Project Name: Child Adoption Portal

Project Member:

Deshpande Pranita	210543181021
Jagtap Komal	210543181032
Neha Katekar	210543181053
Shikha Singh	210543181098

Abstract:

To have a kid is a parent's biggest happiness. Adoption seems to be the most effective way of achieving this joy. It can be the loveliest option not only for single- parent and childless couples but also for homeless kids.

In Existing system there is a manual process for adoption. Applying & Submission of adoption application to officer etc all are done manually. The system is not transparent to the outside world. Manual systems of adoption registration always put pressure on people to be correct in all aspect of their work. This puts a requirement on management to run training continuously for staff to keep them motivated and to ensure they are following the correct procedures. Some other limitations of the existing system are- Inconsistency in data entry, missing information, time consuming and costly to produce reports, lack of security of data.

Major principle of this project is to analyze and to find solution in Online Child Adoption Portal. Other objective of this is to make Child Adoption process easy. System allows applicant to apply for adoption

of child. And finally it presents more flexibility to applicant like how much time is reduced as well as the applicant can apply intended for adoption process conveniently from anyplace.

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Introduction

As in the fast growing IT market, technologies are changing very fast based on these technologies we are aiming to reduce manual process of Child Adoption processing. Child Adoption Portal is web-based tool to reduce communication gap between officer and Applicant.

This system will allow the applicant to apply for Child Adoption conveniently from any place and officer to accept/reject the adoption application based on the information and proofs given by the applicant.

The project will aid in reducing errors, fraud, increase speed and also aid growth in organizations if successfully implemented than the manual adoption registration systems in organizations will be totally eliminated with this computerized system in place. Findings and recommendations from this system will aid in developing newer versions to serve.

The system has feasibility for the applicant to apply the child adoption application through online. It is an automated system the applicant can apply for the adoption of child at any time from any place where internet is accessible.

2. PRODUCT OVERVIEW AND SUMMARY

2.1 Purpose:

Child Adoption Portal is web-based tool to reduce communication gap between Admin and Applicant. Especially in fast growing IT market technologies are changing very fast, based on technology it reduces manual process of adoption processing. This process will make adoption processing very

easy, fast and by one sitting the applicant can apply for adopt child and can check the status of application is accepted or rejected regularly.

The main objective of this solution is to make adoption process easy. This system is designed by keeping in mind both parties like admin and applicants.

2.2 Future Scope:

This Child Adoption Portal can easily be used in process of applying for child adoption And allows the applicants to easily apply for adoption . Applicant will receives notifications on their registered email-id about their application is accepted or rejected by adoption portal And finally it provide more flexibility to applicant like the amount of time is reduced and the applicant can apply for child adoption conveniently from any place. Because of the online support by this system applying for adoption has become an easy process for all the aspiring applicants.

Proposed System

1. Child Adoption Portal is computerized system.
2. Reduce paper work.
3. Easy to maintain applicant, agencies and childes details.

Objectives

The main objective of this application is to make child adoption processing easy and fast.

This system will allow the applicant to apply for child adoption conveniently from any place and officer to accept/reject the adoption application based on the information given by the applicant.

3.REQUIREMENTS

3.1 Functional Requirements

ROLE:

1.Admin Module

2.Applicant Module

Admin Module:

This module maintains all the list of applicant details and list of agencies and childes. Interact with applicant via email, manage all the details of applicant such as view, add, delete etc, and view all the required documents.

Applicant Module:

This module maintains each applicant's profile. Can view list of childes to adopt.

Implementation Technologies:

1.React:

React is a JavaScript library for building user interfaces.

React js is an open-source JavaScript library that is used **for** building user interfaces specifically for single-page applications**.** React is one of the most popular and widely used libraries (it's not a framework) for frontend development. Its component-based library lets you build high-quality user-interfaces for web apps. This library allows you to place HTML code inside JavaScript and it works with Virtual DOM.

1.1 Features of React js:

1. JSX

JSX stands for JavaScript XML. It is a JavaScript syntax extension. Its an XML or HTML like syntax used by ReactJS. This syntax is processed into JavaScript calls of React Framework. It extends the ES6 so that HTML like text can co-exist with JavaScript react code.

2. Components

ReactJS is all about components. ReactJS application is made up of multiple components, and each component has its own logic and controls. These components can be reusable which help you to maintain the code when working on larger scale projects.

3. One-way Data Binding

ReactJS is designed in such a manner that follows unidirectional data flow or one-way data binding. The benefits of one-way data binding give you better control throughout the application. If the data flow is in another direction, then it requires additional features. It is because components are supposed to be immutable and the data within them cannot be changed. Flux is a pattern that helps to keep your data unidirectional. This makes the application more flexible that leads to increase efficiency.

4. Virtual DOM

A virtual DOM object is a representation of the original DOM object. It works like a one-way data binding. Whenever any modifications happen in the web application, the entire UI is re-rendered in virtual DOM representation. Then it checks the difference between the previous DOM representation and new DOM. Once it has done, the real DOM will update only the things that have actually changed. This makes the application faster, and there is no wastage of memory.

5. Simplicity

ReactJS uses JSX file which makes the application simple and to code as well as understand. We know that ReactJS is a component-based approach which makes the code reusable as your need. This makes it simple to use and learn.

1.2 Advantages of ReactJs:

1. **Creating Dynamic Web Applications Becomes Easier**

To create a dynamic web application specifically with HTML strings was tricky because it requires a complex coding, but React JS solved that issue and makes it easier. It provides less coding and gives more functionality

2. **Reusable Components**

A ReactJS web application is made up of multiple components, and each component has its own logic and controls. These components are responsible for outputting a small, reusable piece of HTML code which can be reused wherever you need them.

3. **Performance Enhancement**

ReactJS improves performance due to virtual DOM. The DOM is a cross-platform and programming API which deals with HTML, XML or XHTML. Most of the developers faced the problem when the DOM was updated, which slowed down the performance of the application. ReactJS solved this problem by introducing virtual DOM

4. **The Support of Handy Tools**

React JS has also gained popularity due to the presence of a handy set of tools. These tools make the task of the developers understandable and easier. The React Developer Tools have been designed as Chrome and Firefox dev extension and allow you to inspect the React component hierarchies in the virtual DOM. It also allows you to select

particular components and examine and edit their current props and state.

5. **Scope for Testing the Codes**

ReactJS applications are extremely easy to test. It offers a scope where the developer can test and debug their codes with the help of native tools

2.Spring Framework:

Spring Framework is a Java platform that provides comprehensive infrastructure support for developing Java applications. Spring handles the infrastructure so you can focus on your application.

Spring enables you to build applications from "plain old Java objects" (POJOs) and to apply enterprise services non-invasively to POJOs. This capability applies to the Java SE programming model and to full and partial Java EE.

2.1 Features of Spring Framework:

1. Lightweight

Spring is modular lightweight framework which allows you to selectively use any of its modules on the top of Spring Core.

2. Inversion of Control (IOC)

This is another top feature of Spring framework where application dependencies are satisfied by the framework itself. Framework creates the object in runtime and satisfies application dependencies.

3. Aspect Oriented Programming (AOP)

Aspect Oriented Programming (AOP) is very popular in programming world and in Spring it is well implemented. Developer can use Aspect Oriented Programming (AOP feature of

Spring to develop application in which business logic is separated from system services.

4. Container

Spring provides their own container for managing the bean lifecycle.

5. MVC Framework

Spring MVC Framework is used for developing MVC based web applications.

6. Transaction Management

Spring framework provides generic Transaction Management layer which can be used with or without J2EE(JEE) environment.

7. JDBC Exception Handling

Spring provides their own abstraction of JDBC exception which further simplifies the exception handling in program.

2.2 Advantages of Spring Framework:

1. Solving difficulties of Enterprise application development

Spring is solving the difficulties of development of complex applications, it provides Spring Core, Spring IoC and Spring AOP for integrating various components of business applications.

2. Support Enterprise application development through POJOs

Spring supports development of Enterprise application development using the POJO classes which removes the need of importing heavy Enterprise container during development. This makes application testing much easier.

3. Easy integration other frameworks

Spring designed to be used with all other frameworks of Java, you can use ORM, Struts, Hibernate and other frameworks of Java together. Spring framework do not impose any restriction on the frameworks to be used together.

4. Application Testing

Spring Container can be used to develop and run test cases outside enterprise container which makes testing much easier.

5. Modularity

Spring framework is modular framework and it comes with many modules such as Spring MVC, Spring ORM, Spring JDBC, Spring Transactions etc. which can used as per application requirement in modular fashion.

6. Spring Transaction Management

Spring Transaction Management interface is very flexible it can configure to use local transactions in small application which can be scaled to JTA for global transactions.

3.The JDBC Template:

The central class of the Spring JDBC abstraction framework is the **JdbcTemplate** class that includes the most common logic in using the JDBC API to access data, such as handling the creation of connection, statement creation, statement execution, and release of resource. The **Jdbc-Template** class can be found in the **org.springframework.jdbc.core** package.

The **JdbcTemplate** class instances are thread-safe once configured. A single **JdbcTemplate** can be configured and injected into multiple DAOs.

We can use the **JdbcTemplate** to execute the different types of SQL statements. **Data Manipulation Language** (**DML**) is used for inserting, retrieving, updating, and deleting the data in the database such as **SELECT**, **INSERT**, or **UPDATE** statements

3.1 MySQL

MySQL, the most popular Open Source SQL database management system, is developed, distributed, and supported by Oracle Corporation.

Features of MySQL:

- **MySQL is a database management system.**

  A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications.

- **MySQL databases are relational.**

  A relational database stores data in separate tables rather than putting all the data in one big storeroom. The database structures are organized into physical files optimized for speed. The logical model, with objects such as databases, tables, views, rows, and columns, offers a flexible programming environment.

- **MySQL software is Open Source.**

  Open Source means that it is possible for anyone to use and modify the software. Anybody can download the MySQL software from the Internet and use it without paying anything.

- **The MySQL Database Server is very fast, reliable, scalable, and easy to use.**

  MySQL Server was originally developed to handle large databases much faster than existing solutions and has been successfully used in highly demanding production environments for several years. Although under constant development, MySQL Server today offers a rich and useful set of functions. Its connectivity, speed, and security make MySQL Server highly suited for accessing databases on the Internet.

- **MySQL Server works in client/server or embedded systems.**

  The MySQL Database Software is a client/server system that consists of a multithreaded SQL server that supports different back ends, several different client programs and libraries, administrative tools, and a wide range of application programming interfaces (APIs).

Hardware and Software Requirements (Minimum):

Hardware:

1. Intel i3 processor 3rd generation or later
2. 2 GB ddr3 ram.
3. Windows 7 Home edition or later.
4. 200 GB Sata HDD Space
5. Data Connection 200 kbps

Software:

1. Eclipse
2. MySQL 5.7 with Workbench 8.0
3. Google Chrome

4. Apache Tomcat Server 8.5
5. Maven Dependencies

ER Diagram:

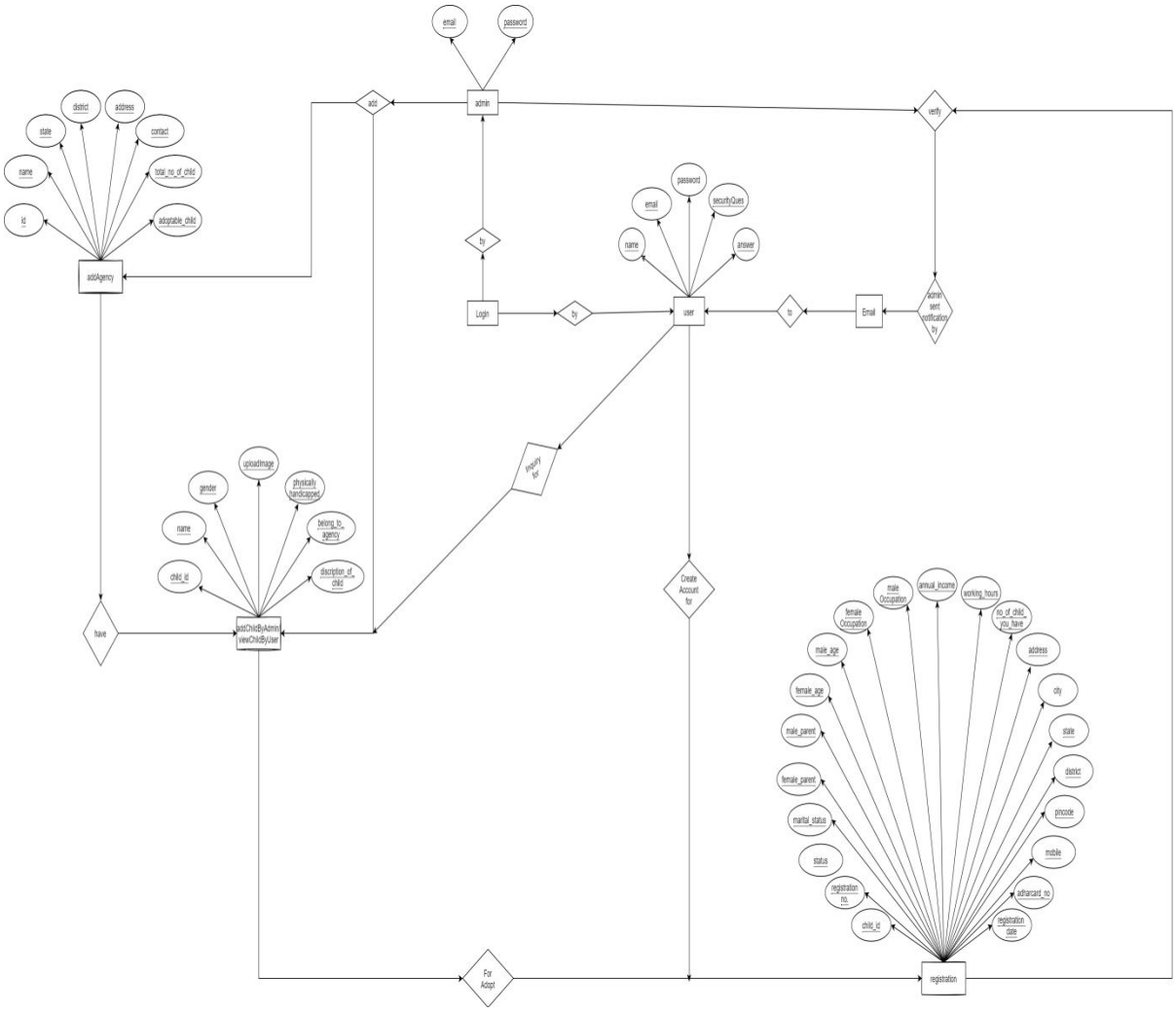


Figure 1: ER Diagram

DATABASE DESIGN

Table Structures:

1.Table name: users

Column name	Type	Null	Key	Extra
id	bigint	NO	PRI	auto_increment
user_name	varchar(85)	YES		
email	varchar(85)	YES		
password	varchar(85)	YES		
cpassword	varchar(85)	YES		
security_que	varchar(85)	YES		
answer	varchar(85)	YES		

2.Table name: childes

Column name	Type	Null	Key	Extra
id	bigint	NO	PRI	auto_increment
age	int(11)	YES		
agency_namee	varchar(85)	YES		
child_name	varchar(85)	YES		
desc_child	varchar(85)	YES		
gender	varchar(85)	YES		
handicaped	varchar(85)	YES		
img	longblob	YES		

3.Table name: agencies

Column name	Type	Null	Key	Extra

id	bigint	NO	PRI	auto_increment
agency_name	varchar(85)	YES		
astate	varchar(85)	YES		
district	varchar(85)	YES		
address	varchar(85)	YES		
contact_info	varchar(85)	YES		
total_childes	int(11)	YES		
adoptable_childes	Int(11)	YES		

4.Table name: registers

Column name	**Type**	**Null**	**Key**	**Extra**
id	bigint	NO	PRI	auto_increment
childid	bigint	YES		
email	varchar(85)	YES		
martial_status	varchar(85)	YES		
mparent_name	varchar(100)	YES		
fparent_name	varchar(100)	YES		
mage	int(11)	YES		
fage	int(11)	YES		
moccupation	varchar(100)	YES		
foccupation	varchar(100)	YES		
mincome	Int(11)	YES		
fincome	Int(11)	YES		
mwhours	Int(11)	YES		
fwhours	Int(11)	YES		
childrens	Int(11)	YES		
address	varchar(100)	YES		
city	varchar(100)	YES		
astate	varchar(100)	YES		
district	varchar(100)	YES		
pincode	Int(11)	YES		

mobile	bigint	YES		
aadharno	bigint	YES		
reg_date	varchar(100)	YES		
is_active	Int(11)	YES		
document	longblob	YES		
hsr	varchar(100)	YES		
status	varchar(100)	YES		

Use-Case Diagrams

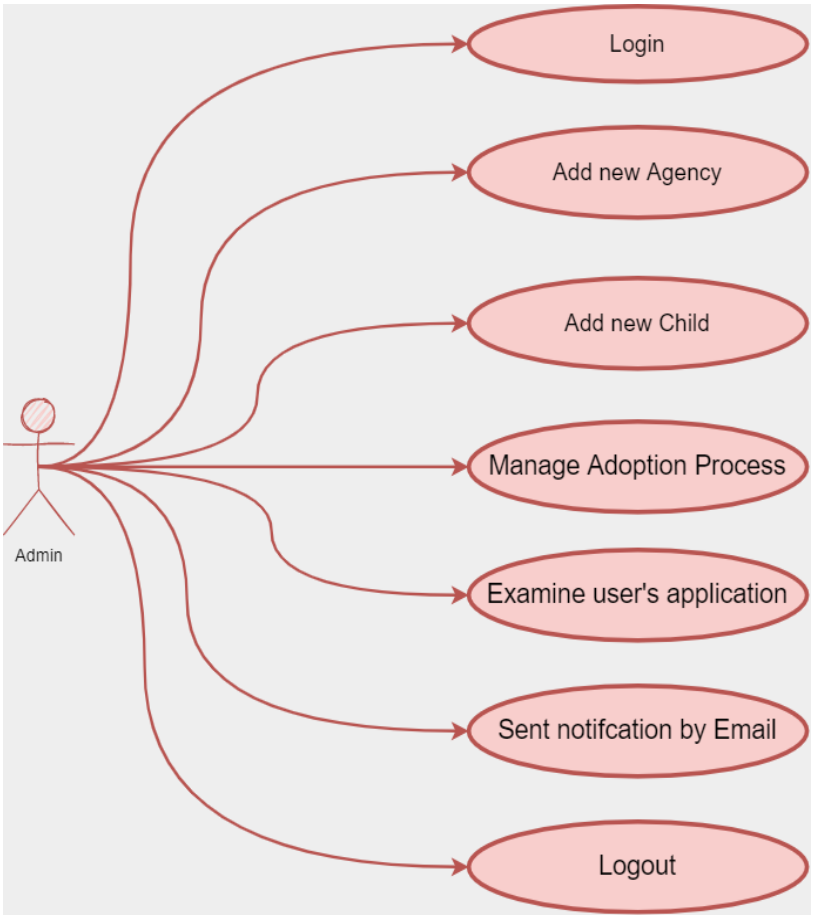


Figure 2: Admin Use-Case Diagram

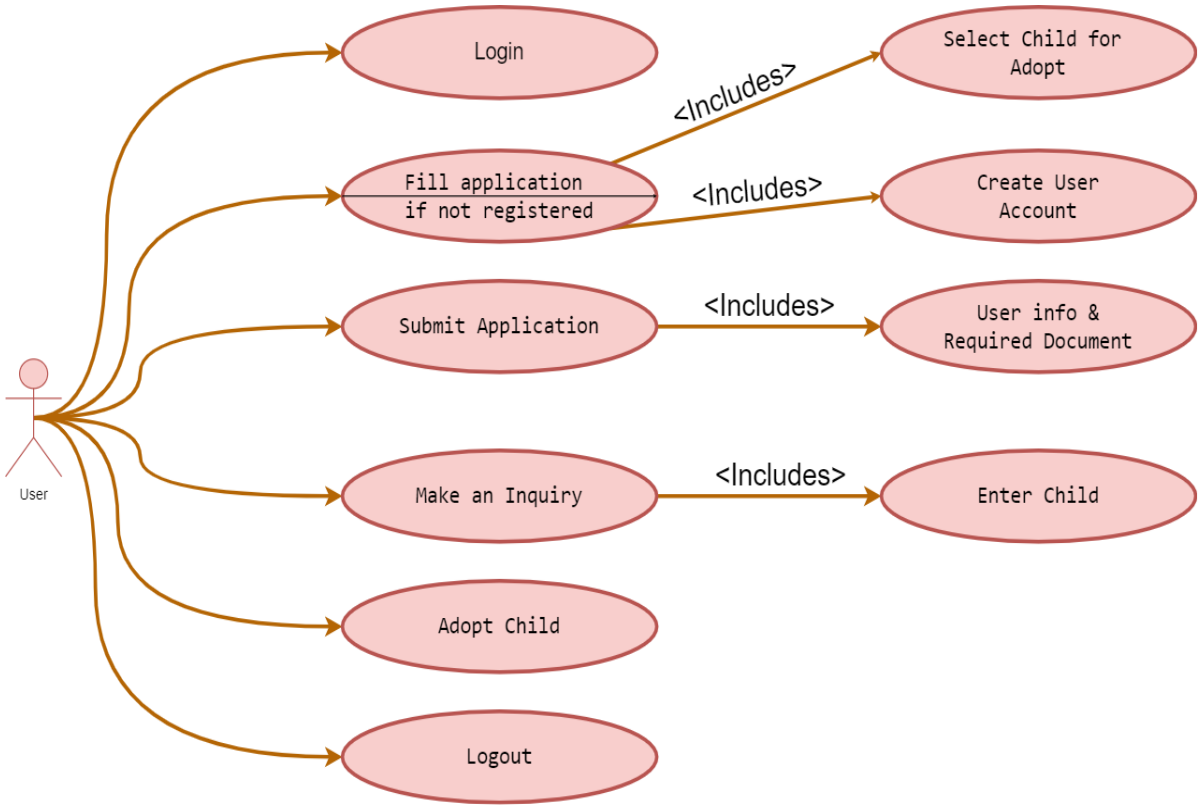
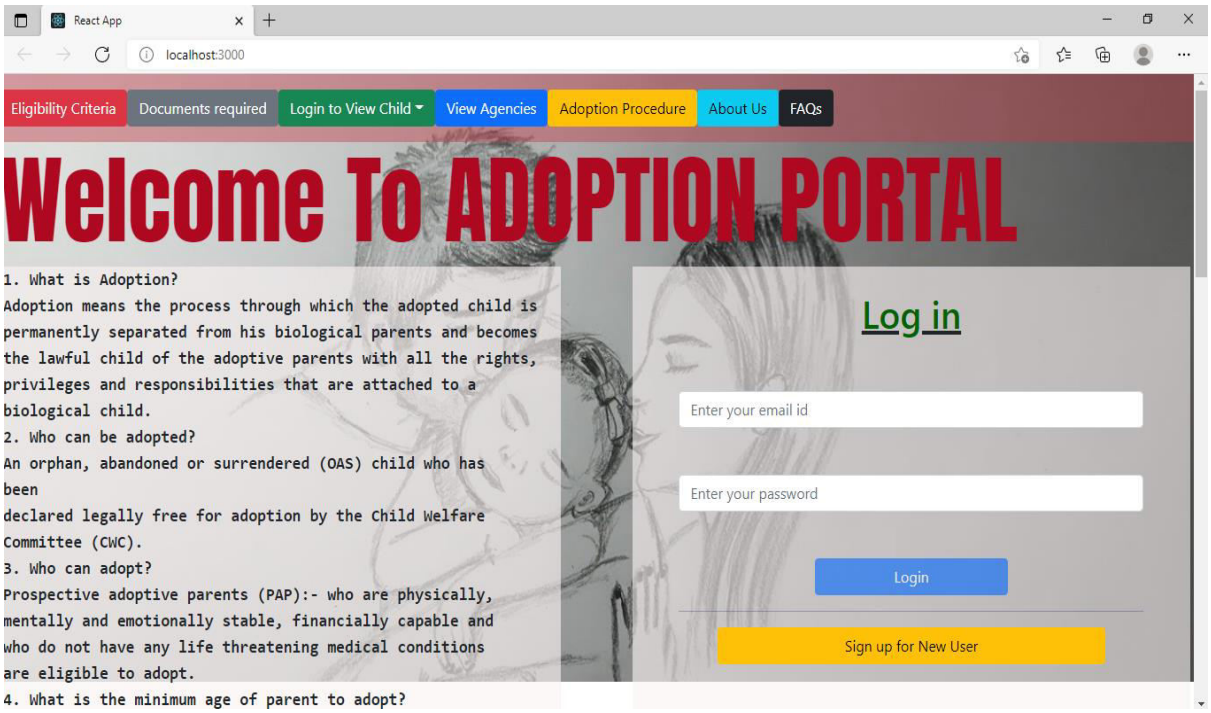


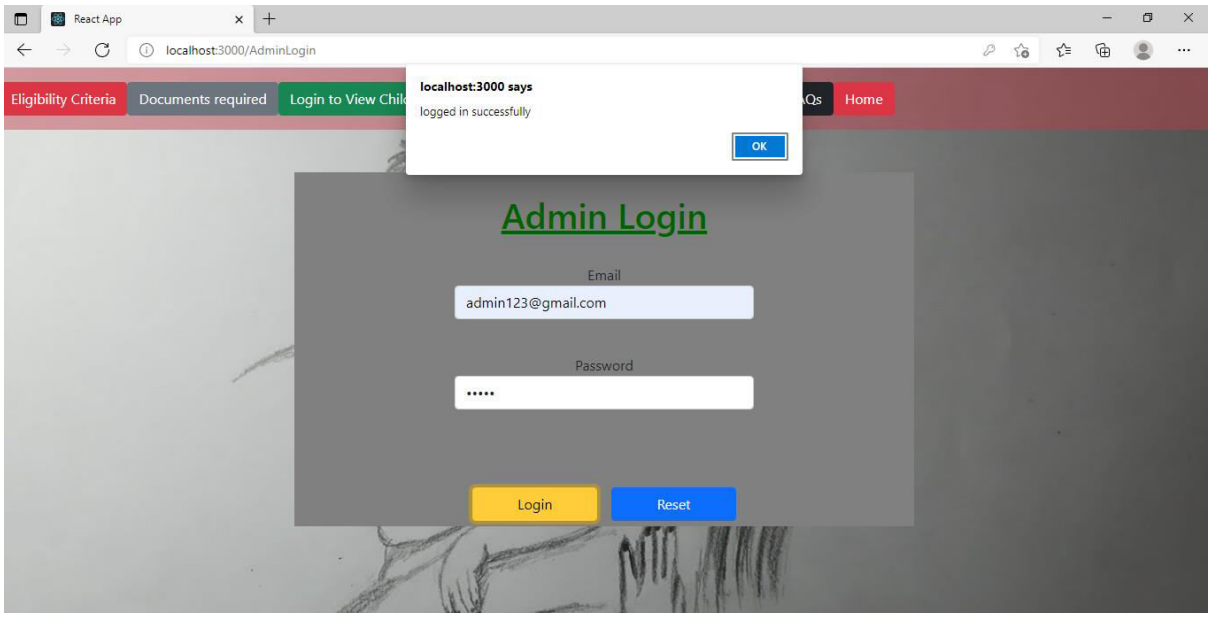
Figure 3: Applicant Use-Case Diagram

User Interface:

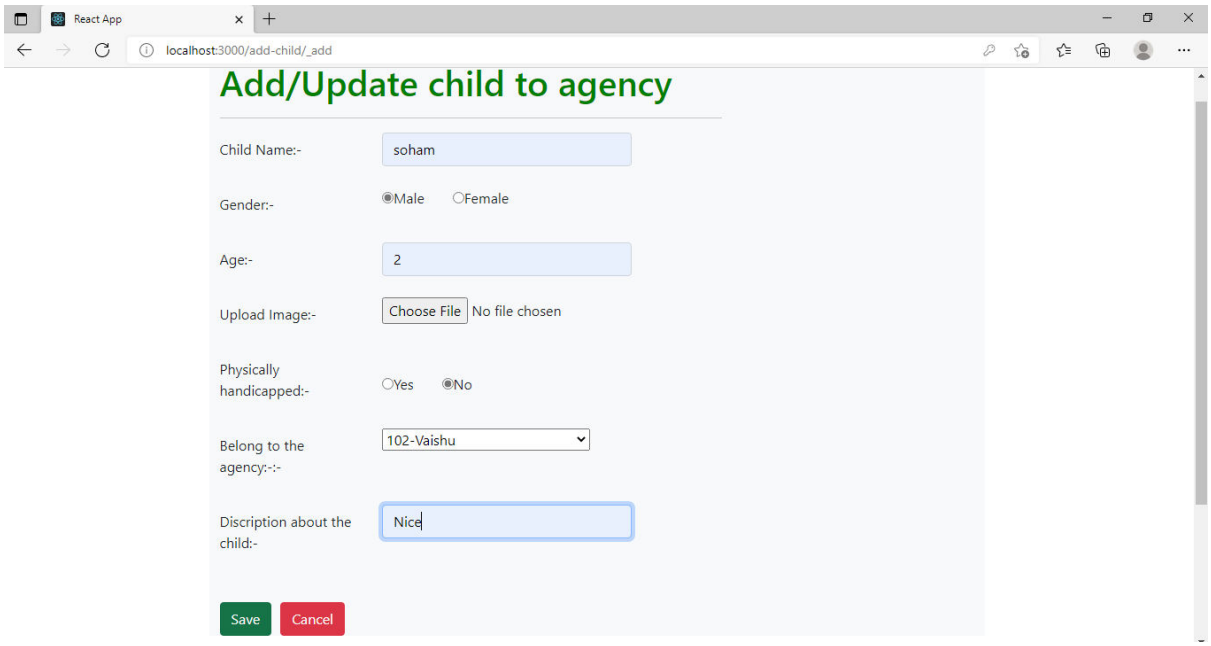
1.Homepage



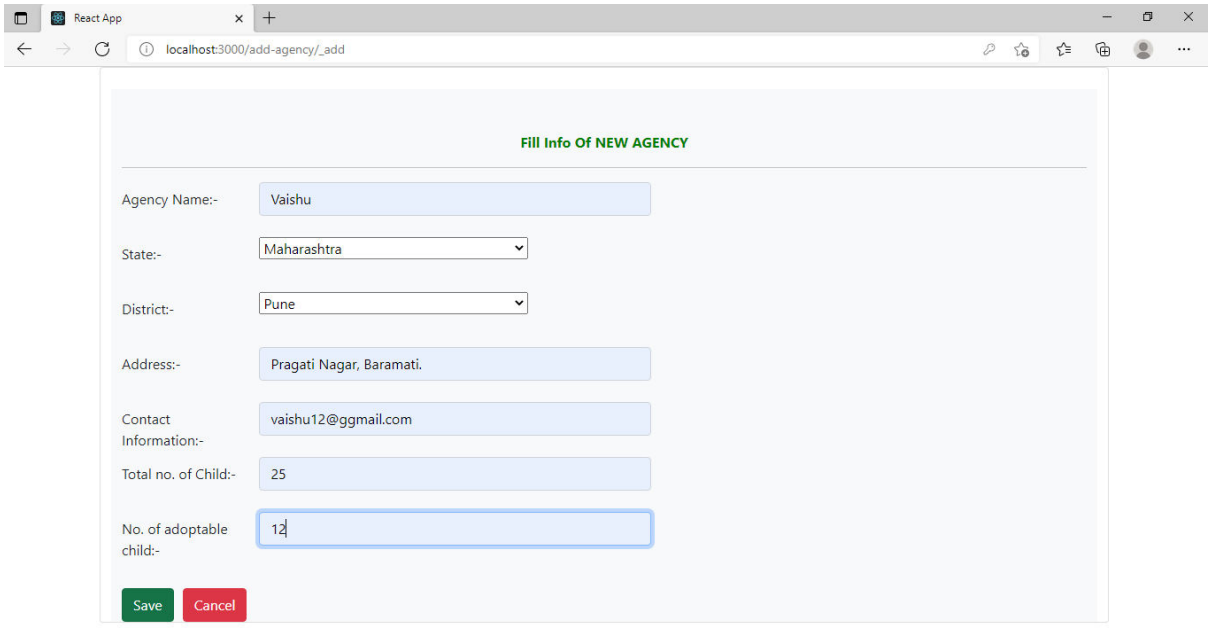
2.Admin Login



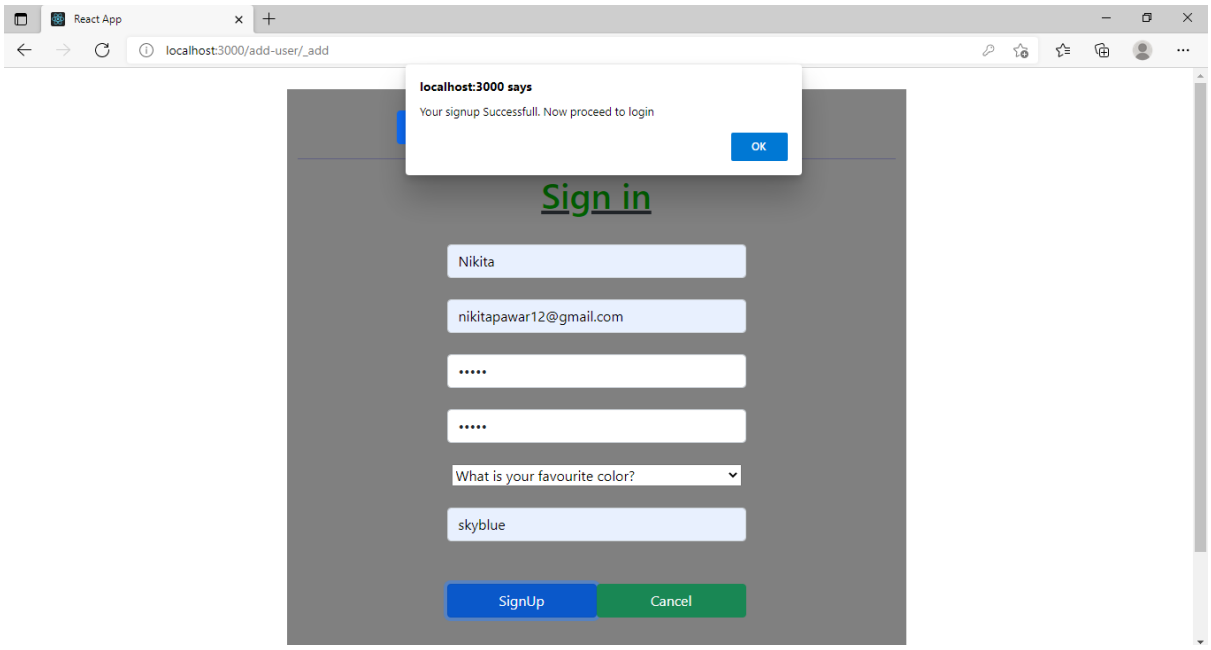
3.Add Child



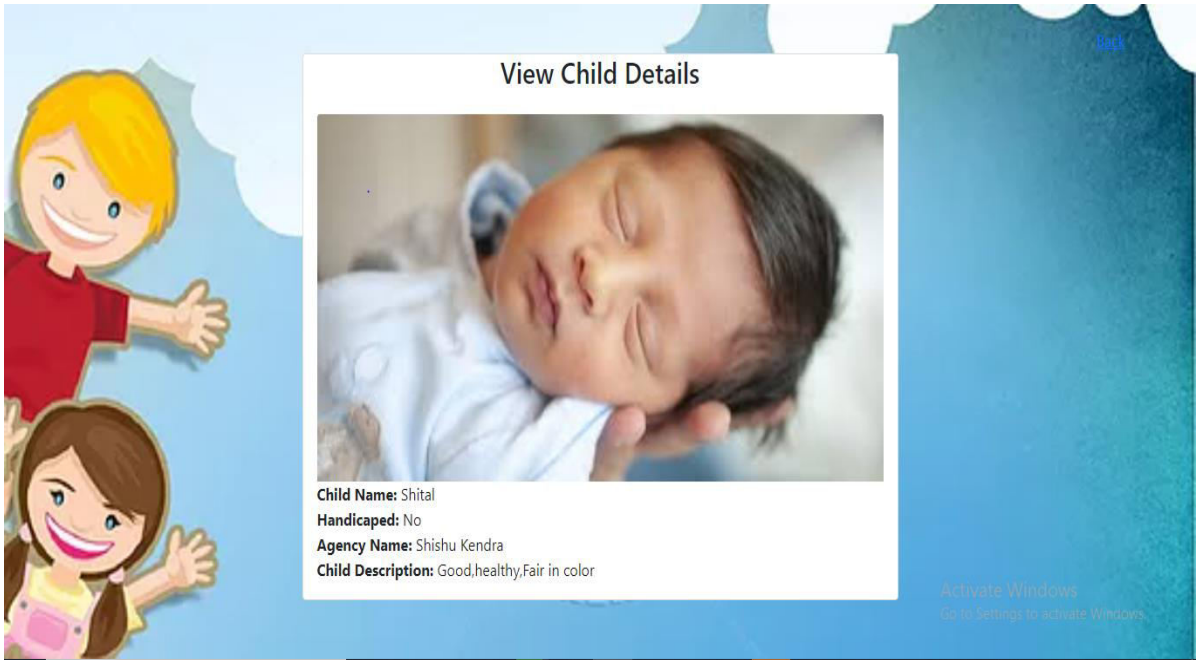
4. Add Agency



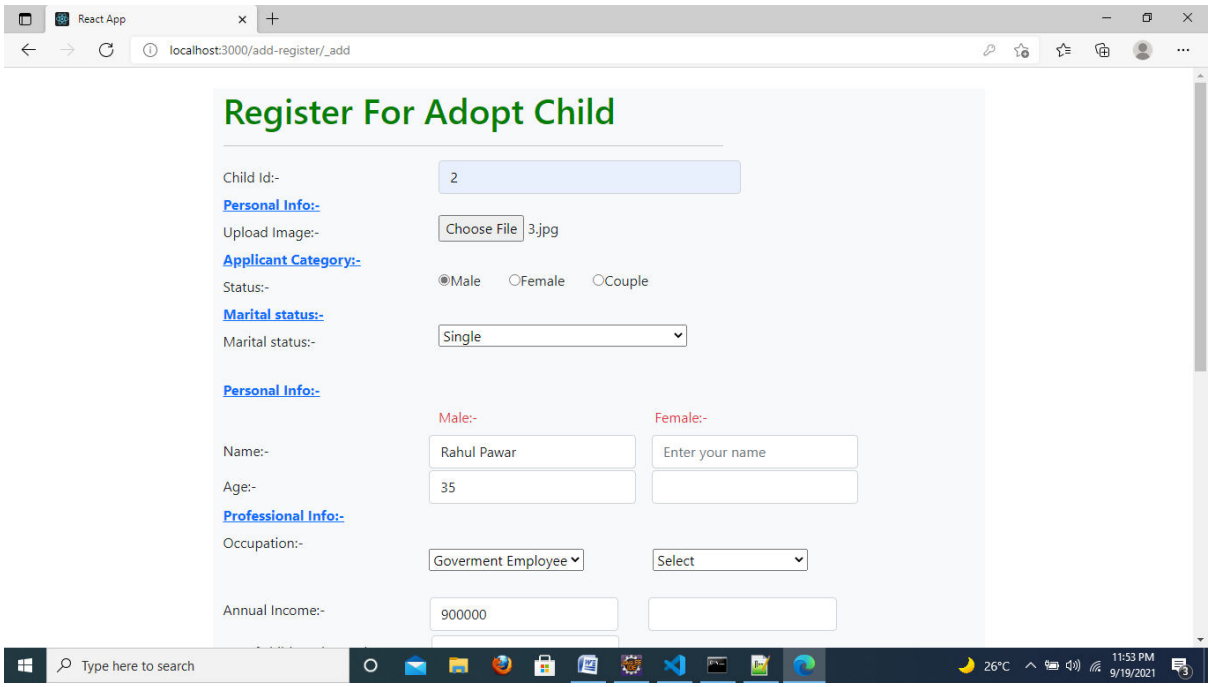
5. User SignUp

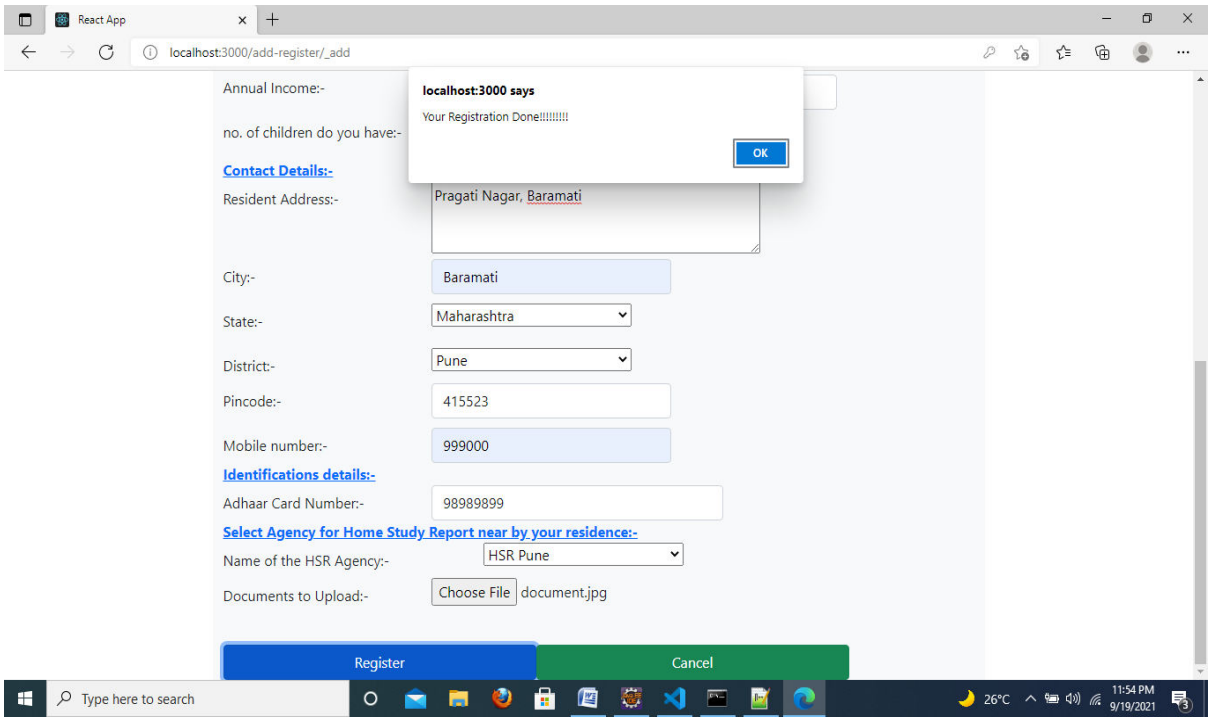


6. View Child

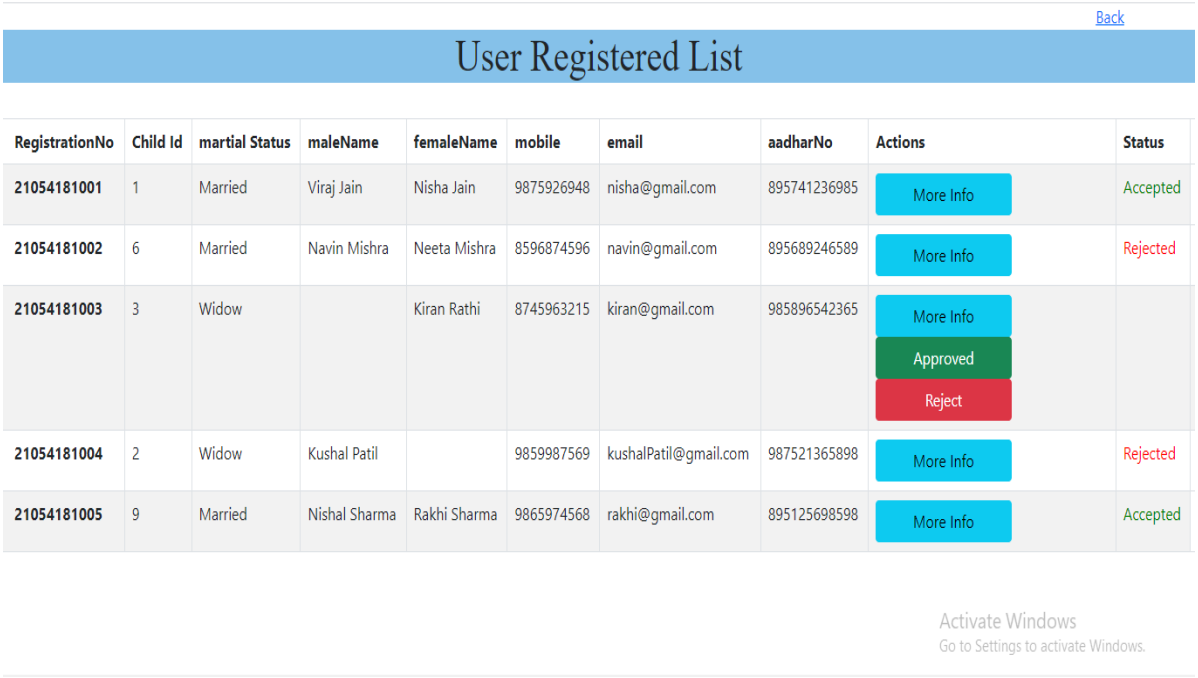


7. Registration

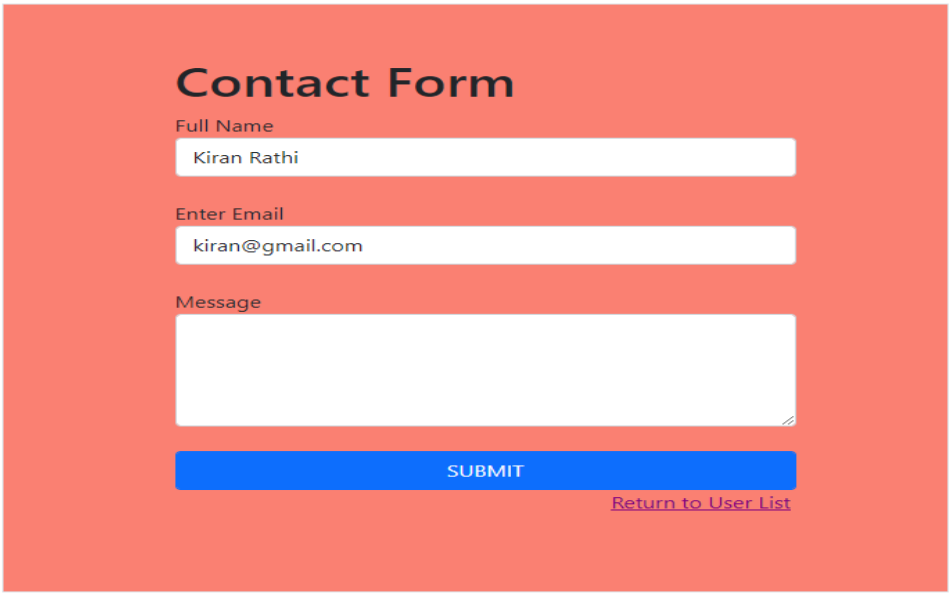




8. Admin See Registered Parent Details



9. Email Page



End to End Flow of Application:

User:

i. User will login to the portal or will have to register if he is not a registered user.
ii. After registration User will login and Dashboard page will be displayed to him which will display the options.
iii. From that page User can click on the '**View Childes'** button and reach the Childes details form page.
iv. In the View Child details page the User has to choose the **child** and then register for adopt that child.
v. User has to submit all information and document in registration form.
vi. After Registration User will receive email on registered email-id within 7 days.
vii. If Applicant have not received any acceptance or rejection mail within 7 days from application date then he can contact adoption portal on their official email.

Admin:

i. Admin will login as Admin from the '**Admin login**' page and will be able to see list of applications and proofs/documents given by applicant.
ii. Admin will be able to add agency and child information on adoption portal.
iii. Admin can Remove any Agency, child from adoption portal.
iv. Admin will be able to update all agencies and childes information.
v. It is the job of Admin to check all details and proofs/ documents provided by applicant.
vi. After conforming about the proofs/documents of applicant, Admin will accept or reject application.

vii. Admin will sent Notification on registered email-id of Applicant.

Conclusion

Child Adoption Portal is successfully designed and develop to full fill the necessary requirement .The system is very much user friendly from level validation and field level validation are perform very efficiently.

The new computerized system was found to be much faster and relatable and user friendly than the existing system.

References:

- W3School.com
- Bootstrap
- Reactjs
- JavaEE docs

Thank You!