Progressive Education Society's
MODERN COLLEGE OF ENGINEERING
Pune 411005.

A PROJECT REPORT ON

RTO MANAGEMENT SYSYTEM

By

Rutuja Kale
Tanvi Kaurwar
Vaishnavi Mule
Aarohi Sudumbrekar

Progressive Education Society's
Modern College Of Engineering, Pune-05.
Department of Information Technology
2020-2021

Certificate

This is to certify that, project entitled "**RTO Management System**", Submitted by **Rutuja Kale, Tanvi Kaurwar, Vaishnavi Mule, Aarohi Sudumbrekar** is record of bonafide work carried out by them, under the guidance of **Prof. Jyoti Jadhav**, in fulfillment of the requirement for the award of the B.E. of Bachelor of Engineering in **Information Technology,** SPPU.

Prof.Jyoti Jadhav **Prof.Mrs.S.D.Deshpande**

GUIDE **H.O.D (IT)**

Date:

Place: Pune

ACKNOWLEDGEMENT:

With great pleasure we wish to express our deep sense of gratitude to Mrs.Jyoti Jadhav, for their valuable guidance, support and encouragement in completion of this project. Also, we would like to thank our H.O.D. S.D. Deshpande for her co-operation in developing this project.We feel gratified to record our cordial thanks to other staff of our IT Department for their support, help and assistance which they extended as and when required.

We owe our deep gratitude to our project guide Mrs.Jyoti Jadhav, who took keen interest on our project work and guided us all along, till the completion of our project work by providing all the necessary information for developing a good system.Also, we would like to extend our sincere esteems to all staff in laboratory for their timely support.

ABSTRACT

The RTO (Regional Transport Office) system as the name suggests, is an application that is designed to give a succinct about RTO related activities such as the process of registration of vehicles and issuing driving license process. It can make the daily activities to run efficiently and provide fast response to retrieve and store the information. RTO management system can also act as a leading technological tool for the ease of RTO functions such as registration, learner's license, and fine computation, etc. It will reduce considerably the difficulties faced on existing system, with minimum error and difficulties. This project will play a leading role in reducing the difficulties faced in day to day activities that are carried away in the RTO to run smoothly.

INDEX

RTO MANAGEMENT SYSTEM

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 a lot of work regarding registration of vehicles and issue of driver's license. This system provides an approach to solve such problems thereby storing all the information related to vehicle, owner, and access to his/her license based on the test given in the database by RTO. The RTO administrator is responsible for performing management related functions. RTO is an advanced "RTO management System "which is designed keeping in view to make the existing registration and issues of information about license easier and faster. It includes the entire registration and license grant procedure starting from the initial phase of entering till the result. It is more reliable, accurate, time-saving and free from any misuse. The system provides information regarding the RTO Application.

Here, we are developing a web application for RTO so here we give a brief description of our project overview. We provide a familiar environment to the needy user so as to access this site for their work purpose related to RTO. First user gets a glance of specific RTO related services the system is offering. If user wants to get his vehicle registration done then also it takes time in old system but here we provide facility that user gets his registration done by filling all the required and important details of vehicle and we gives this details to RTO office directly so that this work will get complete within less time and the user get his vehicle registration done easily thereby providing a suitable vehicle number.

Secondly the user gets License number if not having by filling the necessary details. A mechanism that further checks whether the user has given the test or not and on that basis the administrator determines whether to grant license or not. If the user has not managed to pass the criteria required to pass the test, then the user is not eligible for license. The user's record is deleted from the system and the user must apply again for a license. Third functionality induces upon the user to check his/her fine status. Calculating fine is a tedious work not only

for RTO but also for the traffic police. The system will calculate the justified fine and also warn users to be punctual in paying the required fine else fine will be incremented. The

administrators provide for authentication purposes as well as it handles all the databases of RTO and manages all the processes. He has authority to approve learning license number, permanent license number; pass the vehicle registration number, etc. Facilities are provided by the administrator.

Scope

This project Deals with the transactions of RTO services office:-

1) Admin Login
2) Vehicle Registration
3) Checking Vehicle Details
4) License Application.
5) Granting License to user based on marks.
6) Fine status
7) Rules and regulations

`

Limitations:

1) The scope of this developed system is limited to civilians living in Pune.
2) The payment transactions for paying challan are not provided.
3) The system is a compact version of the RTO office with compendious functionalities.

Requirement Analysis:

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

- The new system should provide ease to access all modules.
- To improve productivity and services thereby generating appropriate results.
- To enhance user / system interface.
- To improve information quality and usability.
- To upgrade systems reliability, availability, flexibility and growth potential.
- User should be able to get his vehicle registration done by filling appropriate data.
- Users data should be properly inserted/ updated in the database according to the necessary prerequisites.
- To issue a license based on the criteria for marks.
- Check the status of fine as and when requested by the user.
- Administrators must provide necessary modifications in the program. Manage all the activities such as granting license number, adding new entry for fine. deleting a record if need be.

.

Feasibility Study:

1) Project Scope: -

The purpose of our **RTO management system** is to provide a leading technological tool for the ease of **RTO** functions such as Registration, Learners License, and Fine status etc...It will reduce considerably the difficulties faced on existing **system**, with minimum error and difficulties. Administrator is power user that performs necessary operations on the users data.

2) Current Analysis: -

To overcome problems in the existing System a new RTO services "Road Transport Authority Information System" is proposed after study of the system. **The objectives of proposed system are:**

1) Facilities ease of operation.
2) Ensure data integrity and security.
3) Less manpower.
4) Generate accurate reports.
5) Accurate handling of multiple details of multiple customers.

3) Requirements: -

In the existing system of RTO office perform functions such as registration, license and fitness. Regional transport office is the organization of the Indian government responsible for maintaining a database of vehicles for various states of India. The RTO issues driving licenses organizes a collection of vehicle excise duty and sells personalized registrations. These Are the main activities of RTO office; we developed this software application with a fully computerized method to manage all the data. At present all records are maintained manually. By introducing the new system we have been organized some striking facilities. Registration of vehicle through online.

4) Approach: -

To develop this entire system the Incremental Model of Development was taken into consideration as it was the best suited model to our approach towards this project. And thus, the project was implemented in the form of successive increments following the Incremental Model.

5) Review: -

Thus, following the steps of analysis, understanding the requirements, deciding the approach, we conclude that this project is feasible for development.

Software Requirement Specification:

Functional requirements:

1) **Data Entry: -**

   The important data to be entered in the database is the information about the applicants applying either for vehicle registration or license application. The data entered through the administrator also plays an important role.

2) **Module Description: -**

Each module proves to be a useful point of reference to These could include increased customer satisfaction, improvement in product quality, better decision making timeliness of information, expediting activities, improved accuracy of operations, better documentation and record keeping, faster retrieval of information, better employee morale. The following information shows the details of the RTO office management system.

- Admin Login
- Vehicle Registration
- License Application
- Search vehicle details
- Check fine status

3) **Workflow: -**

   The launch-page is a website oriented view with different modules provided in the navigation bar. The administrator can login to the system and perform different operations on the database such as insert, update, delete. User can access any of the options provided and thereby proceed as per modules requirement.

4) **Data Entry Rights: -**

Since the database entry and orientation of this project revolves around the creators prospect, all the rights for changes to the database are given to the creators.

Non-Functional Requirements:

1) **Usability requirement:**

   The system shall allow the users to access the system using IDE like Netbeans. The system uses an IDE for java. Since all users are familiar with the general usage of the application, no special training is required.

2) **Availability requirement:**

   The JSP/HTML web-based application must be available to the user 24*7,365 days.

3) **Accuracy:**

   The system should accurately provide real time information taking into consideration various concurrency issues. The system shall provide 100% access reliability.

4) **Performance requirement:**

   The information is refreshed at regular intervals depending upon whether some updates have occurred or not. The system shall respond to the member in not less than two seconds from the time of the request submission. The system shall be allowed to take more time when doing large processing jobs. Responses to view information shall take no longer than 5 seconds to appear on the screen.

5) **Reliability Requirement:**

   The system has to be 100% reliable due to the importance of data and the damages that can be caused by incorrect or incomplete data. The system should be able to run 7 days a week, 24 hours a day.

6) **Consistency:**

   The changes made in the data should be permanent. Also, in case of system failure the data should persist in the system.

Hardware Requirements:

Intel Pentium

RAM- 512MB

Space- 20MB

Software Requirements:

Windows 7/10

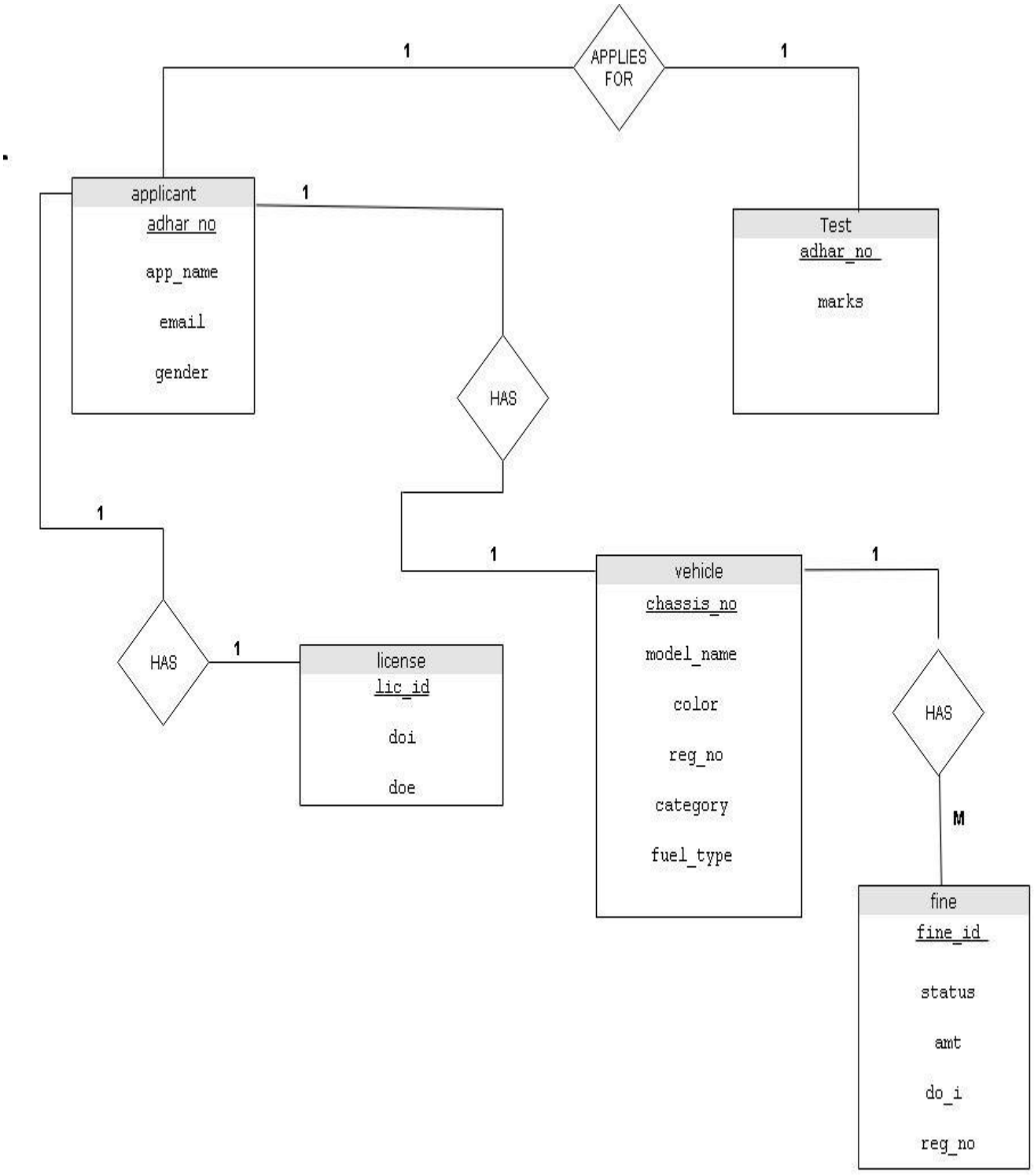
Netbeans IDE 8.2

Atom Text Editor

MySQL Workbench 8.0

Apache Tomcat 8.0.27.0

ER Diagram


APPLIES FOR
1
1
applicant
adhar_no
app_name
email
gender
1
Test
adhar_no
marks
HAS
1
1
vehicle
chassis_no
model_name
color
reg_no
category
fuel_type
1
HAS
1
license
lic_id
doi
doe
HAS
M
fine
fine_id
status
amt
do_i
reg_no

ER To Table Conversion:

1. Table Name: Admin Login Page

Description: To store admin's login credentials.

Sr no.	Name	Data Type	Constraint	Description
1.	Username	Varchar(15)	Primary Key	To store the username
2.	Password	Varchar(15)	Null	To store password

2. Table Name: Applicant table
Description: To store subject details of all the years.

Sr. No	Name	Data Type	Constraints	Description
1.	adhar_no	bigint(20)	Primary Key	Subject code
2.	app_name	Varchar(15)	Null	To store the subject name
3.	Email	Varchar(15)	Null	To store the year that the subject is for.
4.	Dob	Varchar(10)	Null	To store applicant's dob
5.	Gender	char(1)	Null	To store gender

3. Table Name: Vehicle Table
Description: To store information about the faculty members.

Sr No.	Name	Data Type	Constraint	Description
1.	chassis_no	Varchar(15)	Primary Key	Faculty initials
2.	model_name	Varchar(10)	Unique Key	To store name of the faculty

3.	reg_no	Varchar(5)	Unique Key	To store reg_no of applicant when registered for it
4.	Color	Varchar(5)	Null	To store color of vehicle

4. Table Name: License Table
Description: To store the information of which faculty teaches which subject.

Sr No.	Name	Data Type	Constraint	Description
1.	lic_id	Varchar(5)	Primary Key	License id of applicant
2.	Doi	Varchar(5)	Null	To store date of issue of license
3.	Doe	Varchar(5)	Null	To store the date of expiry

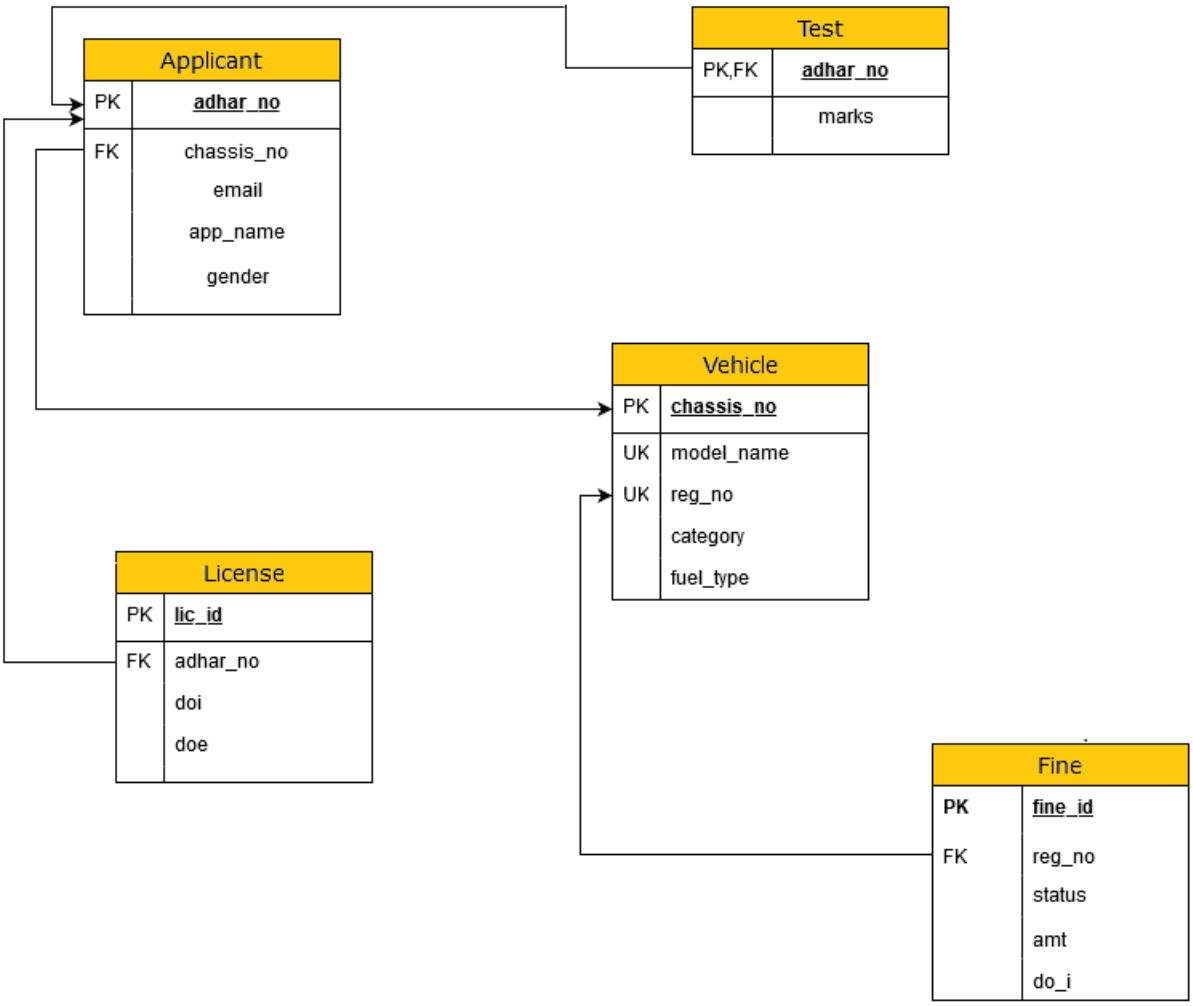
5. Table Name: Fine table
Description: To store the day, time and shift when a subject is taught.

Sr No	Name	Data type	Constraint	Description
1.	fine_id	Varchar(10)	Primary Key	Fine Id
2.	Status	Varchar(7)	Null	To store the status i.e paid/ unpaid
3.	Amt	int	Null	To store amount to be paid
4.	Doi	date	Null	Date of fine issued.

6. **Table Name:** Test table
Description: to store the room no. in which the lectures are conducted

Sr. No	Name	Data Type	Constraints	Description
1.	adhar_no	Varchar(12)	Primary Key, Foreign Key	To check marks by usind adhar no.
2.	Marks	Varchar(10)	Null	To store marks of applicants

Schema Diagram



Schema Definition

1. vehicle1(chassis no, model_name ,reg_no, color)
2. vehicle2(model_name ,category ,fuel_type)
3. app1(adhar_no ,name email ,dob ,gender , chassis_no)
4. app2(adhar_no,chassis_no)
5. test(marks, adhar_no)
6. lic1(lic_id , doi , doe)
7. lic2(adhar_no,lic_id)
8. fine(fine_id ,status ,amt , reg_no)
9. admin(name,password)

Project Plan

Incremental Model

The incremental build model is a method of software development where the model is designed, implemented and tested incrementally (a little more is added each time) until the product is finished. It involves both development and maintenance. The product is defined as finished when it satisfies all of its requirements. This model combines the elements of the waterfall model with the iterative philosophy of prototyping.

The product is decomposed into a number of components, each of which are designed and built separately (termed as builds). Each component is delivered to the client when it is complete. This allows partial utilisation of product and avoids a long development time. It also creates a large initial capital outlay with the subsequent long wait avoided. This model of development also helps ease the traumatic effect of introducing a completely new system all at once.

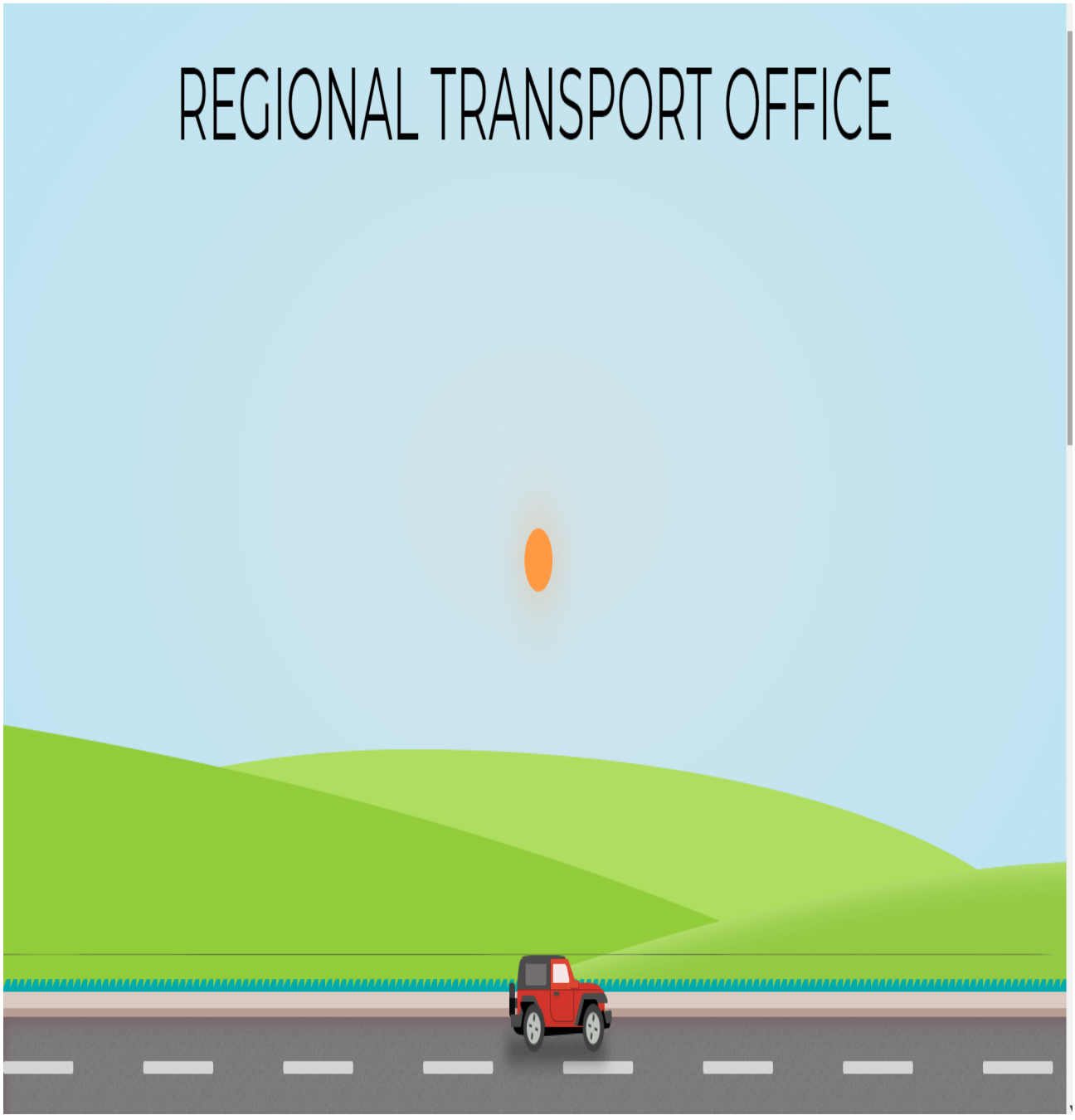
Advantages of Incremental Model

1) Generates working software quickly and early during the software life cycle.
2) More flexible – less costly to change scope and requirements
3) Easier to test and debug during a smaller iteration.
4) Easier to manage risk because risky pieces are identified and handled during its iteration.
5) Each iteration is an easily managed milestone.

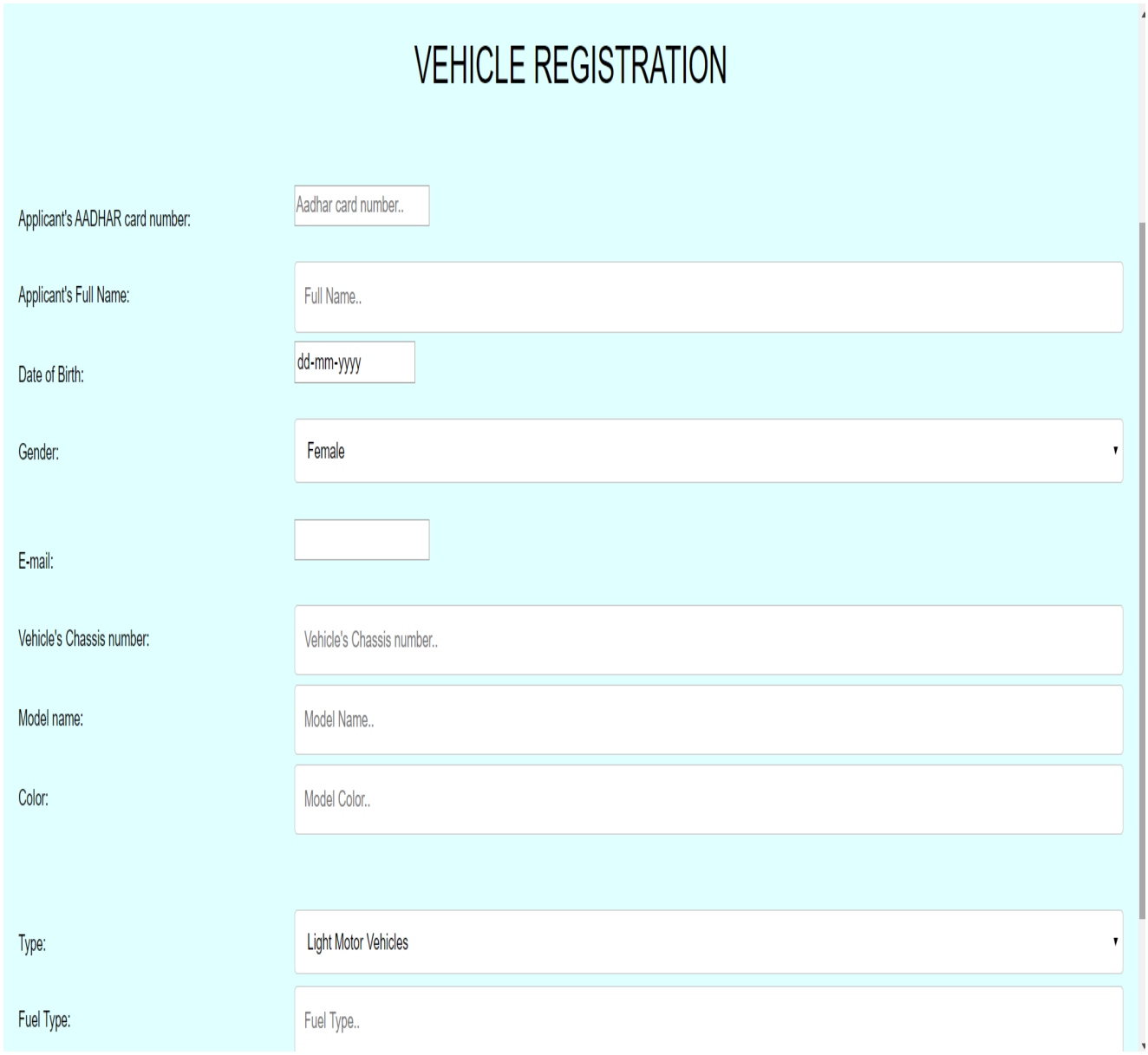
Sr. No.	Events	Dates
1	Selection of Topic	6/3/2021
2	Gathering Required Information	10/3/2021
3	Discussing the Modules	11/3/2021
4	Developing Application Code	20/3/2021
5	Project Testing	8/5/2021
6	Project Documentation	1/6/2021
7	Proper Integration of Project	1/6/2021
8	Project Report	3/6/2021
9	Project Submission	7/6/2021

Screenshots of GUI

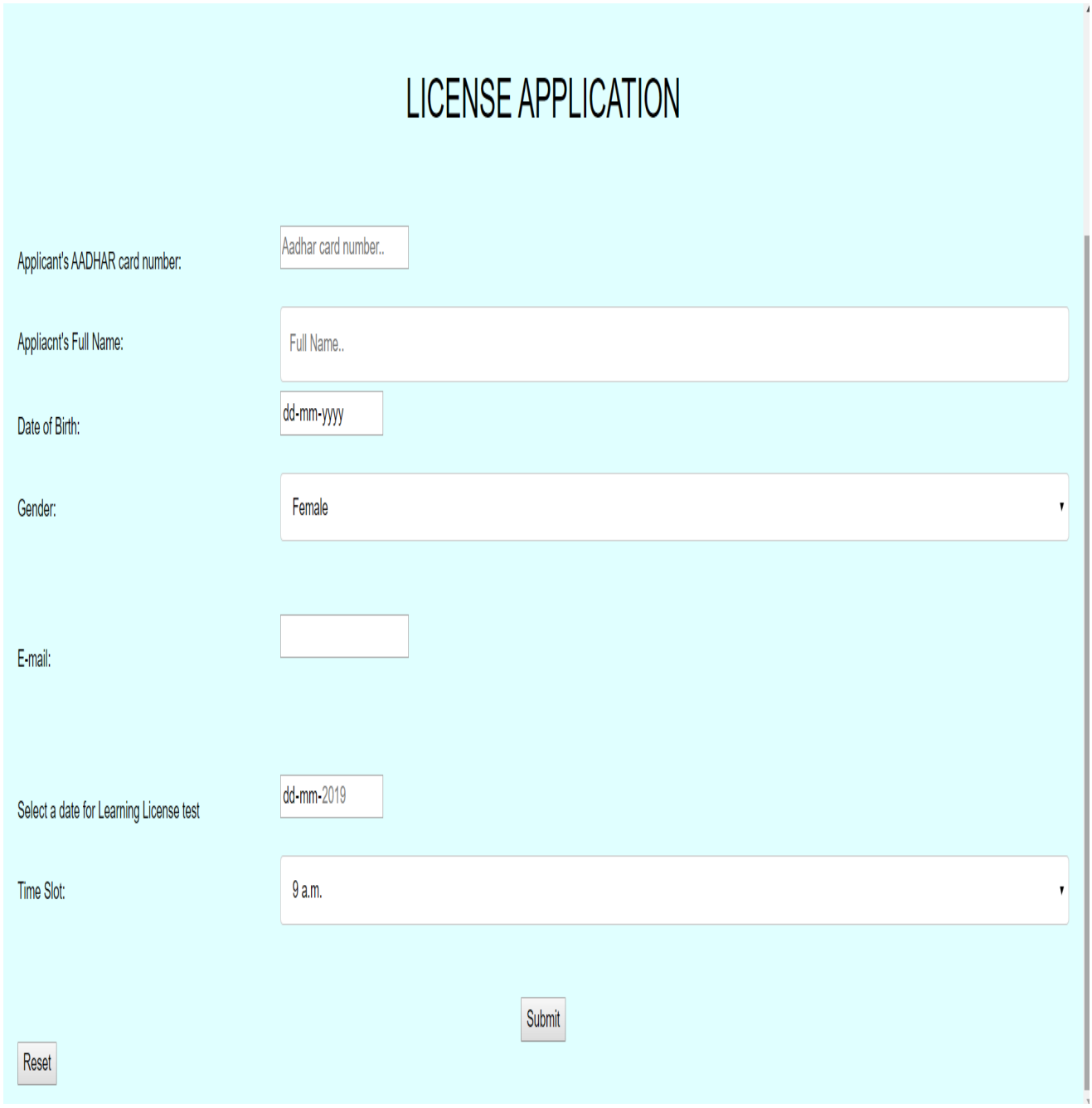
1.Front Page



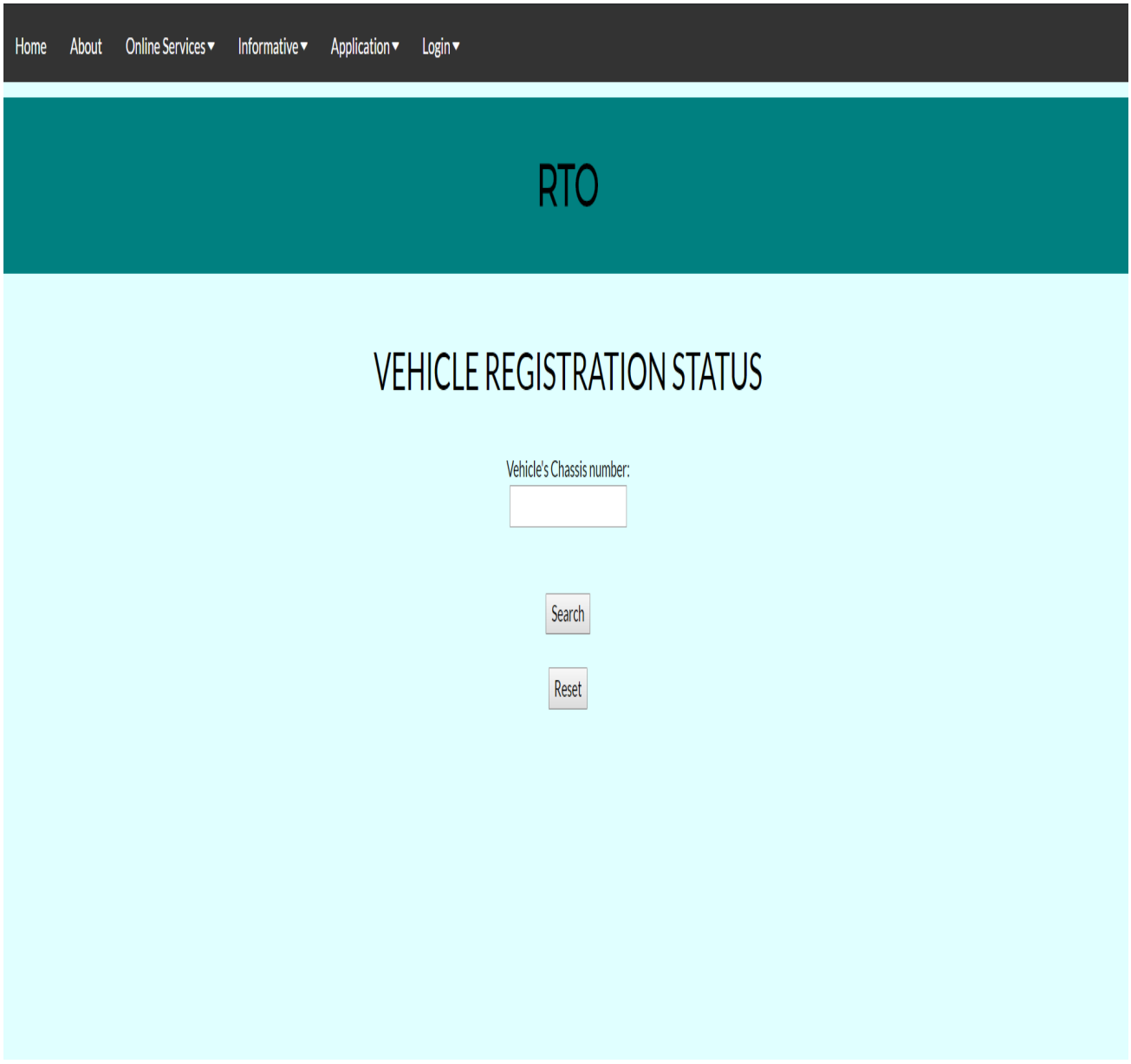
2. Vehicle Registration



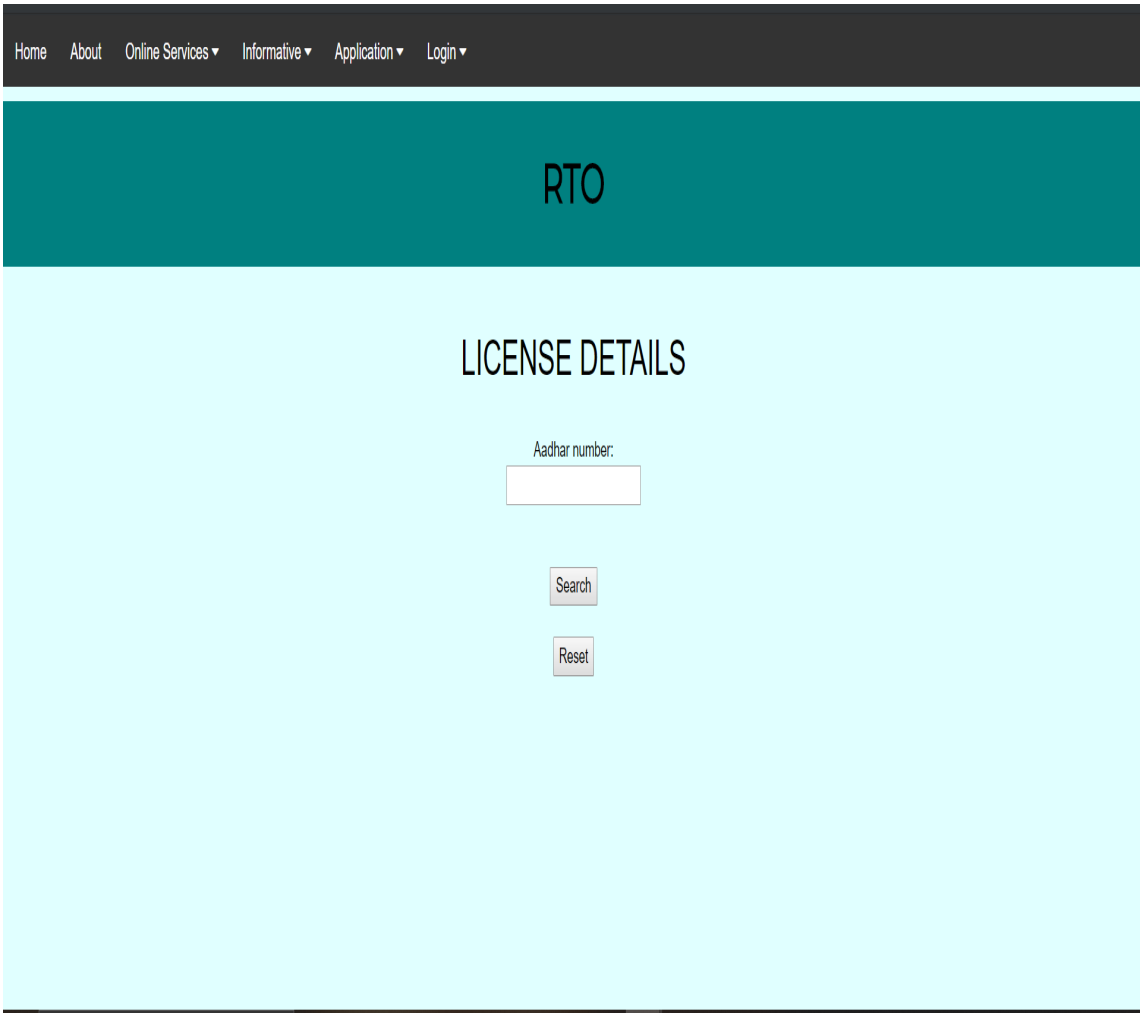
3. License Registration



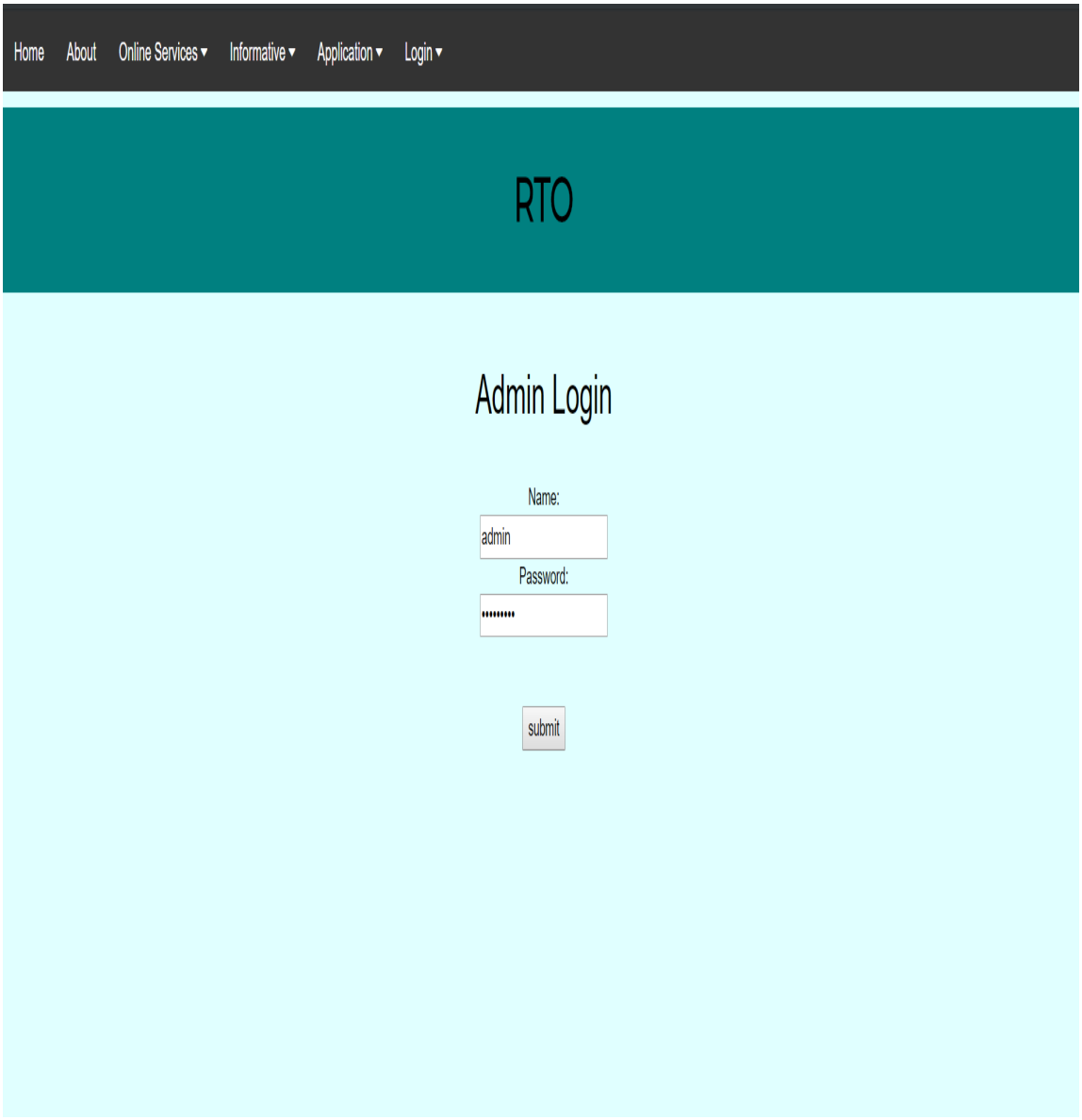
4. Vehicle Search



5.License Search



6.Admin Login



Project codes

```
<!DOCTYPE html>
<html lang="en">
<title>SL1 Project</title>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet" href="https://www.w3schools.com/w3css/4/w3.css">
<link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Lato">
<link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Montserrat">
<link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css
">
<style>
body,h1,h2,h3,h4,h5,h6 {font-family: "Lato", sans-serif}
.w3-bar,h1,button {font-family: "Montserrat", sans-serif}
.fa-anchor,.fa-coffee {font-size:200px}
</style>
<body>


<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<link rel="stylesheet"
href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css
">
<style>
body {
  font-family: Arial, Helvetica, sans-serif;
}

.navbar {
  overflow: hidden;
  background-color: #333;
}

.navbar a {
  float: left;
  font-size: 16px;
  color: white;
  text-align: center;
  padding: 14px 16px;
  text-decoration: none;
}

.dropdown {
  float: left;
  overflow: hidden;
```

```
}

.dropdown .dropbtn {
  font-size: 16px;
  border: none;
  outline: none;
  color: white;
  padding: 14px 16px;
  background-color: inherit;
  font-family: inherit;
  margin: 0;
}

.navbar a:hover, .dropdown:hover .dropbtn {
  background-color: #4C4B4B;
}

.dropdown-content {
  display: none;
  position: absolute;
  background-color: #f9f9f9;
  min-width: 160px;
  box-shadow: 0px 8px 16px 0px rgba(0,0,0,0.2);
  z-index: 1;
}

.dropdown-content a {
  float: none;
  color: black;
  padding: 12px 16px;
  text-decoration: none;
  display: block;
  text-align: left;
}

.dropdown-content a:hover {
  background-color: #ddd;
}

.dropdown:hover .dropdown-content {
  display: block;
}
</style>
</head>
<body>
```

```
<div class="navbar">
  <a href="index.html">Home</a>
  <a href="about.html">About</a>
  <div class="dropdown">
    <button class="dropbtn">Online Services
      <i class="fa fa-caret-down"></i>
    </button>
    <div class="dropdown-content">
      <!--<a href="#">PUC</a>!-->
      <a href="fancy1.html">Fancy No Plate</a>
      <a href="vehiclesearch.html">Details of Vehicle</a>
      <a href="licensesearch.html">Details of License </a>
      <a href="challanlicense.html">Details of e-challan </a>
    </div>
  </div>
  <div class="dropdown">
    <button class="dropbtn">Informative
      <i class="fa fa-caret-down"></i>
    </button>
    <div class="dropdown-content">
      <a href="info1.html">LL/DL/Renewal of DL </a>
                                                                                <a
href="https://www.acko.com/articles/general-info/things-to-know-about-puc-certificate/">P
UC</a>
      <a href="rules.html">Rules </a>
    </div>
  </div>
  <div class="dropdown">
    <button class="dropbtn">Application
      <i class="fa fa-caret-down"></i>
    </button>
    <div class="dropdown-content">
      <a href="llogin21.html">License Application</a>
      <a href="vregistration.html">Vehicle Registration</a>
    </div>
  </div>

  <div class="dropdown">
    <button class="dropbtn">Login
      <i class="fa fa-caret-down"></i>
    </button>
    <div class="dropdown-content">
      <a href="admin.html">Admin</a>
    </div>
  </div>
</div>
</body>
```

```
</body>


  <!-- Navbar on small screens-->
        <div id="navDemo" class="w3-bar-block w3-white w3-hide w3-hide-large
w3-hide-medium w3-large">
    <a href="#" class="w3-bar-item w3-button w3-padding-large">Link 1</a>
    <a href="#" class="w3-bar-item w3-button w3-padding-large">Link 2</a>
    <a href="#" class="w3-bar-item w3-button w3-padding-large">Link 3</a>
    <a href="#" class="w3-bar-item w3-button w3-padding-large">Link 4</a>
  </div>
</div>




<!-- Header
<header class="w3-container w3-red w3-center" style="padding:128px 16px">
  <h1 class="w3-margin w3-jumbo">RTO Management System</h1>
</header>-->

<head>
       <title>running car</title>
       <link rel ="stylesheet" href="style1.css"  >  </head>
   <div class="country-wrap">
              <h1  class="w3-margin  w3-jumbo"  align="center">REGIONAL  TRANSPORT
OFFICE</h1>

          <!--<div class="mountain-1"></div>
          <div class="mountain-2"></div>-->

          <div class="sun"></div>
          <div class="grass"></div>
          <div class="street">
                    <div class="car">
                    <!--<div class="car-base"></div>-->
                    <div class="car-body">
                              <div class="car-top-back">
                                        <div class="back-curve"></div>
                              </div>
                              <div class="car-gate"></div>
                              <div class="car-top-front">
                                        <div class="wind-sheild"></div>
                              </div>
                              <div class="bonet-front"></div>
                              <div class="stepney"></div>
                    </div>
                    <div class="boundary-tyre-cover">
```

```
                        <div class="boundary-tyre-cover-back-bottom"></div>
                        <div class="boundary-tyre-cover-inner"></div>
                </div>
                <div class="tyre-cover-front">
                        <div class="boundary-tyre-cover-inner-front"></div>
                </div>
                <div class="base-axcel">

                </div>
                <div class="front-bumper"></div>
                <div class="tyre">
                        <div class="gap"></div>
                </div>
                <div class="tyre front">
                        <div class="gap"></div>
                </div>
                <div class="car-shadow"></div>
        </div>
        </div>
        <div class="street-stripe"></div>
        <div class="hill">
                <!--<div class="tree-1">
                        <div class="branch-1"></div>
                        <div class="branch-2"></div>
                        <div class="branch-3"></div>
                </div>
                <div class="tree-1">
                <div class="branch"></div>
                <div class="trunk"></div>
        </div>!-->
        </div>

</div>
<!-- First Grid -->
<div class="w3-row-padding w3-padding-64 w3-container">
  <div class="w3-content">
    <div class="w3-twothird">
      <!--<h1>kuch likhana hai kya yahape?</h1>-->
        <h5 class="w3-padding-32">RTA Information System (RTA) is an online information source developed for the Road Transport Authority to facilitate the users in applying for various licenses and registrations. This tool has been designed to facilitate the flow of information within the organization.RTA provides the facility of applying licenses online, issuance of permanent license, tax challans, and receiving payments against challans</h5>

        <p class="w3-text-grey">Under the provision of section 39 of Motor Vehicles Act of 1988, a vehicle can only be driven in public places after registration is done by the registering authority.

We understand that processes related to RTO can at times be complex, cumbersome or even confusing. We know the workflow and the operations of this area. We also minutely
```

```
understand the set of rules and regulations that need to be complied with at each stage. This enables us to provide reliable, quick, and most importantly, economical services .</p>
    </div>

    <div class="w3-third w3-center">
      <i class="fa fa-id-card w3-padding-64 w3-text-red"style="font-size: 11.5em"></i>
    </div>
  </div>
</div>

<!-- Second Grid -->
<div class="w3-row-padding w3-light-grey w3-padding-64 w3-container">
  <div class="w3-content">
    <div class="w3-third w3-center">
          <i class="fa fa-road w3-padding-64 w3-text-red w3-margin-right " style="font-size: 9.5em"></i>
    </div>

    <div class="w3-twothird">
     <!-- <h1>aani ithe pn kahi?</h1>-->
        <h5 class="w3-padding-32">We provide end to end assistance in all documentation support to the clients. we assist you in Driving Licence preparation, Renewal of Driving Licence and all sorts of RTO works, like Vehicle ownership transfer, Vehicle NOC,
          Change of address, Change of name etc.  </h5>

       <p class="w3-text-grey">You can see the huge heap of files that are being piled up in the RTO offices. All the details regarding the functions of the RTO as mentioned already can be stored in these huge heaps of files. All these records can be managed through the use of this RTO management system with ease. The user interface is simple and easy to understand even by the common man. </p>
    </div>
  </div>
</div>

<div class="w3-container w3-black w3-center w3-opacity w3-padding-64">
     <h1 class="w3-margin w3-xlarge">Drive Carefully : 90% of all people are caused by ACCIDENTS</h1>
</div>
<script>
// Used to toggle the menu on small screens when clicking on the menu button
function myFunction() {
  var x = document.getElementById("navDemo");
  if (x.className.indexOf("w3-show") == -1) {
    x.className += " w3-show";
  } else {
    x.className = x.className.replace(" w3-show", "");
  }
}
</script>

</body>
```

</html>

Future Enhancement

This system is also helpful for Traffic police. It turns out to be more effective in controlling repeat violators of traffic rules. 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 the 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

RTO is a web application. Very useful for completion of RTO works online. Our system helps R.T.O Officers to perform their functions electronically. It will also help the R.T.O officials to maintain records systematically and reduce a lot of paperwork and manual efforts. We also identified some general requirements of such a system and tried to meet those requirements as much as possible in the design and implementation of our system. It saves time for the user. Also reduce corruption in the transport department and keep the documents safely.

References:

1) https://stackoverflow.com/questions
2) https://www.w3schools.com/sql/default.asp
3) www.youtube.com /ProgrammingKnowledge
4) Korth Sudarshan 6th Edition (Reference Book)
5) www.draw.io
6) Mr.Sanjay Gaikwad (RTO Office Pune)