

CIVIL REGISTRY

A Project Report of Capstone Project - 3

Submitted by

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SCHOOL OF COMPUTING AND SCIENCE AND ENGINEERING

BONAFIDE CERTIFICATE

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Abstract

In these times it is very difficult to apply for government papers and cards easily and swiftly, for e.g. If we wish to apply for a passport there is a thousand procedures in front of us, we have to visit the concerned office many times and this will be extremely difficult and tedious for busy persons. Moreover it is important that we have to be in a good terms with the authorities for the smooth procedures of getting a license or any other cards such as aadhar card, voter's identity card etc. Civil Registry system is a perfect remedial solution for all the disadvantage of the present system, the proposed is an online portal which helps the citizens of this county to connect with major government departments. Registered users can apply for the cards issued by various departments online through this site. Users can also keep track of their application status on a button click instead of dragging through government office corridors. Civil registry acts as an online consulting agency which provides legal assistance while applying various cards and documents. Application to various public departments such as aadhar card, passport etc. can be submitted or applied online for further processing.

List of Tables

Table Name: Citizen Data

Primary Key: candidate id

Field Name	Data Type	Size
Cid	Integer	
Name	Varchar	50
Fathers name	Varchar	50
Mothers name	Varchar	50
Email	Varchar	50
Phone no	Varchar	50
Gender	Varchar	50
Marital status	Varchar	50
Address	Varchar	50
State	Varchar	50
City	Varchar	50
Pincode	Varchar	50
Date of birth	Varchar	50
Photo	Blob	
Password	Varchar	50

Table Name: Admin

Field Name	Data Type	Size
Admin id	Varchar	50
Admin pass	Varchar	50
Admin name	Varchar	50

Table Name: Staff

Primary Key: staff id

Field Name	Data Type	Size
Eid	Int	
Ename	Varchar	50
Eemail	Varchar	50
Ephone	Varchar	50
Edob	Varchar	50
Egender	Varchar	50
Edept	Varchar	50
Eaddress	Varchar	50
Ecity	Varchar	50
Estate	Varchar	50
Epincode	Varchar	50
epass	Varchar	50
Ephoto	Blob	

Table Name: aadharcard

Primary Key: application no

Field Name	Data Type	Size
Appl no	integer	
cid	integer	
Aadharno	Bigint	
Aadharstatus	Varchar	50
Idproof	Blob	
Idprooffilename	Varchar	50
Idproofno	Varchar	50
10thmarksheet	Blob	

Table Name: votercard

Primary Key: application no

Field Name	Data Type	Size
Appl no	integer	
cid	integer	
votercardno	Varchar	
votercardstatus	Varchar	50
Idproof	Blob	
Idprooffilename	Varchar	50
Idproofno	Varchar	50
10thmarksheet	Blob	

Table Name: pancard

Primary Key: application no

Field Name	Data Type	Size
Appl no	integer	
cid	integer	
pancardno	Varchar	
pancardstatus	Varchar	50
Idproof	Blob	
Idprooffilename	Varchar	50
Idproofno	Varchar	50
10thmarksheet	Blob	
10thmarksheetfilename	Varchar	50
10thmarksheetno	Varchar	50
Birthcertificate	Blob	
Birthcertificatefilename	Varchar	50
Birthcertificateno	Varchar	50

Table Name: passport

Primary Key: application no

Field Name	Data Type	Size
Appl no	integer	
cid	integer	
passportno	Varchar	
passportstatus	Varchar	50
Idproof	Blob	
Idprooffilename	Varchar	50
Idproofno	Varchar	50
10thmarksheet	Blob	
10thmarksheetfilename	Varchar	50
10thmarksheetno	Varchar	50
Birthcertificate	Blob	
Birthcertificatefilename	Varchar	50
Birthcertificateno	Varchar	50

Table Name: drivinglicence

Primary Key: application no

Field Name	Data Type	Size
Appl no	integer	
cid	integer	
drivinglicenceno	Varchar	
drivinglicencestatus	Varchar	50
Idproof	Blob	
Idprooffilename	Varchar	50
Idproofno	Varchar	50
10thmarksheet	Blob	
10thmarksheetfilename	Varchar	50
10thmarksheetno	Varchar	50
Birthcertificate	Blob	
Birthcertificatefilename	Varchar	50
Birthcertificateno	Varchar	50

Chapter 1. Introduction

(i) Overall View - Civil Registry is the online system or agency to help the Indian citizens to apply for their government records like passport, driving license, voter's ID card, PAN card etc. The primary objective of this web site is to give awareness about the government or legal documents and its registration details as well as to help to register or apply for those documents. This also acts as a consultancy agency to assist the public. The main purpose of the web site is to reduce the effort by the candidate and save his time and avoid unwanted rushes at the government offices and assure a smooth working schedule at government offices.

(ii) Purpose - In these times it is very difficult to apply for government papers and cards easily and swiftly, for e.g. If we wish to apply for a passport there is a thousand procedures in front of us, we have to visit the concerned office many times and this will be extremely difficult and tedious for busy persons. Moreover it is important that we have to be in a good terms with the authorities for the smooth procedures of getting a license or any other cards such as aadhar card, voter's identity card etc. Civil Registry system is a perfect remedial solution for all the disadvantage of the present system, the proposed is an online portal which helps the citizens of this county to connect with major government departments. Registered users can apply for the cards issued by various departments online through this site

(iii) Motivation and Scope – Civil registration is the system by which a government records the vital events of its citizens and residents. The resulting

repository or database is called civil register, and the office responsible for receiving registrations is often called the registrar, registry, or population registry. The primary purpose of civil registration is to create a legal document that can be used to establish and protect the rights of individuals. A secondary purpose is to create a data source for the compilation of vital statistics.

Chapter 2. Literature Survey

PRESENT SYSTEM

Existing system refers to the system that is being followed till now. Presently all the registrations are done manually. If a person wants to make registrations like AADHAR CARD, PAN CARD etc. he should directly contact the corresponding office. The main disadvantage is that there will be lot of difficulties for the citizens. So, all these procedures will be a time consuming one and more sufficient word I'll propose to say "govt. work like a headache in existing world".

LIMITATIONS OF PRESENT SYSTEM

- Difficult for persons.
- Time consuming.

To avoid all these limitations and make the working more accurately the system needs to be computerized.

PROPOSED SYSTEM

Civil Registry is the online system or agency to help the Indian citizens to apply for the government records like passport, driving license, voter's ID card, PAN card etc. Civil Registry is a consultancy agency who is providing the assistance to apply and enquire about the legal activities and different applications such as Voters ID, Aadhar Id, Passport etc.

The main purpose of the web site is to Reduce the effort by the candidate and save his

time and avoid unwanted rushes at the Government offices and assure a smooth working schedule at government offices. Civil Registry has its own support team for giving assistance to collect supporting documents and signature for each of every applications. It has its own legal helpdesk for assisting the legal queries online. Vital events that are typically recorded include live voter's registration, passport application. Among legal documents that are derived from civil registration. Civil Registry is aimed at developing a web-based system. In this system the person can register online and do many things. The details of all the things are made available to them through the website.

ADVANTAGES

- This website provides online help for legal queries.
- This website helps all the users to view the registration.
- The user can post thread in the forum.
- The system is user friendly.

Chapter 3. System Design

PRODUCT FUNCTION

USER

Civil Registry is a consultancy agency who is providing the assistance to apply and enquire about the legal activities and different applications such as Voters ID car Registration.

DEPARTMENT

Department view the all application and take desire action regarding the query. To generate the document and keep the track all the record of users.

ADMIN

Admin is nothing but government, the details which are given in consultancy office will be stored in government records. so admin can view the details of every applications such as Voters ID etc.

SYSTEM DESIGN

The most creative and challenging face of the system development is System Design. It provides the understanding and procedural details necessary for implementing the system recommended in the feasibility study. Design goes through the logical and physical stages of development.

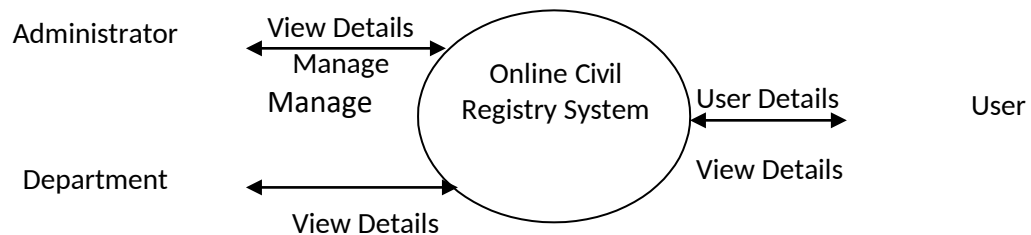
In designing a new system, the system analyst must have a clear understanding of the objectives, which the design is aiming to fulfill. The first step is to determine how the output is to be produced and in what format. Second, input data and master files have to be designed to meet the requirements of the proposed output. The operational phases are handled through program construction and testing.

Design of a system can be defined as a process of applying various techniques and principles for the purpose of defining a device, a process or a system in sufficient detail to permit its physical realization. Thus system design is a solution to “how to” approach to the creation of a new system. Thus important phase provides the understanding and the procedural details necessary for implementing the system recommended in the feasibility study. The design step provides a data design, architectural design, and a procedural design.

LOGICAL DESIGN

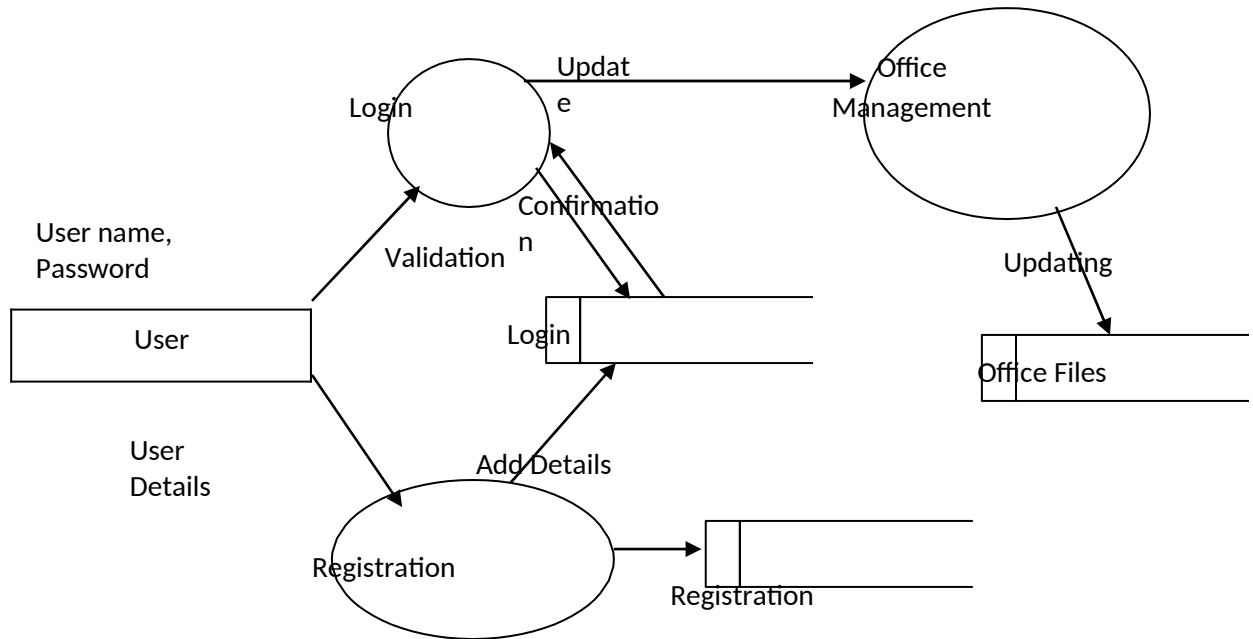
Logical data design is about the logically implied data. Each and every data in the form can be designed in such a manner to understand the meaning. Logical data designing should give a clear understanding and idea about the related data used to construct a form.

CONTEXT DIAGRAM

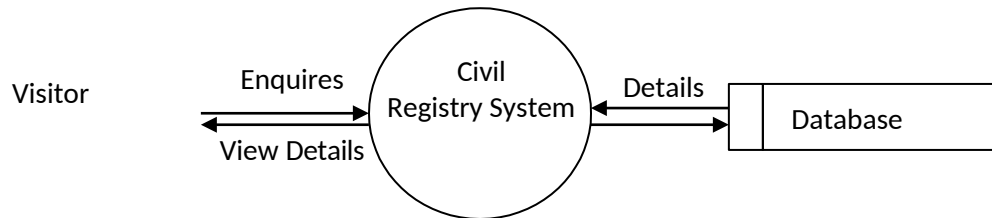


DATA FLOW DIAGRAM

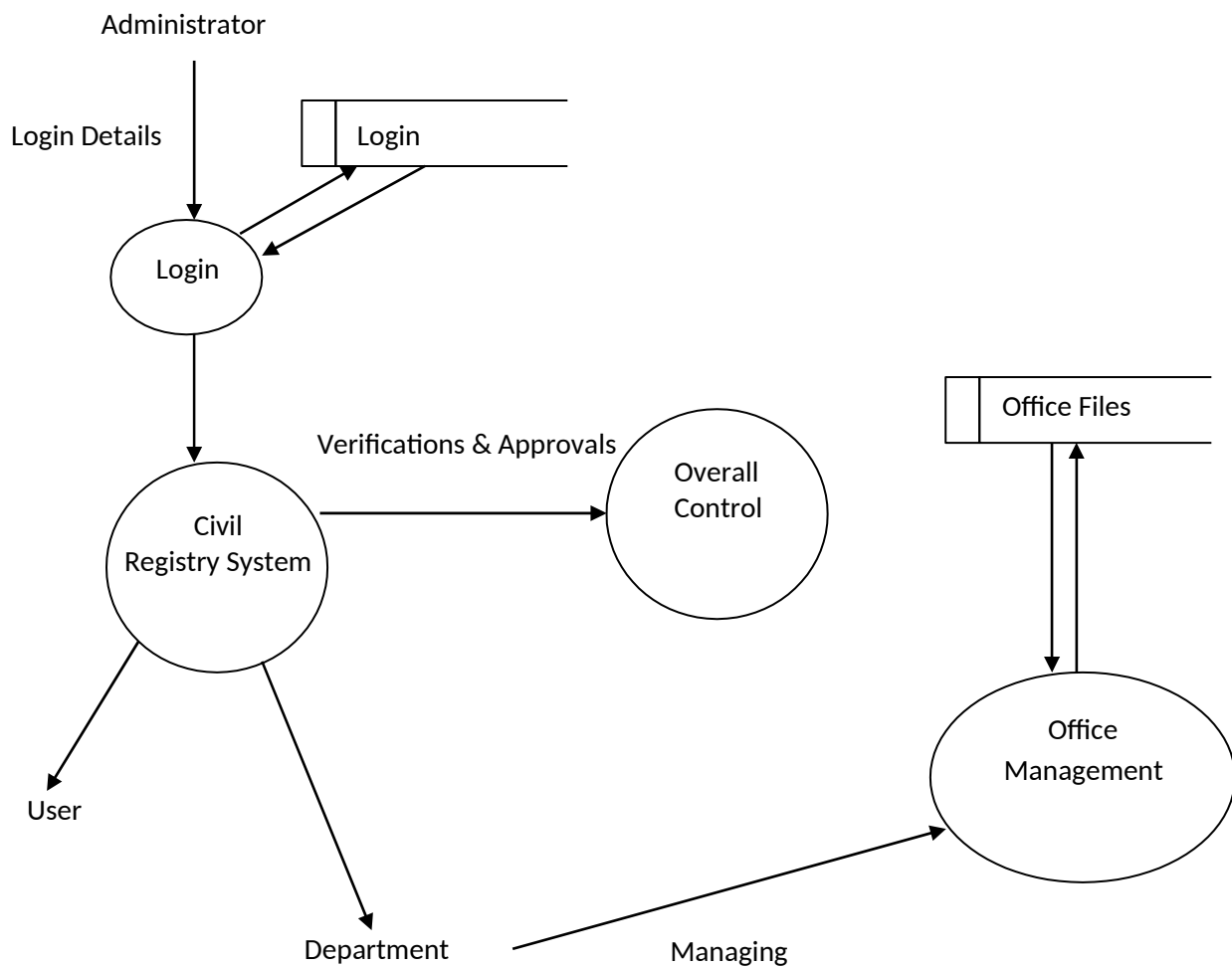
DFD - USER



DFD - DEPARTMENT

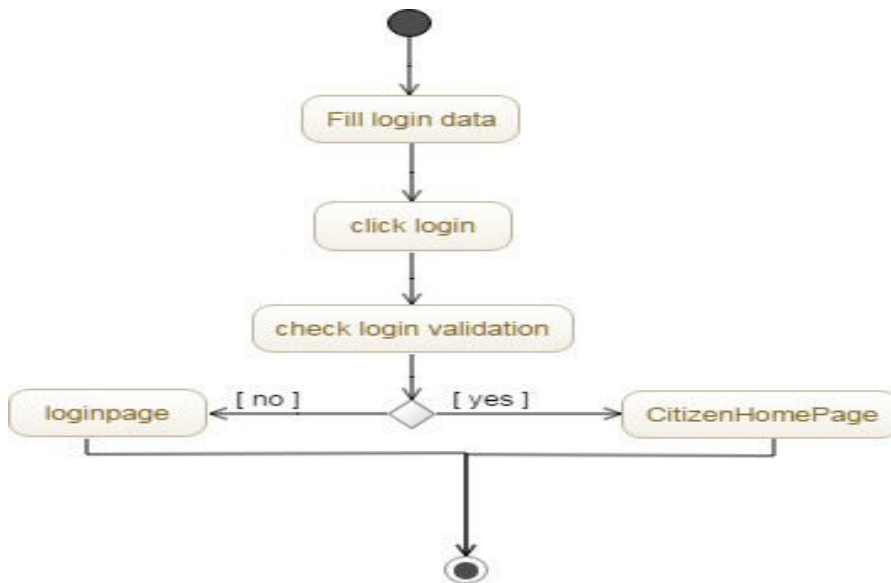


DFD- ADMINISTRATOR

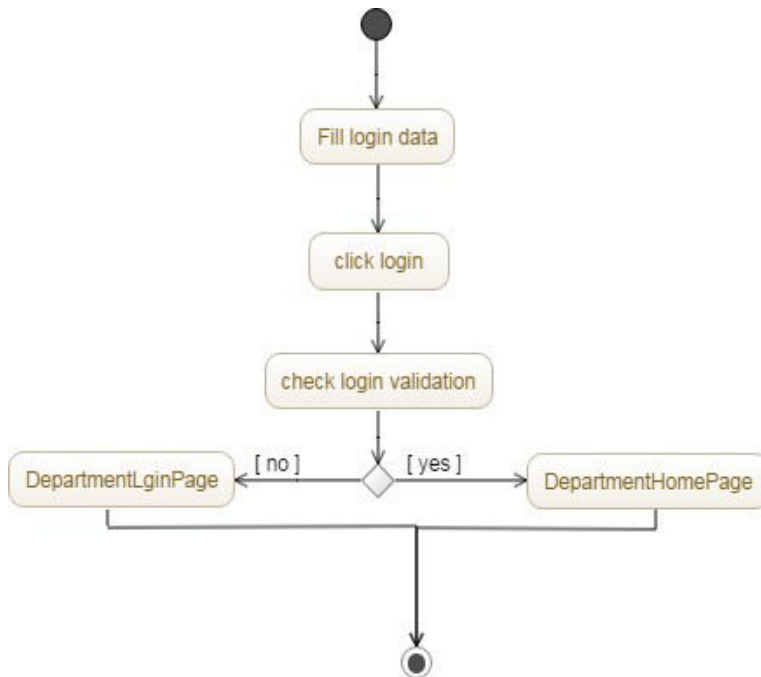


ACTIVITY DIAGRAM

- FOR CITIZEN



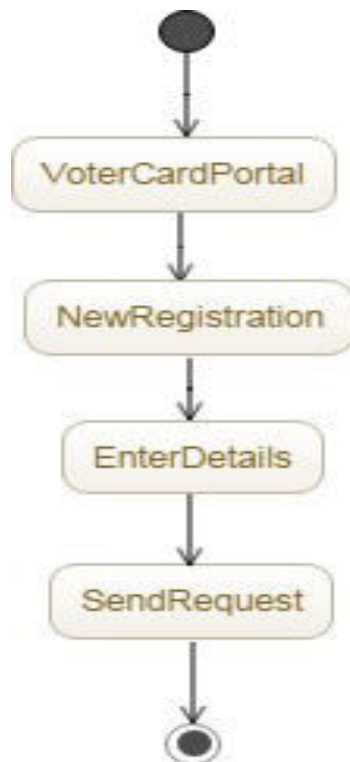
- FOR DEPARTMENT



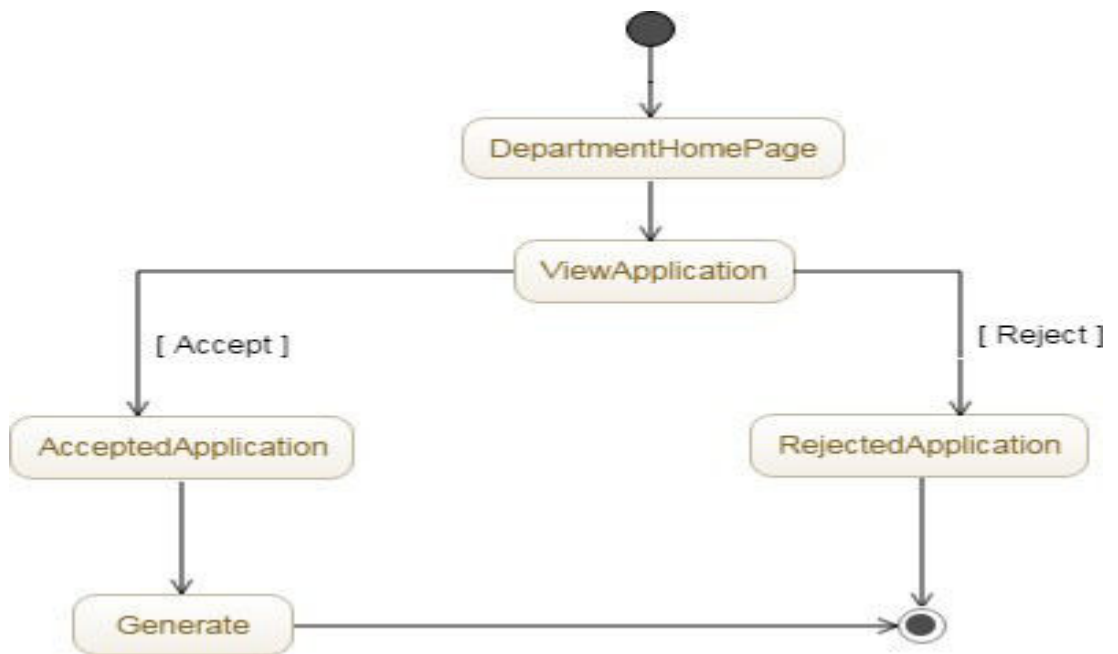
- AADHAR CARD FOR CITIZEN



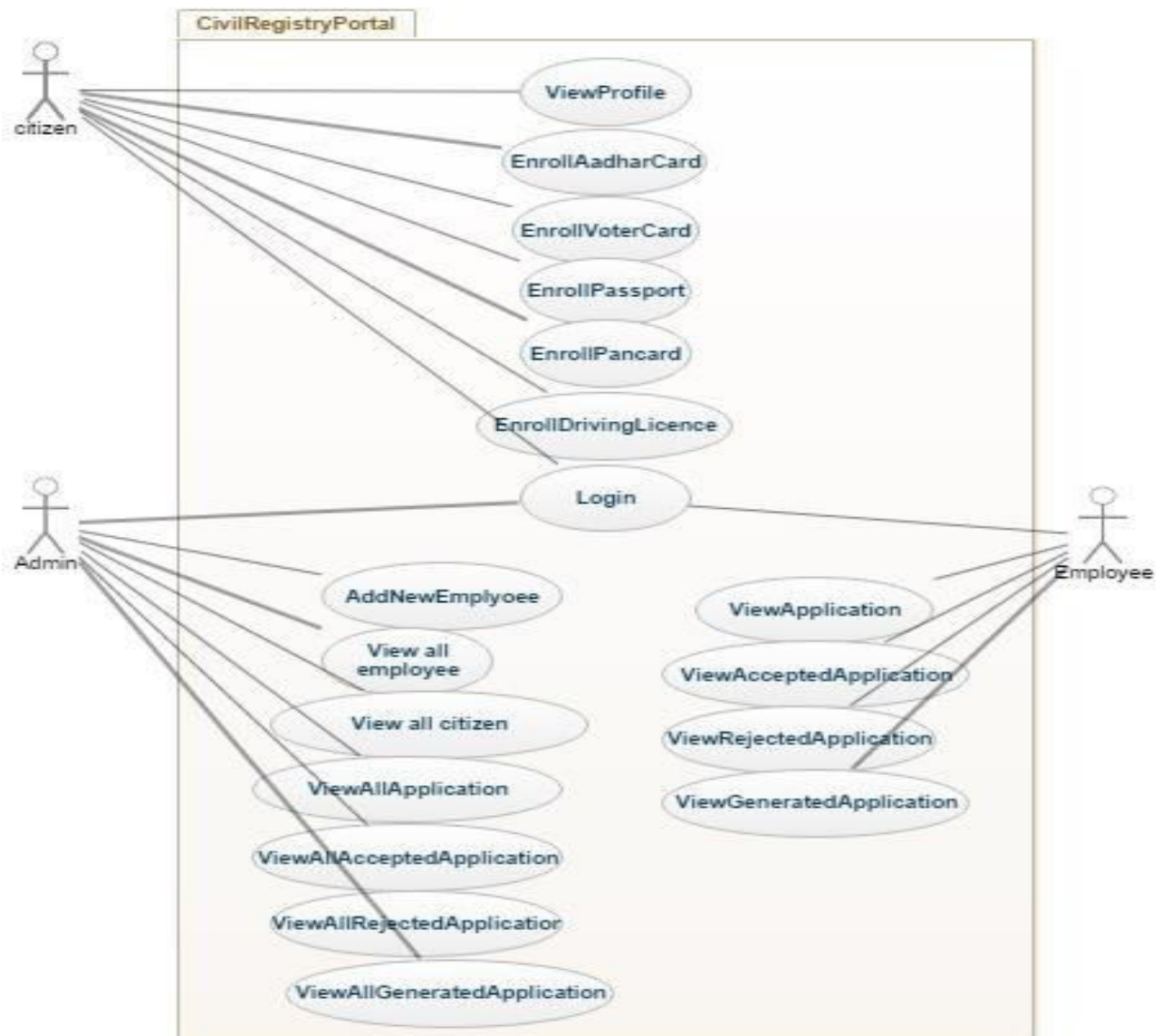
- VOTERCARD FOR CITIZEN



- FOR DEPARTMENT



USE CASE DIAGRAM



Chapter 4. Requirements

System Requirements

SOFTWARE REQUIREMENTS

- Operating System : Windows.
- Server: Tomcat Apache.
- Platform: J2EE(servlet/jsp).
- Programming Language: java
- Database: Oracle DB Server/MySQL.
- Web Technologies: HTML/CSS/JS/BOOTSTRAP

Hardware Requirements

- Minimum 500GB Hard Disk
- Processor: Pentium series and above
- RAM: 512MB

Softwares Required

Netbeans

NetBeans is an integrated development environment (IDE) for Java. NetBeans allows applications to be developed from a set of modular software components called *modules*. NetBeans runs on Windows, macOS, Linux and Solaris. In addition to Java development, it has extensions for other languages like PHP, C, C++, HTML5, and Javascript. Applications based on NetBeans, including the NetBeans IDE, can be extended by third party developers.

Platform

The NetBeans Platform is a framework for simplifying the development of Swing desktop applications. The NetBeans IDE bundle for Java SE contains what is needed to start developing NetBeans plugins and NetBeans Platform based applications; no additional SDK is required.

Applications can install modules dynamically. Any application can include the Update Center module to allow users of the application to download digitally signed upgrades and new features directly into the running application. Reinstalling an upgrade or a new release does not force users to download the entire application again.

The platform offers reusable services common to desktop applications, allowing developers to focus on the logic specific to their application. Among the features of the platform are:

- User interface management (e.g. menus and toolbars)
- User settings management
- Storage management (carries out efficient storage)
- Window management
- Wizard framework (supports step-by-step dialogs)
- NetBeans Visual Library
- Integrated development tools

NetBeans IDE is an open-source integrated development environment. NetBeans IDE supports development of all Java application types (Java SE(including JavaFX), Java ME, web, EJB and mobile applications) out of the box. Among other features are an ANT-based project system, MAVEN support, refactorings, version control (supporting CVS, Subversion, Git, Mercurial and Clearcase).

Modularity: All the functions of the IDE are provided by modules. Each module provides a well-defined function, such as support for the Java language, editing, or support for the CVS versioning system, and SVN. NetBeans contains all the modules needed for Java development in a single download, allowing the user to start working immediately. Modules also allow NetBeans to be extended. New features, such as support for other programming languages, can be added by installing additional modules. For instance, Sun Studio, Sun Java Studio Enterprise, and Sun Java Studio Creator from Sun Micro-systems are all based on the NetBeans IDE.

The NetBeans Profiler is a tool for the monitoring of Java applications: It helps developers find memory leaks and optimize speed. Formerly downloaded separately, it is integrated into the core IDE since version 6.0. The Profiler is based on a Sun Laboratories research project that was named JFluid. That research uncovered specific techniques that can be used to lower the overhead of profiling a Java application. One of those techniques is dynamic bytecode instrumentation, which is particularly useful for profiling large Java applications. Using dynamic bytecode instrumentation and

additional algorithms, the NetBeans Profiler is able to obtain runtime information on applications that are too large or complex for other profilers. NetBeans also support Profiling Points that let you profile precise points of execution and measure execution time.

The **NetBeans IDE Bundle for Web & Java EE** provides complete tools for all the latest Java EE 6 standards, including the new Java EE 6 Web Profile, Enterprise Java Beans (EJBs), servlets, Java Persistence API, web services, and annotations. NetBeans also supports the JSF 2.0 (Facelets), JavaServer Pages (JSP), Hibernate, Spring, and Struts frameworks, and the Java EE 5 and J2EE 1.4 platforms. It includes Glassfish and Apache Tomcat.

Some of its features with Java EE include:

- Improved support for CDI, REST services and Java Persistence
- New support for Bean Validation
- Support for JSF component libraries, including bundled PrimeFaces library
- Improved editing for Expression Language in JSF, including code completion, refactoring and hints

NetBeans IDE offers first-class tools for Java web, enterprise, desktop, and mobile application development. It is consistently the first IDE to support the latest versions of the JDK, Java EE, and JavaFX. It provides smart overviews to help you understand and manage your applications, including out-of-the-box support for popular technologies such as Maven.

With its end-to-end application development features, constantly improving Java Editor, and continual speed and performance enhancements, NetBeans IDE sets the standard for application development with cutting edge technologies out of the box.

Apache Tomcat

Apache Tomcat (sometimes simply "Tomcat") is an open-source implementation of the Java Servlet, Java Server Pages, Java Expression Language and WebSocket technologies. Tomcat provides a "pure Java" HTTP Web Server environment in which Java code can run.

Components

Tomcat 4.x was released with Catalina (a servlet container), Coyote (an HTTP connector) and Jasper (a JSP Engine).

Catalina

Catalina is Tomcat's servlet Container. Catalina implements Sun Microsystems specifications for servlet and JavaServer Pages (JSP). In Tomcat, a Realm element represents a "database" of usernames, passwords, and roles (similar to Unix groups) assigned to those users. Different implementations of Realm allow Catalina to be integrated into environments where such authentication information is already being created and maintained, and then use that information to implement Container Managed Security as described in the Servlet Specification.

Coyote

Coyote is a Connector component for Tomcat that supports the HTTP 1.1 protocol as a web server. This allows Catalina, nominally a Java Servlet or JSP container, to also act as a plain web server that serves local files as HTTP documents. Coyote listens for incoming connections to the server on a specific TCP port and forwards the request to the Tomcat Engine to process the request and send back a response to the requesting client. Another Coyote Connector, Coyote JK, listens similarly but instead forwards its requests to another web server, such as Apache, using the JK Protocol. This usually offers better performance.

Jasper

Jasper is Tomcat's JSP Engine. Jasper parses JSP files to compile them into Java code as servlets (that can be handled by Catalina). At runtime, Jasper detects changes to JSP files and recompiles them.

As of version 5, Tomcat uses Jasper 2, which is an implementation of the Sun Microsystems' JSP 2.0 specification. From Jasper to Jasper 2, important features were added:

- JSP Tag library pooling – Each tag markup in JSP file is handled by a tag handler class. Tag handler class objects can be pooled and reused in the whole JSP servlet.
- Background JSP compilation – While recompiling modified JSP Java code, the older version is still available for server requests. The older JSP servlet is deleted once the new JSP servlet has finished being recompiled.
- Recompile JSP when included page changes – pages can be inserted and included into a JSP at runtime. The JSP will not only be recompiled with JSP file changes but also with included page changes.
- JDT Java compiler – Jasper 2 can use the Eclipse JDT (Java Development Tools) Java compiler instead of Ant and javac

Three new components were added with the release of Tomcat 7:

Cluster

This component has been added to manage large applications. It is used for load balancing that can be achieved through many techniques. Clustering support currently requires the JDK version 1.5 or higher.

High availability

A high-availability feature has been added to facilitate the scheduling of system upgrades (e.g. new releases, change requests) without affecting the live environment.

This is done by dispatching live traffic requests to a temporary server on a different port while the main server is upgraded on the main port. It is very useful in handling user requests on high-traffic web applications.

Web application

It has also added user—as well as system-based web applications enhancement to add support for deployment across the variety of environments. It also tries to manage sessions as well as applications across the network.

Tomcat is building additional components. A number of additional components may be used with Apache Tomcat. These components may be built by users should they need them or they can be downloaded from one of the mirrors.

Tomcat 7.x implements the Servlet 3.0 and JSP 2.2 specifications. It requires Java version 1.6, although previous versions have run on Java 1.1 through 1.5. Versions 5 through 6 saw improvements in garbage collection, JSP parsing, performance and scalability. Native wrappers, known as "Tomcat Native", are available for Microsoft windows and Unix for platform integration.

Tomcat 8.x implements the Servlet 3.1 and JSP 2.3 Specifications. Apache Tomcat 8.5.x is intended to replace 8.0.x and includes new features pulled forward from Tomcat 9.0.x. The minimum Java version and implemented specification versions remain unchanged.

The Java ecosystem supports several kinds of application server, so let's disambiguate

them and see where Tomcat fits in:

- A **servlet container** is an implementation of the Java Servlet specification, used primarily for hosting Java servlets.
- A **web server** is a server designed to serve files from the local system, like Apache.
- A **Java enterprise application server** is a full-blown implementation of the Java EE (now Jakarta Enterprise) specification.

At heart, Tomcat is a servlet and JSP container. A Java Servlet encapsulates code and business logic and defines how requests and responses should be handled in a Java server. JSP is a server-side view rendering technology. As the developer, you write the servlet or JSP page, then let Tomcat handle the routing.

Tomcat also contains the Coyote engine, which is a web server. Thanks to Coyote, it's possible to extend Tomcat to include a variety of Java enterprise specs and capabilities, including the Java Persistence Application. Tomcat also has an extended version, called Tom EE, that includes more enterprise features. I'll briefly introduce TomEE later in this article.

Chapter 5. Implementation

Frontend

HTML

HTML stands for Hyper Text Markup Language, which is the most widely used language on Web to develop web pages. HTML was created by Berners-Lee in late 1991 but "HTML 2.0" was the first standard HTML specification which was published in 1995. HTML 4.01 was a major version of HTML and it was published in late 1999. Though HTML 4.01 version is widely used but currently we are having HTML-5 version which is an extension to HTML 4.01, and this version was published in 2012.

HTML is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain. I will list down some of the key advantages of learning HTML:

- **Create Web site** - You can create a website or customize an existing web template if you know HTML well.
- **Become a web designer** - If you want to start a carrer as a professional web designer, HTML and CSS designing is a must skill.
- **Understand web** - If you want to optimize your website, to boost its speed and

performance, it is good to know HTML to yield best results.

- **Learn other languages** - Once you understands the basic of HTML then other related technologies like javascript, php, or angular are become easier to understand.

```
<!DOCTYPE html>
<html>
  <head>
    <title>This is document title</title>
  </head>
  <body>
    <h1>This is a heading</h1>
    <p>Hello World!</p>
  </body>
</html>
```

CSS

CSS is used to control the style of a web document in a simple and easy way. CSS is the acronym for "**Cascading Style Sheet**". This tutorial covers both the versions CSS1, CSS2 and CSS3, and gives a complete understanding of CSS, starting from its basics to advanced concepts.

CSS is a MUST for students and working professionals to become a great Software Engineer specially when they are working in Web Development Domain. I will list down some of the key advantages of learning CSS:

- **Create Stunning Web site** - CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different

devices and screen sizes as well as a variety of other effects.

- **Become a web designer** - If you want to start a career as a professional web designer, HTML and CSS designing is a must skill.
- **Control web** - CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.
- **Learn other languages** - Once you understand the basic of HTML and CSS then other related technologies like javascript, php, or angular are become easier to understand.

```
<!DOCTYPE html>
<html>
  <head>
    <title>This is document title</title>
    <style>
      h1 {
        color: #36CFFF;
      }
    </style>
  </head>
  <body>
    <h1>Hello World!</h1>
  </body>
</html>
```

JavaScript

JavaScript is a lightweight, interpreted programming language. It is designed for creating network-centric applications. It is complimentary to and integrated with Java. JavaScript is very easy to implement because it is integrated with HTML. It is open and cross-platform.

Javascript is a MUST for students and working professionals to become a great

Software Engineer specially when they are working in Web Development Domain. I will list down some of the key advantages of learning Javascript:

- Javascript is everywhere, it comes installed on every modern web browser and so to learn Javascript you really do not need any special environment setup. For example Chrome, Mozilla Firefox , Safari and every browser you know as of today, supports Javascript.
- Javascript helps you create really beautiful and crazy fast websites. You can develop your website with a console like look and feel and give your users the best Graphical User Experience.
- JavaScript usage has now extended to mobile app development, desktop app development, and game development. This opens many opportunities for you as Javascript Programmer.
- Due to high demand, there is tons of job growth and high pay for those who know JavaScript. You can navigate over to different job sites to see what having JavaScript skills looks like in the job market.
- Great thing about Javascript is that you will find tons of frameworks and Libraries already developed which can be used directly in your software development to reduce your time to market.

<html>

```
<body>
  <script language = "javascript" type = "text/javascript">
    <!--
```

```
document.write("Hello World!")
//-->
</script>
</body>
</html>
```

Bootstrap

Bootstrap is the most popular front end framework in the recent time. It is sleek, intuitive, and powerful mobile first front-end framework for faster and easier web development. It uses HTML, CSS and Javascript.

Here are some listed applications of bootstrap

- Scaffolding – Bootstrap provides a basic structure with Grid System, link styles, and background. This is covered in detail in the section Bootstrap Basic Structure
- CSS – Bootstrap comes with the feature of global CSS settings, fundamental HTML elements styled and enhanced with extensible classes, and an advanced grid system. This is covered in detail in the section Bootstrap with CSS.
- Components – Bootstrap contains over a dozen reusable components built to provide iconography, dropdowns, navigation, alerts, pop-overs, and much more. This is covered in detail in the section Layout Components.
- JavaScript Plugins – Bootstrap contains over a dozen custom jQuery plugins. You can easily include them all, or one by one. This is covered in details in the section Bootstrap Plugins.
- Customize – You can customize Bootstrap's components, LESS variables, and

jQuery plugins to get your very own version

<!DOCTYPE html>

```
<html>

  <head>
    <title>Bootstrap 101 Template</title>
    <meta name = "viewport" content = "width = device-width, initial-scale = 1.0">

    <!-- Bootstrap -->
    <link href = "css/bootstrap.min.css" rel = "stylesheet">

    <!-- HTML5 Shim and Respond.js IE8 support of HTML5 elements and media queries
-->
    <!-- WARNING: Respond.js doesn't work if you view the page via file:// -->

    <!--[if lt IE 9]>
    <script src =
"https://oss.maxcdn.com/libs/html5shiv/3.7.0/html5shiv.js"></script>
    <script src =
"https://oss.maxcdn.com/libs/respond.js/1.3.0/respond.min.js"></script>
    <![endif]-->

  </head>

  <body>
    <h1>Hello, world!</h1>

    <!-- jQuery (necessary for Bootstrap's JavaScript plugins) -->
    <script src = "https://code.jquery.com/jquery.js"></script>

    <!-- Include all compiled plugins (below), or include individual files as needed
-->
    <script src = "js/bootstrap.min.js"></script>

  </body>
</html>
```

jQuery

jQuery is a fast and concise JavaScript library created by John Resig in 2006. jQuery simplifies HTML document traversing, event handling, animating, and Ajax interactions for Rapid Web Development.

- jQuery is a small and lightweight JavaScript library.
- jQuery is cross-platform.
- jQuery means "write less do more".
- jQuery simplifies AJAX call and DOM manipulation.

Backend

JSP

Adding dynamic content via expressions

As we saw in the previous section, any HTML file can be turned into a JSP file by changing its extension to .jsp. Of course, what makes JSP useful is the ability to embed Java. Put the following text in a file with .jsp extension (let us call it **hello.jsp**), place it in your JSP directory, and view it in a browser.

```
<HTML>
<BODY>
Hello! The time is now <%= new java.util.Date() %>
</BODY>
</HTML>
```

Notice that each time you reload the page in the browser, it comes up with the current time.

The character sequences `<%=` and `%>` enclose Java expressions, which are evaluated at run time.

This is what makes it possible to use JSP to generate dynamic HTML pages that change in response to user actions or vary from user to user.

Scriptlets

We have already seen how to embed Java expressions in JSP pages by putting them between the `<%=` and `%>` character sequences.

But it is difficult to do much programming just by putting Java expressions inside

HTML.

JSP also allows you to write blocks of Java code inside the JSP. You do this by placing your Java code between `<%` and `%>` characters (just like expressions, but without the `=` sign at the start of the sequence.)

This block of code is known as a "scriptlet". By itself, a scriptlet doesn't contribute any HTML (though it can, as we will see down below.) A scriptlet contains Java code that is executed every time the JSP is invoked.

Here is a modified version of our JSP from previous section, adding in a scriptlet.

```
<HTML>
<BODY>
<%
    // This is a scriptlet. Notice that the "date"
    // variable we declare here is available in the
    // embedded expression later on.
    System.out.println( "Evaluating date now" );
    java.util.Date date = new java.util.Date();
%>
Hello! The time is now <%= date %>
</BODY>
</HTML>
```

If you run the above example, you will notice the output from the "System.out.println" on the server log. This is a convenient way to do simple debugging (some servers also have techniques of debugging the JSP in the IDE. See your server's documentation to see if it offers such a technique.)

By itself a scriptlet does not generate HTML. If a scriptlet wants to generate HTML, it can use a variable called "out". This variable does not need to be declared. It is already predefined for scriptlets, along with some other variables. The following

example shows how the scriptlet can generate HTML output.

```
<HTML>
<BODY>
<%
    // This scriptlet declares and initializes "date"
    System.out.println( "Evaluating date now" );
    java.util.Date date = new java.util.Date();
%>
Hello! The time is now
<%
    // This scriptlet generates HTML output
    out.println( String.valueOf( date ));
%>
</BODY>
</HTML>
```

Here, instead of using an expression, we are generating the HTML directly by printing to the "out" variable. The "out" variable is of type `javax.servlet.jsp.JspWriter`.

Another very useful pre-defined variable is "request". It is of type `javax.servlet.http.HttpServletRequest`

A "request" in server-side processing refers to the transaction between a browser and the server. When someone clicks or enters a URL, the browser sends a "request" to the server for that URL, and shows the data returned. As a part of this "request", various data is available, including the file the browser wants from the server, and if the request is coming from pressing a SUBMIT button, the information the user has entered in the form fields.

The JSP "request" variable is used to obtain information from the request as sent by the browser. For instance, you can find out the name of the client's host (if available, otherwise the IP address will be returned.) Let us modify the code as shown:

```
<HTML>
<BODY>
<%
  // This scriptlet declares and initializes "date"
  System.out.println( "Evaluating date now" );
  java.util.Date date = new java.util.Date();
%>
Hello! The time is now
<%
  out.println( date );
  out.println( "<BR>Your machine's address is " );
  out.println( request.getRemoteHost());
%>
</BODY>
</HTML>
```

A similar variable is "response". This can be used to affect the response being sent to the browser. For instance, you can call `response.sendRedirect(anotherUrl);` to send a response to the browser that it should load a different URL. This response will actually go all the way to the browser. The browser will then send a different request, to "anotherUrl". This is a little different from some other JSP mechanisms we will come across, for including another page or forwarding the browser to another page.

Servlet

Servlet technology is used to create a web application (resides at server side and generates a dynamic web page).

Servlet technology is robust and scalable because of java language. Before Servlet, CGI (Common Gateway Interface) scripting language was common as a server-side programming language. However, there were many disadvantages to this technology.

We have discussed these disadvantages below.

There are many interfaces and classes in the Servlet API such as Servlet, GenericServlet, HttpServlet, ServletRequest, ServletResponse, etc.

Servlet can be described in many ways, depending on the context.

- Servlet is a technology which is used to create a web application.
- Servlet is an API that provides many interfaces and classes including documentation.
- Servlet is an interface that must be implemented for creating any Servlet.
- Servlet is a class that extends the capabilities of the servers and responds to the incoming requests. It can respond to any requests.
- Servlet is a web component that is deployed on the server to create a dynamic web page.

Servlet Interface

Servlet interface provides common behavior to all the servlets. Servlet interface defines methods that all servlets must implement.

Servlet interface needs to be implemented for creating any servlet (either directly or indirectly). It provides 3 life cycle methods that are used to initialize the servlet, to service the requests, and to destroy the servlet and 2 non-life cycle methods.

```
import java.io.*;
import javax.servlet.*;

public class First implements Servlet {
    ServletConfig config=null;
```

```

public void init(ServletConfig config){
this.config=config;
System.out.println("servlet is initialized");
}

public void service(ServletRequest req,ServletResponse res)
throws IOException,ServletException{

res.setContentType("text/html");

PrintWriter out=res.getWriter();
out.print("<html><body>");
out.print("<b>hello simple servlet</b>");
out.print("</body></html>");

}
public void destroy(){System.out.println("servlet is destroyed");}
public ServletConfig getServletConfig(){return config;}
public String getServletInfo(){return "copyright 2007-1010";}

}

```

Generic Servlet

GenericServlet class implements Servlet, ServletConfig and Serializable interfaces. It provides the implementation of all the methods of these interfaces except the service method.

GenericServlet class can handle any type of request so it is protocol-independent.

```

import java.io.*;
import javax.servlet.*;

public class First extends GenericServlet{
public void service(ServletRequest req,ServletResponse res)
throws IOException,ServletException{

res.setContentType("text/html");

PrintWriter out=res.getWriter();
out.print("<html><body>");
out.print("<b>hello generic servlet</b>");
out.print("</body></html>");

}

```

```
}
```

HttpServlet

The HttpServlet class extends the GenericServlet class and implements Serializable interface. It provides http specific methods such as doGet, doPost, doHead, doTrace etc.

```
import javax.servlet.*;
import java.io.*;
public class DemoServ extends HttpServlet{
public void doGet(HttpServletRequest req,HttpServletResponse res)throws ServletException,IOException
{
res.setContentType("text/html");
PrintWriter pw=res.getWriter();
String name=req.getParameter("name");
pw.println("Welcome "+name);
}}
```

MySql

My SQL is an application used to create computer databases for the Microsoft Windows family of server operating systems. It provides an environment used to generate databases that can be accessed from workstations, the web, or other media such as a personal digital assistant (PDA). MY SQL is probably the most accessible and the most documented enterprise database environment right now. This also means that you can learn it a little quicker than most other database environments on the market

What is SQL Used for:

Using SQL one can create and maintain data manipulation objects such as table, views, sequence etc. These data manipulation objects will be created and stored on the

server's hard disk drive, in a tablespace, to which the user has been assigned.

Once these data manipulation objects are created, they are used extensively in commercial applications.

DML, DCL, DDL:

In addition to the creation of data manipulation objects, the actual manipulation of data within these objects is done using SQL.

The SQL sentences that are used to create these objects are called DDL's or Data Definition Language. The SQL sentences used to manipulate data within these objects are called DML's or Data Manipulation Language. The SQL sentences, which are used to control the behavior of these objects, are called DCL's or Data Control Language.

Data Type

Built-in data types

In My Sql, each object (such as column, variable, or parameter) has a related data type, which is an attribute that specifies the type of data that the object can hold.

User-defined data types

My SQL supports user-defined data types too. User-defined data types provide a mechanism for applying a name to a data type that is more descriptive of the types of values to be held in the object. Using user-defined data type can make it easier for a programmer or database administrator to understand the intended use of any object defined with the data type. The user-defined data types are based on the system data types and can be used to predefine several attributes of a column, such as its data

type, length, and whether it supports NULL values. To create a user-defined data type, you can use the `sp_addtype` system stored procedure or you could add one using the Enterprise Manager. When you create a user-defined data type, you should specify the following three properties:

- Data type's name.
- Built-in data type upon which the new data type is based.
- Whether it can contain NULL values.

Chapter 6. Software Quality Attributes

RELIABILITY

Reliability of a system is a measure of the ability of a system to keep operating overtime. It is typically measured as its mean time between failures (MTBF), expected type of system. Delivery of data to intended recipient (notification to sender by email or message).

Reliability service – notify user – if delivery fail.

Together TCP & IP provide reliable service.

Vaccinate has the ability to behave consistently in a user acceptable manner when operating within the environment for which the system was intended.

AVAILABILITY

It is apt that resources that should be available to authorized user actually are available (Safety & dependability).

A fault associate with availability is denial of service attack. Degree to which system is in specified operable and committable state at the start. It will operate satisfactorily at given pt.

Chapter 7. Future Enhancement

Now the users can only do registrations through online. All the remaining procedures are done manually. In future we can do full process through online. Civil Registry team can apply for the tie up or authorization from all the Government offices like Passport Office, Register Office, RTO, and Cooperation Office etc.

Chapter 8 . Conclusion

Now a day's manual process for the citizens to apply for their government records like passport, driving license, voter's id, pan card etc. has become a huge task. The main object of the website is to reduce the effort by the candidate and save his time and avoid unwanted rushes at the government offices and assure a smooth working schedule at government offices. The main features of this site includes flexibility, reduce manual work in an efficient manner, a quick, convenient, reliable and effective way to apply for their government records. The project could very well be enhanced further as per the requirements.

To conclude, this project computerizes the various registration system in government offices and digitalizes the official cards provided to the citizens. The growing use of internet and the current uneconomical, time consuming manual registration system makes up for the good scope of this web-based project.

Chapter 9. Output

The screenshot shows the homepage of the Civil Registration Portal. At the top, there is a dark blue header with the portal's logo on the left and navigation links on the right: "Civil Registration", "Our Sigmets", "Services", and "Signin/Signup". The main content area features a large blue banner with the text "WELCOME TO CIVIL REGISTRATION PORTAL". Below this banner, a paragraph of text describes the portal as the first online system for Indian citizens to apply for and update government records and cards. A "read more" button is positioned below the text. Further down, a section titled "Our Sigmets" is visible, with three partially shown cards below it. The first card contains the text: "A 12-Digit Unique Identity for Every Indian Individual, Including Children & Infants".

Wed Apr 26 00:01:13 IST 2017 About Portal Who we are About us Contact us Department Official

Civil Registration Our Sigmets Services Signin/Signup

WELCOME TO CIVIL REGISTRATION PORTAL

CIVIL REGISTRATION, first online system or agency to help the INDIAN citizens easy to apply and updation for there government records and cards like Passport, Driving License, Voter ID card, PAN card and Aadhar card.

[read more](#)

Our Sigmets

A 12-Digit Unique Identity for Every Indian Individual, Including Children & Infants

This screenshot shows the same Civil Registration Portal homepage as above, but with a "Sign in" modal window open in the center. The modal has a white background and a dark blue header with the text "Sign in" and a close button (X). It contains two input fields: "Email Id" with a placeholder "Email" and "Password" with a placeholder "Password". Below the input fields are four buttons: "Signin", "Reset", "Forgot password", and "Signup here". The background of the page is dimmed to show the modal is active.

Wed Apr 26 00:01:13 IST 2017 About Portal Who we are About us Contact us Department Official

Civil Registration Our Sigmets Services Signin/Signup

Sign in

Email Id

Password

[Signin](#) [Reset](#) [Forgot password](#) [Signup here](#)

WELCOME TO CIVIL REGISTRATION PORTAL

CIVIL REGISTRATION, first online system or agency to help the INDIAN citizens easy to apply and updation for there government records and cards like Passport, Driving License, Voter ID card, PAN card and Aadhar card.

Our Sigmets

A 12-Digit Unique Identity for Every Indian Individual, Including Children & Infants

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Civil Registration

Our Sigmets Services Signin/Signup

Signup here

Name <input type="text" value="Name"/>	Phone <input type="text" value="Phone"/>	I am <input checked="" type="radio"/> Male <input type="radio"/> Female <input type="radio"/> Other
Father's Name <input type="text" value="Father's Name"/>	Date of birth <input type="text" value="dd-mm-yyyy"/>	I am <input checked="" type="radio"/> Unmarried <input type="radio"/> Married <input type="radio"/> Other
Mother's Name <input type="text" value="Mother's Name"/>	Password <input type="password"/>	
Email <input type="text" value="Email"/>	Upload your Photo (This photo will use as a on document) <input type="button" value="Choose File"/> No file chosen	
Address <input type="text" value="Address"/>		
City <input type="text" value="Noida"/>		
state		

A 12-Digit Unique Identity for Every Indian Individual, Including Children & Infants

Wed Apr 26 00:01:13 IST 2017 About Portal Who we are About us Contact us Department Official

Civil Registration

Our Sigmets Services Signin/Signup

Forget password

WELCOME TO CIVIL REGISTRATION PORTAL

CIVIL REGISTRATION, first online system or agency to help the INDIAN citizens easy to apply and updatation for there government records and cards like Passport, Driving License, Voter ID card, PAN card and Aadhar card.

Our Sigmets

A 12-Digit Unique Identity for Every Indian Individual, Including Children & Infants

Aadhar Card Portal

- AADHAR CARD
- VOTER CARD
- PASSPORT
- DRIVING LICENCE
- PANCARD



- About Aadhar
- Vision
- Mission
- Core Values

About AADHAR

Aadhaar is a 12-digit unique identification number issued by the Indian government to every individual resident of India. The Unique Identification Authority of India (UIDAI), which functions under the Planning Commission of India, is responsible for managing Aadhaar numbers and Aadhaar identification cards. The Aadhaar project was initiated as an attempt towards having a single, unique identification document or number that would capture all the details, including demographic and biometric information, of every resident Indian individual. Currently there are a plethora of identity documents in India including passports, permanent account numbers (PANs), driving licenses and ration cards. The Aadhaar card / UID will not replace these identification documents but can be used as the sole identification proof when applying for other things. It will also serve as the basis for

- AadharCard
- VoterCard
- Pancard
- Passport
- Driving Licence

Aadhar Card Portal

NOTE: All The Document Should Be Verified First Otherwise You Won't Be Able To Generate Any ID

Apply for Aadhar Card

Upload Your Documents

*ID proof(voter-ID Card /ration-card /ID proof letter)	Id proof unique number
<input type="button" value="Choose File"/> No file chosen	
(if any)10 th marksheet	10th marksheet unique number
<input type="button" value="Choose File"/> No file chosen	
*Birth Certificate	Birth-Certificate unique number
<input type="button" value="Choose File"/> No file chosen	



Voter Card Portal

NOTE : All The Document Should Be Verified First Otherwise You Won't Be Able To Generate Any ID

Apply for VoterCard

Upload Your Documents

*ID proof(Aadhar Card)

No file chosen

(if any)10th marksheet

No file chosen

*Birth Certificate

No file chosen



Passport Portal

NOTE : All The Document Should Be Verified First Otherwise You Won't Be Able To Generate Any ID

Apply for Passport

Upload Your Documents

*ID proof(Aadhar Card)

No file chosen

(if any)10th marksheet

No file chosen

*Birth Certificate

No file chosen

Chapter 10. References

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