50)	<input checked="" type="checkbox"/>	
		<input type="checkbox"/>	

Script T-SQL:

```

CREATE TABLE [dbo].[student_marks] (
    [uname] NVARCHAR (50) NOT NULL,
    [c1] NVARCHAR (50) NULL,
    [c2] NVARCHAR (50) NULL,
    [c3] NVARCHAR (50) NULL,
    [c4] NVARCHAR (50) NULL,
    [c5] NVARCHAR (50) NULL,
    [c6] NVARCHAR (50) NULL,
    [attendance] NVARCHAR (50) NULL,
    PRIMARY KEY CLUSTERED ([uname] ASC)
);

```

```

CREATE TABLE [dbo].[student_sem_reg] (
    [uname] NVARCHAR (50) NOT NULL,
    [sem] NVARCHAR (50) NULL,
    [cgpa] NVARCHAR (50) NULL,
    [branch] NVARCHAR (50) NULL,
    PRIMARY KEY CLUSTERED ([uname] ASC)
);

```

4. TUITION FEE DETAILS

The screenshot shows the SSMS interface with the 'dbo.tution [Design]' tab selected. The table structure is defined as follows:

	Name	Data Type	Allow Nulls	Default
1	uname	nvarchar(50)	<input type="checkbox"/>	
2	sem	nvarchar(50)	<input checked="" type="checkbox"/>	
3	amount	nvarchar(50)	<input checked="" type="checkbox"/>	
4	date	nvarchar(50)	<input checked="" type="checkbox"/>	
5	du	nvarchar(50)	<input checked="" type="checkbox"/>	
6			<input type="checkbox"/>	

On the right side, under the 'Keys' section, it shows a primary key named <unnamed> (Primary Key, Clustered: uname). The 'T-SQL' tab displays the following CREATE TABLE script:

```

CREATE TABLE [dbo].[tution] (
    [uname] NVARCHAR (50) NOT NULL,
    [sem] NVARCHAR (50) NULL,
    [amount] NVARCHAR (50) NULL,
    [date] NVARCHAR (50) NULL,
    [du] NVARCHAR (50) NULL,
    PRIMARY KEY CLUSTERED ([uname] ASC)
);

```

Test Completion Criteria:

The USER nAME will be used as primary key to identify each PERSON uniquely. Based on the register number we can find their details.

14. CONCLUSION

This document outlines the designing of the process of resolving issues of the projects. The document is intended to be living document and can be modified, when the coding phase starts .this document provides a professional approach towards the system where its tasks can be monitored.

The document provides detailed description about the entity relationship, classes, interaction between the objects and the overall structure of the application in the form of diagrams.

Since each issue/task (basic component) of a project is tested to verify that the detailed design for the project has been correctly implemented, the unit testing strategy is proposed from the designing of this application.

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