

E-RTO SYSTEM

Database Management System : Project Report

Under the supervision and guidance of Dr.Vinay Singh

Submitted By:

Nivedita Bhadauria(2016MBA-17)

ABV-IIITM, Gwalior

niveditabhadauria8@gmail.com



ABV-Indian Institute of Information Technology and Management, Gwalior

ABSTRACT

Existing process of RTO is very time consuming process. Now a day's many people are purchasing two wheelers, four wheelers etc. So the RTO employees having lot of work burden of making registration, License issue, transfer etc., which required lot of paper work. As a result people cannot get the things done in right time, which waste the time, energy. Similarly the vehicle owner sometimes forgets to carry the license, and forgets the insurance date at the time of enquiry. So to overcome these drawbacks we are developing an E-RTO System which helps in work related of RTO office online called E-RTO System. Such like that we provide one type of environment which gives a user friendly means user can access and understand well and do what he or she wants means if they want to make a driving license then they can go through the registration and get one appointment date and they will have to come on that date and give the test of driving license. In this way we develop a system which directly provides services driving license, insurance, vehicle registration etc. Administrator is power user. He has the power to verify the data entered by the user, processing of data and provide appropriate solutions. Any person who have been authorized by the administrator. An authorized user should have a user name and password to access detailed information from the site excluding or accessing general information in shared, public pages. User is the person who gets the full benefits of this application.

Introduction

Regional Transport Office (RTO) is an Indian government bureau which is responsible for the registration of vehicles and issue of Driver's License in India. RTO management will be having lot of work regarding registration of vehicles and issue of driver's license. Similarly the vehicle owner sometimes forgets to carry the license, and forgets the insurance at the time of enquiry. This paper proposed an approach to solve such problems that is by storing all the information related to vehicle and driver at database by RTO administrator.

E-RTO is an advanced "ERTO System" which is design keeping in a view to make the existing registration and insurance system easier and faster. It includes the entire registration and insurance procedure starting from the initial phase of entering till the result. It is a more reliable, accurate, time saving and free from any misuse. the system provide information regarding the RTO Application and its status the TDER job such as verifying All the records of the applicant , confirming all the personal detail are furnish, submission of qualification documents, driving license , registration details, etc. are done in the most convenient way to the administrator. Also security is being provided in the most proficient way of the intermediate stages starting from the receiving of the application form to revealing the applicant number along with the expiry date of license are being dealt.

Advantages of this application are- Considerably reduce the corruption in transport department. Keep the license documents safely. In case of accidents helps to identify the injured person and also helps to find out stolen vehicle effectively. To offer the drivers to be independent of vehicle related papers.

Literature Review and Related Work

We all know existing RTO office work is how much lengthy as well as very time consuming process. In many villages there is only one day camp of RTO and the people who want driving license they should remain present on that day if they missed that day then they have to go to the district RTO office. So it is disadvantage because that may be not able to go or he having work on that day. so that here we are developing one web application which provide easiest and efficient way for RTO works like making driving license, insurance of vehicle, registration number of vehicle, etc.

In many cases we found that RTO office work get complete through third party called agent. When a person go to the RTO office for driving license, vehicle passing, and registration number of vehicle then a person go through the agent and agent will complete person work by taking lot of money and that person is unaware about all this system. According to the TOI new on dated 3 September 2015 RTO office is more corrupted area. So using our web application we are somewhere to help to reduce corruption.

The old system is time consuming as following steps are required to issue learning license:

- You will have to obtain either Form 2 which is for the application of Learner's License with passport photographs or Form 3 which is for Learner's License application with photographs. These forms can be downloaded online or can be directly procured from the RTO office.
- Fill the application form completely and attach photographs wherever necessary. Attach age proof and address proof documents. Visit the RTO for your locality and submit the application form. Also, schedule a Learner's License test by choosing a slot.
- Be present at the Learner's License test facility on the date and time that you have chosen. Once you pass the test, the Learner's License will be sent to the registered address or will be directly offered on the spot depending on the RTO.
- If you are taking driving lessons under the guidance of a driving school, they will assist you in getting a Learner's License.

Eligibility Criteria For learning License:

- A person should have completed 16 years to obtain license for 2 wheelers without gear.
- A person should have completed 18 years age to obtain license for 2 wheelers with gear, Motor-car, Tractor and other non-transport vehicles.

- For transport vehicles, a person should have completed 20 years of age. In addition he should be passed standard 8th pass and should have experience of 1 year driving a light motor vehicle.

Necessary Documents needed to apply for learning license:

- **Proof of Age**

School Leaving Certificate, Birth Certificate, Passport, Pan Card, L.I.C. Policy or a Certificate from Civil Surgeon or a Doctor equivalent to that can be submitted as a proof of age.

- **Proof of Address**

School Leaving Certificate, Passport, L.I.C. Policy, Electoral Voter I-Card, Light Bill, Telephone Bill, receipt of House Tax with address, Pay Slip of Central/State/Local self Government or an Affidavit from the applicant to that effect can be submitted as the proof for address.

Renewal of Driving License:

- Driving license is valid till the date as shown in the driving license.
- A grace period of 30 days is granted for renewal of driving license.
- If, a driving license holder comes for renewal within a period of 5 years from the date of expiry, he is exempted from test, but license is valid from date of renewed license.
- Application in Form-9 attached with original Driving License should be made for renewal of driving license.
- Medical Certificate in Form-1-A is required to be produced, if, applicant has completed 50 years of age or is applying for renewal of driving license for a transport vehicle.
- A fee of Rs.50/- with a smart card fee of Rs.200/- is required to be paid, if, application is made within the period.
- For delay, an additional fee of Rs.50/- for every year of such delay is required to be paid.
- In case of original driving license is from other R.T.O. or State, then N.O.C. of concerned R.T.O. should be attached.

Objective

Administrator is power user. He has the power to verify the data entered by the user, processing of data and provide appropriate solutions. Any person who have been authorized by the administrator. An authorized user should have a user name and password to access detailed information from the site excluding for accessing general information in shared, public pages. User is the person who gets the full benefits of this application. By introducing the new system we have been organized some striking felicities. Registration of vehicle through online. Fancy number selection of vehicles through online. Issue of information's about license, which include application forms, demo of learner's license test and other information's. It help's traffic police for tracing particular vehicle's. It help's for public awareness. Separate account for the license holders and police. Provide email alerts for users about license expiry. And also register Complaint.

Scope

This project prepared RTO office to maintain all the records like issuing the LL, DL, Vehicle registration, Vehicle ownership transfer etc. Once all these get computerized to work efficiency of the employee will get increases. By using this system we can get Information about RTO. Information like Driving License, Learning License and all the RTO service online. This system helps to solve the time related problem. System helps customer to find his/her requirement in various RTO Information online.

Goal

The main goal of the project is to maintain the records of issuing the LL, DL, Vehicle registration, User Details, RTO Test Facility etc. “E-RTO System” has been designed to automate the process of registration of vehicle and issuing driving license process. System can make the daily activities efficient and providing the fast response to store and retrieve information to the people By Using SMS or E-Mail.

Modules and sub-modules

- ❖ Admin

- ❖ User

- ❖ E-RTO Test

Module Description:

- **Admin** Admin verify how many user are applied for learning license registration. Admin has all the authority to access, update user information.He is maintaining the questions of e-rto online test and forms that a user can download.

- ❖ Login/Logout

- ❖ User registration

- ❖ Record

- ❖ Selection

- ❖ Verify

- **User User:** User can register itself if he wants to apply for license.User can give online test for checking the knowledge of traffic rules and regulations. If user failed to pass then he can retake the exam after 7 days. User can access the forms, license, NOCs through this system.

- ❖ Request

- ❖ Registration

- ❖ Login

PROJECT MANAGEMENT

PROJECT DEVELOPMENT APPROACH

Software process model

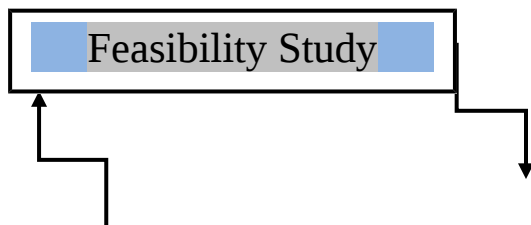
To solve actual problems in an industry, software developer or a team of developers must incorporate a development strategy that encompasses the process, methods and tools layers and generic phases. This strategy is often referred to as process model or 3 software developing paradigm. A process model for software developing is chosen based on the nature of project and application, the methods and tools to be used, and the controls and deliverables that are required. All software development can be characterized as a problem solving loop in which four distinct stages are encountered: Status quo, problem definition, technical development and solution integration. Regardless of the process model that is chosen for a software project all of the stages coexist simultaneously at some level of detail.

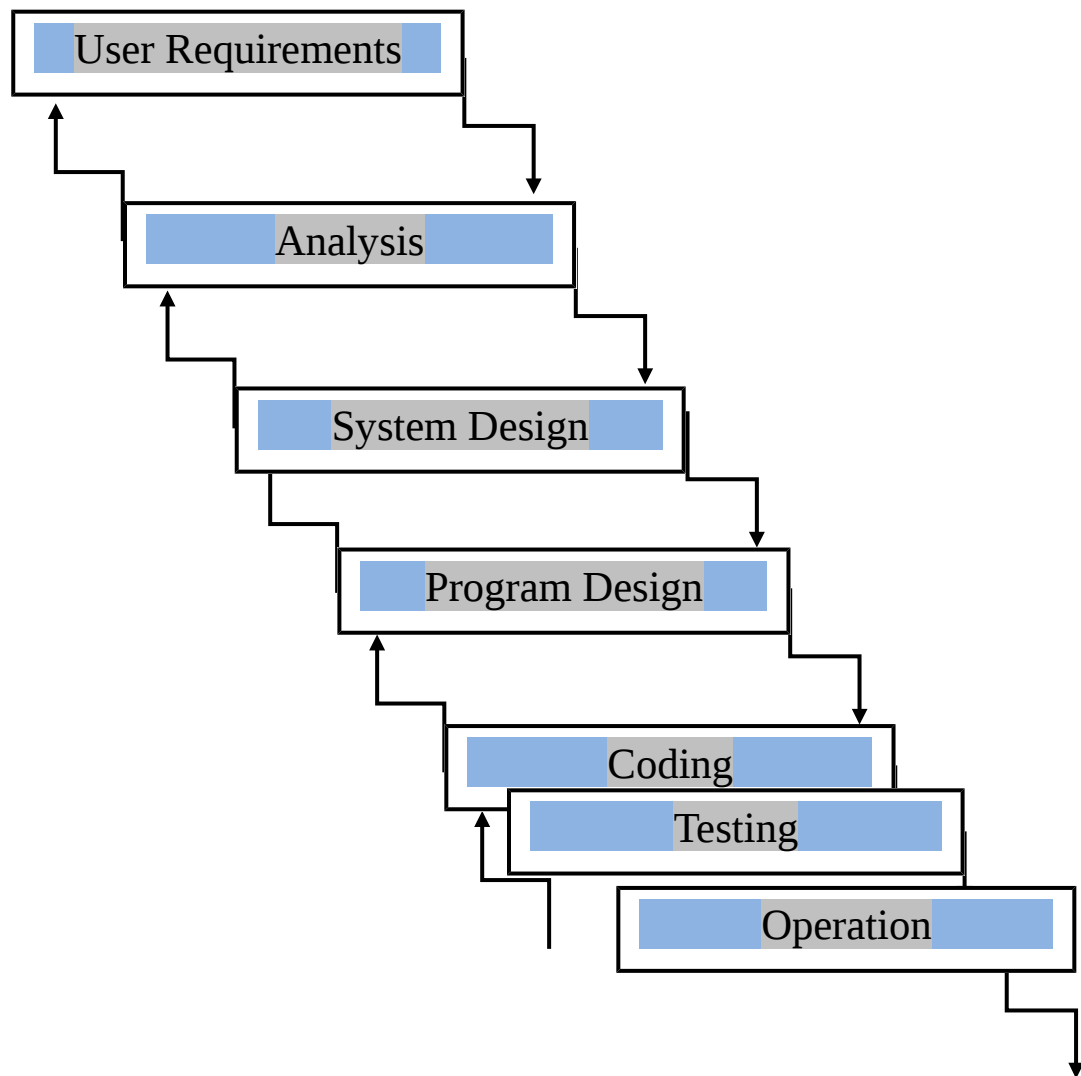
Our project follows the waterfall model

➤ THE WATERFALL MODEL

The steps of the typical waterfall model are:

- 1) Requirement definition
- 2) System & software design
- 3) Implementation
- 4) Integration & system testing
- 5) Operation and maintenance





There have been some variations from the typical waterfall model for this project lifecycle.

They are: - Maintenance has been omitted from the current project. Not all testing methods which are present in theoretical model are implemented.

Study About The Software

❖ ASP.NET 3.5 using Visual studio 2010

ASP.NET 3.5 is the big step back in the right direction. Microsoft recognized that one thing people who build web sites don't want to do is have to code. Code is dull; code is geeky. However, Microsoft also recognized that some people still have to code for a living. And more hand that, these coders have to build the same things, over and over again: a login mechanism, a menu system, a shopping cart, a funky theme for your site's backdrop applied to every page—something every web site requires. Two guiding principles seem to be at work here: make it easier for the novice to use and reduce the amount of repetitive work the developer has to do. Claims for ASP.NET 3.5 boast “70 percent less code” is needed; ASP.NET 3.5 also comes with a multitude of controls to enable the developer to create login systems and menus in minutes.

Late in 2008 we saw the previews of the new version of Active Server Pages named ASP.NET 3.5. Everyone knew that these claims weren't just hyperbole and that the way developers create web applications was going to change fundamentally. Microsoft expanded the powerful features of earlier ASP versions while greatly reducing the effort to implement those features. The ease of implementation meant a reduction in the cost of developing complex sites. Or, put another way, there would now be a large expansion of the number of people that have the capability to build a complex site.

In addition to ASP.NET 3.5 comes a new, affordable tool for creating these web sites: Visual Web Developer Express. Microsoft's previous attempts at providing tools for helping create dynamic web sites have been clunky (Front Page) or have never really taken off (Visual Interdev), but this time they've got it right. Visual Web Developer is part of the Visual Studio.NET suite, but a scaled-down version of Visual Web Developer Express will be free in the foreseeable future. It allows you to drag and drop a site together within minutes, is instantly recognizable to developers, and allows easy creation and management of your web pages.

This book leads you step-by-step through creating dynamic, data-driven, complex web sites using ASP.NET 3.5. To those ends, this chapter explains the basic ideas and examines the completed sample site. You then learn how to use Visual Web Developer Express (VWD) to build ASP.NET 3.5 sites.

Microsoft SQL Server 2008

After a long gap in the release of SQL Server databases, Microsoft recently released SQL Server 2008 (formerly code-named Yukon). In this substantial upgrade, they've packed the new database

engine full of features. Probably the most significant one that will catch your attention is the price tag – it's up to 25% higher than SQL Server 2000. A single processor license for SQL Server 2008 Enterprise Edition will set you back approximately \$25,000. That's not cheap, but Microsoft has made some great advances in functionality that make up the difference.

In this first part of our series on this new product, let's take a look at the four different editions of SQL Server 2008 that Microsoft plans to release:

- **SQL Server 2008 Express** replaces the Microsoft Data Engine (MSDE) as the free version of SQL Server for application development and lightweight use. It remains free and retains the limitations of MSDE with respect to client connections and performance. It's a great tool for developing and testing applications and extremely small implementations, but that's about as far as you can run with it.
- **SQL Server 2008 Workgroup** is the new entrant in the product line. It's billed as a "small business SQL Server" and it offers an impressive array of functionality for a \$3,899 price tag per processor. (It's also available under a 5-user license for \$739). Workgroup edition maxes out at 2 CPUs with 3GB of RAM and allows for most of the functionality you'd expect from a server-based relational database. It offers limited replication capabilities as well.
- The workhorse **SQL Server 2008 Standard Edition** remains the staple of the product line for serious database applications. It can handle up to 4 CPUs with an unlimited amount of RAM. Standard Edition 2005 introduces database mirroring and integration services. It's priced at \$5,999 for a processor or \$2,799 for 5 users.
- The big kid on the block is **SQL Server 2005 Enterprise Edition**. With the release of 2005, Enterprise Edition allows unlimited scalability and partitioning. It's truly an enterprise-class database and its hefty price tag (\$24,999 per processor or \$13,499 for 5 users) reflects its value.

System Requirement Analysis

User Characteristics:

- ❖ This system will be used in two modules which are Administrator, user. As all of these have different requirements the modules are designed to meet their needs and avoid any type of confusion. The uses of all two user modules have been described below.

1) Administrator can do the following function

- Update the act and rules.
- Manage the user information.
- Send the acknowledgement to user.
- Cancel the user registration.
- Manage the user account.
- Update the news.
- Take demo test.

2) User can do the following function

- Register their information and create account.
- Select Demo test And Give That test.
- See the demo test result at the time.
- See The Information regarding RTO.
- See the act and Rules Updated by admin.

Hardware & Software requirements

➤ Hardware

- Pentium IV processor or any higher processor
- 256 MB RAM or more
- 700 MB Hard Disk or more

➤ Software

- Operating System
- Windows XP or higher operating system

➤ Development Tools

- Microsoft Asp.NET 2010
- Database-Microsoft SQL Server 2005

➤ **Documentation & Presentation Tools**

- Microsoft word 2007
- Microsoft PowerPoint 2007

HARDWARE SOFTWARE REQUIREMENT

Minimum Software Requirement

Server side:-

- Window Xp or any Server OS
- ASP.net
- My Sql Server 2005

Client side:-

- Windows Xp or Above
- Internet Explorer 5.0 or Above
- Google Chrome
- Mozilla Firefox

Minimum Hardware Requirement

Server side:-

- Pentium-4 or Above
- 512MB RAM
- 700 MB Hard Disk

Client side:-

- Pentium 4 or above

- 256 MB RAM
- 700 MB hard disk

System Analysis

Drawback of Old System

- ❖ Existing system is very complex, waste of time & many more Real-life problem.
- ❖ Many employees are needed to handle current system.
- ❖ It is more expensive process.
- ❖ Immediate responses to the queries are difficult.

- ❖ Lots of times are consumed for each report generation.
- ❖ So, require to build new Website according to RTO office Infrastructure and Facilities.
- ❖ So that all the people can get information about the RTO.

Features of New System

- ❖ By using this system we can get Information about RTO.
- ❖ Information like Driving License, Learning License and all the RTO service online.
- ❖ This system helps to solve the time related problem.
- ❖ System helps customer to find his/her requirement in various RTO Information online.
- ❖ It also Provide Online RTO tests.
- ❖ We can get the information at any time by using this system about.
- ❖ This system reduces all the paper work.

Feasibility Study

The following three areas were taken into consideration while deciding the feasibility of the proposed system.

- ❖ Technical Feasibility
- ❖ Economic Feasibility
- ❖ Operational Feasibility

➤ Technical Feasibility

The company is an efficient company with excellent infrastructure so as to successfully support me, as a developer, and support the website. The system, which is being developed in the latest web technology available, can efficiently use the resources available and maximize output.

➤ **Economic Feasibility**

The project will be quite beneficial economically as it will be designed to cater a global audience as per the company's market presence requirements. It shall ensure a richer customer base that spreads across the globe thanks to the transaction facilities that will be implemented.

➤ **Operational Feasibility**

The project once completed shall be useful to the company and the company will be able to manage it very effectively using the administration tools that shall be incorporated within the said system. The general difficulty level of the project has been kept low so as to ensure ease of operation.

System design

System Flow Chart

Yes

[Process of system For User]

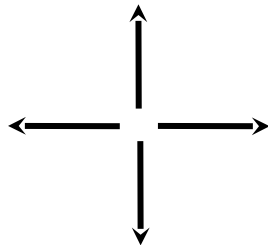
Data Flow Diagram

The DFD (also known as bubble chart) is a simple graphical formalism that can be used to represent a system in terms of the input data into the system, various process carried on these data and the output data generated by the system.

The main reason why the DFD technique is so popular is because the fact that the DFD is very simple formalism – it is simple to understand use. A DFD is a very limited number of primitive symbols to represent the functions performed by a system and the data flow among the functions. Starting with a set of high-level functions that a system performs, a DFD model hierarchy represents various sub-functions.

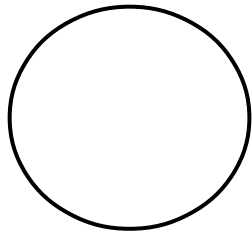
➤ **Data Flow :**

A line with an arrow represents data flows. The arrow shows the direction of flow of data. The name of the data appears next to the line. Data move in a specific Direction from an origin to a destination. The data flow is a 'packet' of data.



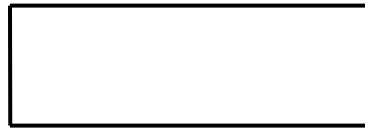
➤ **Process:**

A Circle is used to depict a process. Processes are numbered and given a name.



➤ **Data Store :**

A data store stores the data. Two parallel lines with square depict a data store. Processes may store or retrieve data from a data store. If an arrow points to the store, it indicates operation of writing in the store. If it points away from the store, it indicates operation of reading from the store.



➤ **External Entity :**

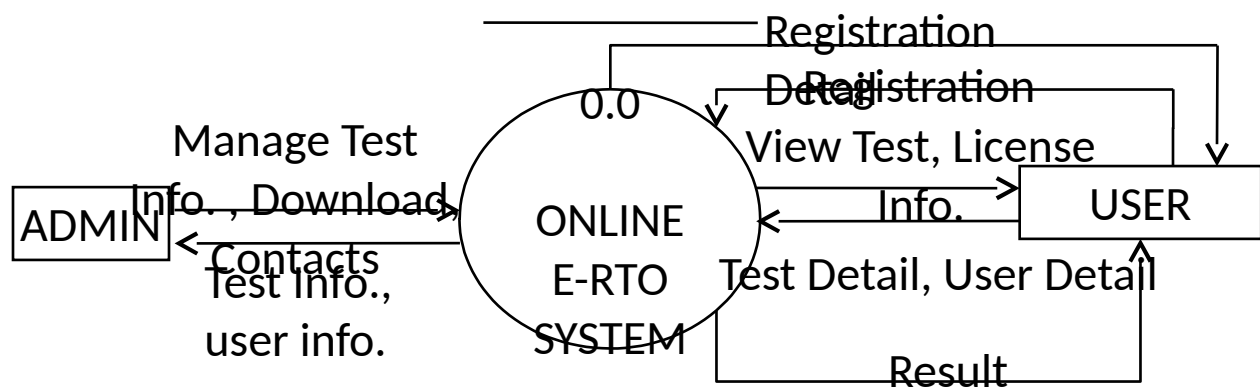
External Entities are represented by the rectangle, and are outside the system, such as vendors or customers with which the system interacts. The designers have no control over them.



❖ **Types Of Data Flow Diagram**

- **Context level DFD**
- **First level DFD**
- **Second level DFD**

❖ **CONTEXT LEVEL DFD**

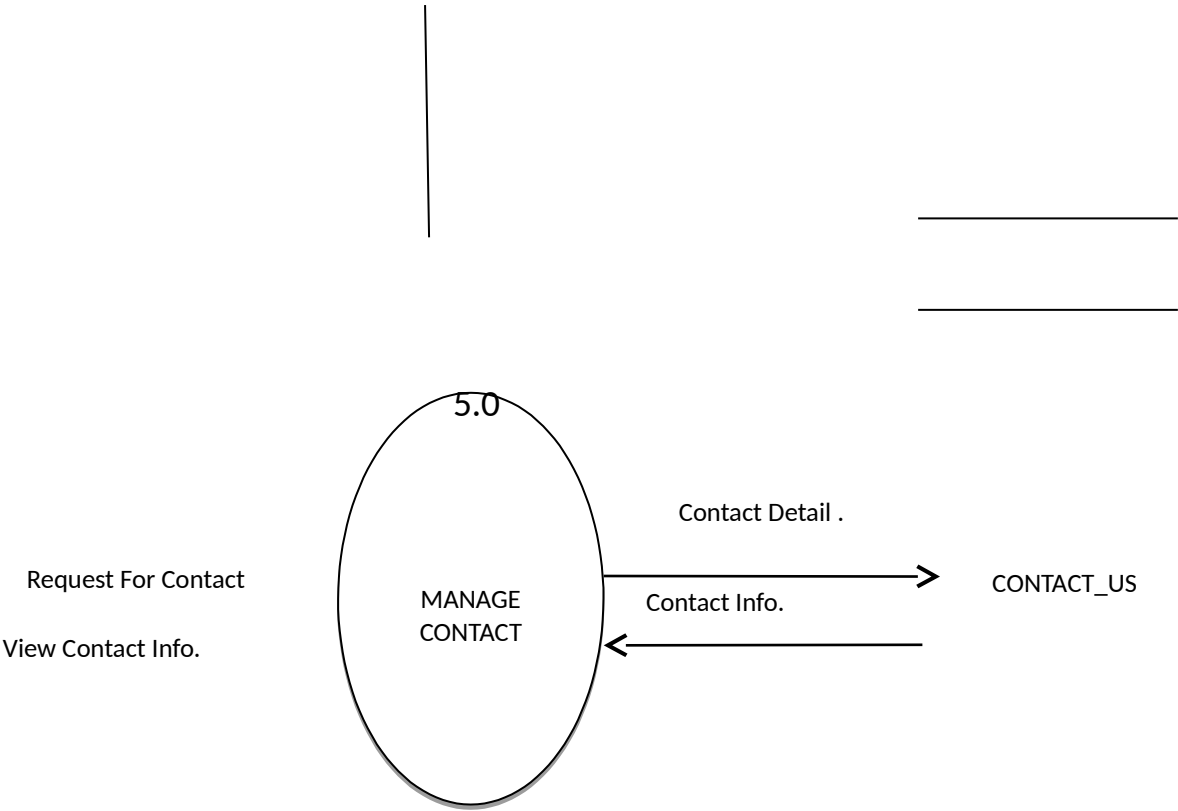


Admin verify how many user are applied for learning license registration. Admin has all the authority to access, update user information. He is maintaining the questions of e-rto online test and forms that a user can download.

User can register itself if he wants to apply for license. User can give online test for checking the knowledge of traffic rules and regulations. If user failed to pass then he can retake the exam after 7 days. User can access the forms, license, NOCs through this system.

First Level DFD [Admin]

4.0



❖ **First Level DFD[User]**

4.0

Responce

❖ E-R Diagram:

M

DATA MODELING

❖ Data Dictionary:

TABLE 1:- Admin_master**Descriptions:** - This table keeps The Information about Admin.

Sr.no.	Field name	Data type	Constrain	Size	Description
1.	Admin_id	int	Primary key	-	Id of admin master.
2.	User_name	Varchar	Not null	50	Name of user
3.	Password	Varchar	Not null	50	Password of user
4.	F_name	Varchar	Not null	50	First name of user
5.	L_name	Varchar	Not null	50	Last name of user
6.	Address	Varchar	Not null	50	Address of user
7.	City	Varchar	Not null	50	City of user
8.	Mobile	Decimal	Not null	18	Mobile number of user
9.	E-mail	Varchar	Not null	50	Email address of user
10.	Seq_que	Varchar	Not null	50	Security question
11.	Seq_ans	Varchar	Not null	50	Security answer
12.	Status	Varchar	Not null	50	Status

TABLE 2:- Registration**Descriptions:-** This table keeps The Information about User Registration.

Sr.no.	Field name		Constrain	Size	Description
1.	Reg_id	Int	Primary key	-	Id of registration.

2.	User_name	Varchar	Not null	50	Name of user
3.	Password	Varchar	Not null	50	Password of user
4.	F_name	Varchar	Not null	50	First name of user
5.	L_name	Varchar	Not null	50	Last name of user
6.	Address	Varchar	Not null	50	Address of user
7.	City	Varchar	Not null	50	City of user
8.	Mobile	Decimal	Not null	18	Mobile number of user
9.	E-mail	Varchar	Not null	50	Email address of user
10.	Seq_que	Varchar	Not null	50	Security question
11.	Seq_ans	Varchar	Not null	50	Security answer
12.	Status	Varchar	Not null	50	Status
13.	Temp	Varchar	Not null	50	Document
14.	Photo	Varchar	Not null	50	Photos

TABLE 3:- Contact Us

Descriptions: -This table keeps The Information about Contact Us.

Sr.no.	Field name	Data type	Constrain	Size	Description
1.	Cont_id	int	Primary key	-	Id of contact us.
2.	Name	Varchar	Not null	20	Name of user
3.	Date	Date time	Not null	30	Date
4.	Mobile	Decimal	Not null	18	Mobile number of user
5.	E-mail	Varchar	Not null	50	Email address of user

6.	Detail	Varchar	Not null	50	Detail about
----	--------	---------	----------	----	--------------

TABLE 4:- Feedback

Descriptions:-This table keeps the information about feedback

Sr.no.	Field name	Data type	Constrain	Size	Description
1.	Feed_id	int	Primary key	-	Id of feedback form.
2.	Date	Date time	Not null	30	Date
3.	Name	Varchar	Not null	50	Name of user
4.	Mobile	Decimal	Not null	18	Mobile number of user
5.	E-mail	Varchar	Not null	10	e-mail address of user
6.	Comments	Varchar	Not null	50	Category of form

TABLE 5:- RTO-Test

Descriptions:- This table keeps information about RTO test.

Sr no.	Field name	Data type.	Constrain	Size	Description
1.	Que_id	int	Primary key	-	Question id.
2.	Que_name	Varchar	Not null	Max	Question name.
3.	Opt_1	Varchar	Not null	Max	Option 1.
4.	Opt_2	Varchar	Not null	Max	Option 2.
5.	Opt_3	Varchar	Not null	Max	Option 3.
6.	Ans	Varchar	Not null	1	Answer of question
7.	Image	Varchar	Not null	50	Image

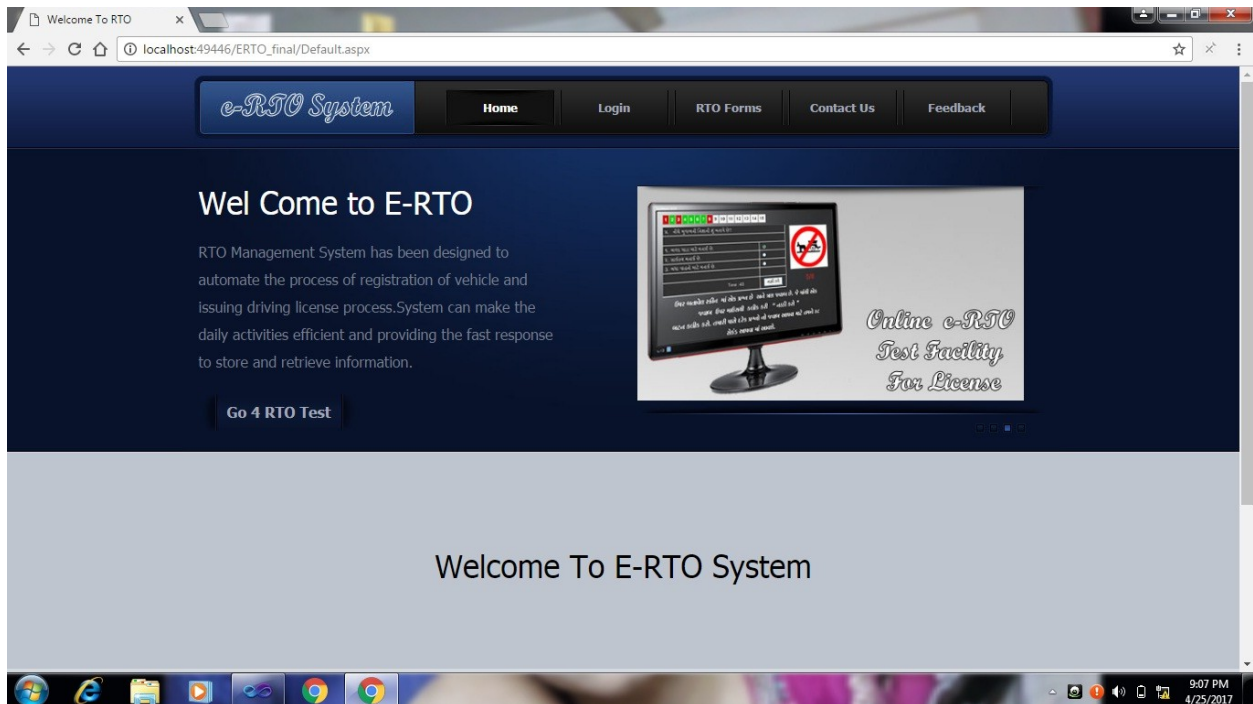
TABLE 6:- Result

Descriptions: - This table keeps information about Result.

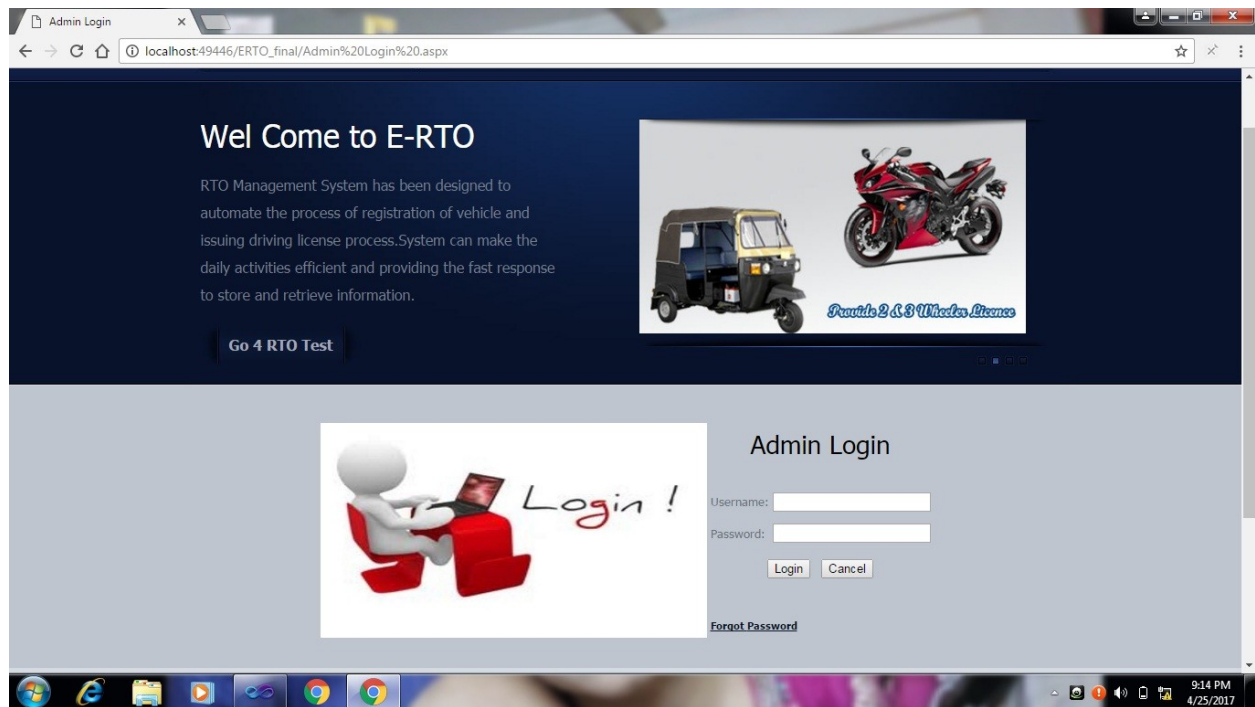
Sr no.	Field name	Data type.	Constrain	Size	Description
1.	Id	int	Primary key	-	Id.
2.	User_Id	Varchar	Not null	20	User id
3.	Date	Date Time	Not null	30	Test Date
4.	Marks	int	Not null	20	Obtain Mark
4.	Result	Varchar	Not null	20	Pass/Fail

Snapshots

❖ **Home Page:** This is the home page of the web application



- ❖ **Admin: Login/Logout-** This module facilitates Administrative Access to the application. If admin has already register he can access his account through login module. In this module login/logout of administrative account managed.



Admin Registration Page: This sub-module facilitates registration of Administrative User's registration details are shown. Through this module admin can insert, update and delete user's record.

Registration List Form

localhost:49446/ERTO_final/admin/List%20Registration.aspx

Welcome To e-RTO

Wel Come: nivedita

Welcome Admin Page

:: Menu ::

- [Admin Info](#)
- [Registration](#)
- [RTO Test](#)
- [Contact Us Info](#)
- [Feedback](#)
- [Download Form](#)
- [Sending Mails](#)
- [record](#)
- [Selection](#)
- [View](#)
- [Verified](#)

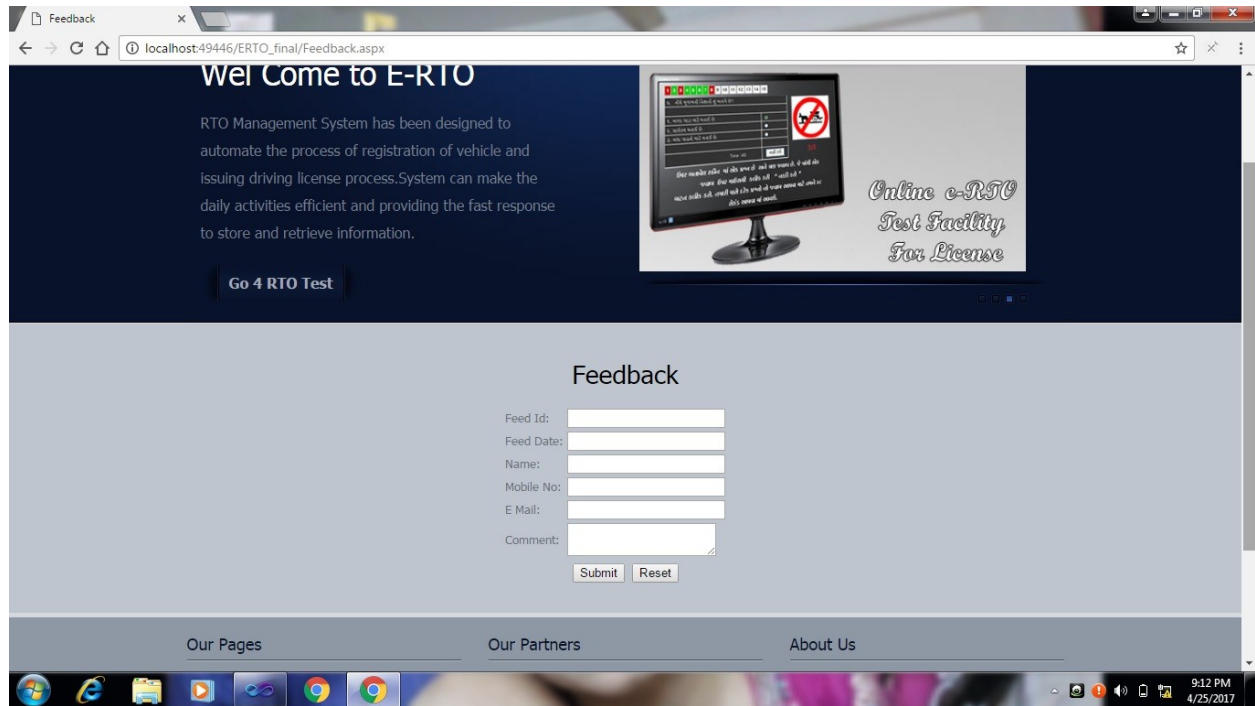
Registration List Form

Show New Entry

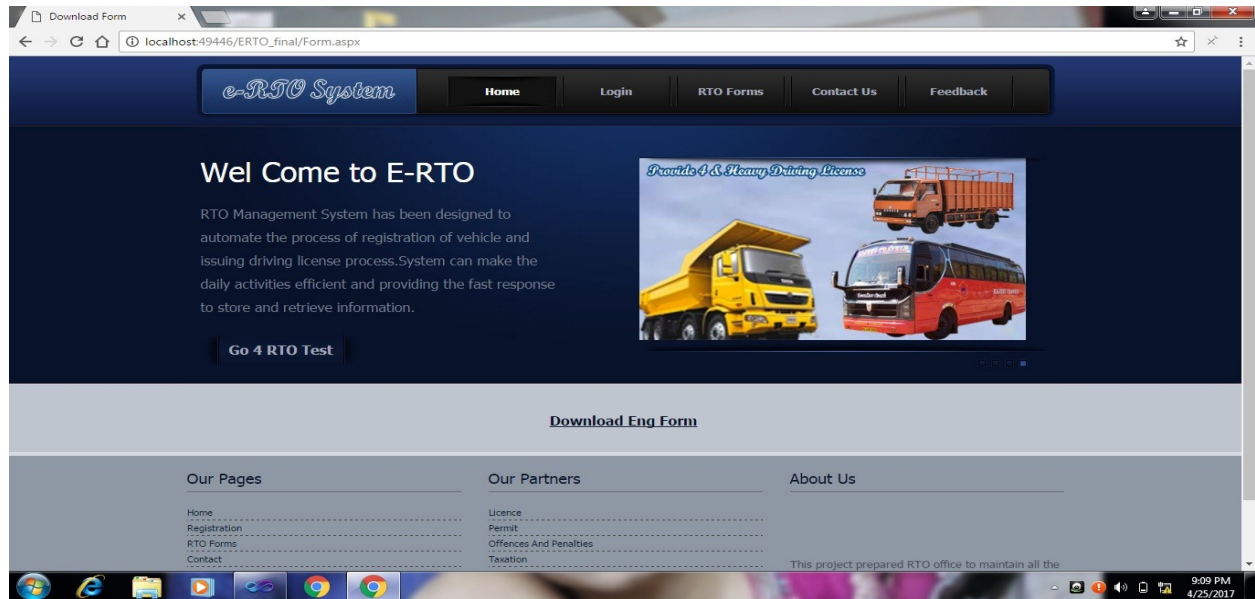
Password	F_Name	L_Name	Address	City	Mobile	E_mail	Sec_Q
nivi	nivedita	bhadauria	ruhigierugi	uireuhut	9452920057	niveditadhadauria8@gmail.com	What is your favouri color?
riya	Riya	sharma	kvhfdkhgvudf	djhgdgjcfdh	7486587346	riya123@gmail.com	What is your favouri color?
123	NAMRATA	GUPTA	Faizabad	fzd	8604584500	namrata26gupta@gmail.com	What is your favouri

9:21 PM
4/25/2017

Feedback Page: This sub-module provide facility to users to give feedback with admin by leaving message.



Download Page:



Future Scope

This system is also helpful for Traffic police also. The traffic police to be more effective in controlling repeat violators of traffic rules. Traffic Police have the database of registration numbers as well as the history of driving license holders. When a traffic policeman would enter the details of any vehicle caught violating traffic rules, it would give the complete details of that particular vehicle including the name and address of owner and the make, model and other details of the vehicle. Not only this, the details of the driving license holder would also be available. Therefore enhanced penalties would be imposed for repetition of violation of traffic rules. Fake registration plates, if any, would be detected immediately.

CONCLUSION

E-RTO is web application, which is very useful for RTO works completion online. Here we are developing such types of module which helps to reduce the RTO work manually and it helps to saving time of user. Considerably reduce the corruption in transport department. Keep the license documents safely.

❖ Reference

➤ Appendix –A List of Useful Websites

- www.drivingschool.com
- www.transportindia.in

➤ Appendix –B List of Useful Book

- C# BIBLE, WILEY
- PRO ASP.NET IN C# 3.5
- SQL SERVER 2008 BIBLE