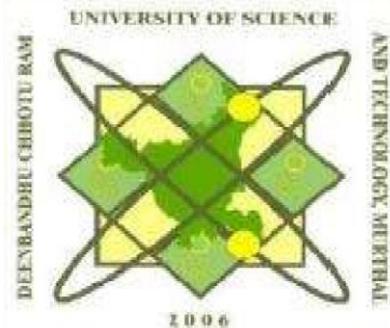


**PROJECT REPORT  
ON  
Forms World**

**Submitted in the partial fulfillment of requirement for the award  
of degree of Bachelor of Computers Applications  
Session (2020-2023)**

**Under supervision of  
*Ms. Parull Bhardwaj*  
*Project In-charge***

**Submitted by:-  
*Shubham Dahiya*  
**20012041042****



**DEPARTMENT OF COMPUTER SCIENCE  
DEENBANDHU CHHOTU RAM UNIVERSITY OF SCIENCE AND  
TECHNOLOGY  
MURTHAL, SONIPAT**

**Title of the Project**

**Forms World**

## **Abstract**

When in final semester we were told to build a Minor-Project, the first thing which into my mind is to build an application that people could use to solve their problems based on some solution for real-world. Like there's Zomato for solving the problem of going outside for food. Uber for bringing up the gap between travelers and cab drivers. And I always use them and wandered about their whole system works, like so many people use them. So I decided to build one.

"Forms World" is an Application where users from all over India can apply for various Job and Govt. form applications to save them time. Forms World is a service provide platform that provide to people to fill their forms with the data which once they were given during KYC in the start. It makes users to directly apply to the form application if he is eligible without need of any hard-work.

## **Acknowledgement**

It brings me great pleasure to finally complete the minor project in partial fulfillment of the prerequisite for the award of Bachelor computer application. I would like to thank Ms. Parull mam (project in-charge, BCA department) who was involved with me in this project to make it a success. I extend my heartfelt and profound gratitude to my respected faculty members for providing me the impulse to get this work on the ground.

**Date:**

**Mr. Shubham Dahiya**

**(20012041042)**

## Certificate

This Is to certify that Project Report entitled "**Forms World**" which is submitted by **Shubham (20012041042)** has been successfully completed and submitted In partial fulfillment of the requirement for the requirement for the award of Degree Bachelor of Computer Applications In Computer Science, Hindu Institute Of Management, DCRUST (Deenbandhu Chotu Ram University Of Science And Technology), Murthal, Sonipat. Is a record of the candidate's work carried out by him under the supervision of undersigned. The matter embodied in this report is original and has not been submitted for the award of any other degree.

This Performance was good during the tenure.

**Date:**

**Ms. Parull Bhardwaj**

## **Declaration**

I here declare that all the work presented in this project report entitled 'Forms World' in the partial fulfillment of the requirement for the award of the degree of BCA (Bachelor of Computer Application), Hindu institute of management, DCRUST (Deenbandhu Chotu Ram University of Science and Technology), Murthal is an authentic record of our own work carried out under the guidance of Ms. Parull Bhardwaj Mam.

**Date:**

**Mr.Shubham Dahiya**

**(20012041042)**

## Table of Contents

<b>S. No</b>	<b>Contents</b>	<b>Page No.</b>
1	<b>About the Project</b> 1.1 Introduction 1.2 Introduction to Technologies Used	1 2
2	<b>System Analysis</b> 2.1 Introduction 2.2 Identification of Need 2.3 Preliminary Investigation	6 7 8
3	<b>Feasibility Study</b> 3.1 Introduction 3.2 Goals & Objectives 3.3 Technical Feasibility 3.4 Potential Risks 3.5 Economic Feasibility	9 11 12 13 14
4	<b>System Analysis</b> 4.1 Introduction 4.2 Functional Requirements 4.3 Non-Functional Requirements	16 17 18
5	<b>Project Monitoring System - Planning</b> 5.1 Introduction 5.2 Gantt Chart	21 22
6	<b>System Requirement and Specification</b> 6.1 Introduction 6.2 Hardware Requirements 6.2 Software Requirements	23 24 24
7	<b>System Design</b> 7.1 Introduction 7.2 Architecture 7.3 Components	25 26 26
8	<b>Flow Chart</b>	29
9	<b>Data Modelling Description</b> 9.1 Introduction 9.2 List of Tables 9.3 ER Diagram 9.4 Entity Relationship Dictionary	31 31 34 38

<b>10</b>	<b>Data Flow Diagram</b>	<b>41</b>
<b>11</b>	<b>Project Design</b>	
	11.1 Database Design	45
	11.2 Screen Design	48
<b>12</b>	<b>Testing</b>	<b>61</b>
<b>13</b>	<b>System Implementation</b>	
	13.1 Introduction	95
	13.2 System Architecture	96
	13.3 Front-End Implementation	97
	13.4 Backend Implementation	99
	13.5 Database Implementation	109
	13.6 Deployment and Hosting	102
<b>14</b>	<b>Conclusion</b>	<b>103</b>
<b>15</b>	<b>Future Enhancements</b>	<b>104</b>

## **List of Tables**

5.1 Gantt Chart of Forms World.....	22
9.1 Users Database Model.....	31
9.2 Users KYC Model.....	32
9.3 Forms Model.....	32
9.4 Orders Model.....	33
9.5 Payments Model.....	33
12.1 Signup and Login Testing.....	63
12.2 User kyc Testing.....	70
12.3 Updating Password Testing.....	77
12.4 Signout Testing.....	80
12.5 Services Testing.....	81
12.6 Admin/Active Testing.....	85
12.7 Admin/Orders Testing.....	91

## **List of Figures**

3.1 Feasibility Study Phases.....	9
7.1 Flow Chart of Forms World.....	30
6.1 Entity Relationship diagram.....	35
6.2 Entity Relationship diagram Continued.....	36
9.1 0 level – DFD.....	42
9.2 1 <sup>st</sup> level – DFD.....	43
9.3 2 <sup>nd</sup> level – DFD.....	44
12.1 Types of Testing.....	61

# **Chapter 1**

## **About The Project**

### **1.1 Introduction**

Forms World is a web-based application built using the MERN stack and deployed on Firebase. The application aims to provide form filling services for various jobs, making it easy for users to fill out and submit forms online.

The project started with the identification of the need for an online platform that simplifies the process of form filling for different jobs.

The application is built on the MERN stack, which includes MongoDB, Express.js, React.js, and Node.js. MongoDB is used as the database for storing user information and form data, while Express.js and Node.js handle the server-side logic. React.js is used for the front-end development, providing a seamless and interactive user interface.

Forms World is deployed on Firebase, a cloud-based platform that provides scalable infrastructure for web applications. Firebase provides hosting, real-time database, authentication, and other services required for the application to function efficiently.

The key features of Forms World include a simple and intuitive user interface, multiple form templates for different job applications, real-time data validation, auto-save feature for unfinished forms, and secure data storage.

The application also provides users with the ability to track the status of their submitted forms.

Overall, Forms World provides a convenient and reliable platform for users to fill out and submit forms for various jobs. The application's user-friendly interface and robust technology stack ensure a seamless user experience.

The following technologies were employed in the development of the "Forms World" web application:

Node JS, React JS, Express JS, and Mongo DB are all included.

## **1.2 Introduction to Technologies**

### **1. Node.js**

Node.js is a server-side JavaScript runtime environment that allows developers to build scalable and efficient backend systems. It is used in Forms World to handle HTTP requests, manage sessions, and integrate with MongoDB.

One of the main advantages of using Node.js is its performance. Node.js uses an event-driven, non-blocking I/O model, which allows it to handle a large number of simultaneous connections without blocking the event loop. This makes it a great choice for building scalable and efficient backend systems, especially for web applications.

In Forms World, Node.js is used to handle HTTP requests, manage sessions, and integrate with MongoDB. By using Node.js, Forms World is able to provide a reliable and efficient backend system for users to fill out forms and submit job applications.

### **2. Introduction to React**

React.js is a popular open-source JavaScript library that is widely used for building user interfaces. In the context of your project, Forms World, React.js plays a crucial role in providing a seamless and interactive user experience.

React.js is a component-based library that allows developers to create reusable UI components. These components can be combined to form complex user interfaces. By breaking down the user interface into small, reusable components, React.js makes it easier to manage and maintain the codebase.

In Forms World, React.js is used for the front-end development of the application. The user interface of Forms World is built using React components. These components are designed to be modular and reusable, making it easy to add new features and functionality to the application.

One of the key advantages of using React.js is that it enables developers to build complex user interfaces quickly and efficiently. React.js uses a virtual DOM (Document Object Model) which allows for fast and efficient updates to the user interface. This means that changes to the UI can be made without the need for a full page refresh, resulting in a smoother and more responsive user experience.

Another advantage of using React.js is that it provides a rich set of tools and libraries that can be used to enhance the functionality and performance of the application. For example, React.js provides support for server-side rendering, which can improve the performance of the application by reducing the time it takes to load the initial page.

Overall, React.js is a powerful and flexible library that is well-suited to building complex user interfaces. Its modular, component-based architecture makes it an ideal choice for large-scale projects like Forms World, where the user interface plays a critical role in the success of the application.

### **3. Introduction to Express**

Express is a web application framework for Node.js that provides a set of tools and utilities for building web applications. It simplifies the process of handling HTTP requests, managing sessions, and integrating with MongoDB, making it an ideal choice for building the backend of Forms World.

One of the main advantages of using Express is its simplicity. Express provides a minimal and flexible set of tools and utilities, which allows developers to build web applications quickly and efficiently. Additionally, Express is modular, which means that developers can choose which components to use based on their specific needs.

In Forms World, Express is used to handle HTTP requests, manage sessions, and integrate with MongoDB. By using Express, Forms World is able to provide a reliable and efficient backend for users to fill out forms and submit job applications.

### **4. Introduction to MongoDB**

MongoDB is a popular NoSQL database that stores data in JSON-like documents, making it easy to work with data in a flexible and scalable way. Unlike traditional relational databases, MongoDB does not use tables, rows, or columns to store data. Instead, it uses a collection of documents that can have any number of fields and be of any shape. This makes it easier to work with complex and unstructured data.

One of the main advantages of using MongoDB is its scalability. MongoDB is designed to scale horizontally, meaning that it can handle large amounts of data

and traffic by adding more servers to the database cluster. This is known as sharding feature of MongoDB.

In Forms World, MongoDB is used to store data related to user accounts, job applications, and other forms. By using MongoDB, Forms World is able to handle large amounts of data and traffic while still providing a flexible and scalable platform for users to fill out forms and submit job applications.

## **5. Firebase:**

Firebase is a cloud-based platform provided by Google that offers a number of features, including real-time database, cloud storage, authentication, and hosting. It is used in Forms World to deploy and host the website, making it scalable, reliable, and secure.

One of the main advantages of using Firebase is its ease of use. Firebase has a simple and intuitive interface that allows developers to quickly deploy and host web applications.

In Forms World, Firebase is used to deploy and host the website. By using Firebase, Forms World is able to provide a scalable, reliable, and secure platform for users to fill out forms and submit job applications.

Overall, the MERN stack and Firebase provide a powerful and flexible platform for building web applications. By using MongoDB, Express, React, Node.js, and Firebase, Forms World is able to handle large amounts of data and traffic while still providing a fast, responsive, and secure platform for users to fill out forms and submit job applications.

## **Chapter 2**

### **System Analysis**

#### **2.1 Introduction:**

The internet has revolutionized the way we work, communicate, and conduct business. In today's fast-paced world, people are always looking for ways to simplify their lives and save time. This is where our website comes in – we provide form filling services for various jobs, making it easy for people to complete important documents and applications quickly and efficiently.

The purpose of this system analysis report is to provide a detailed overview of our website and the system requirements necessary to support its functionality. This report will cover the scope of the project, the system requirements, the functional and non-functional requirements, use cases, data flow diagrams, system architecture, and risk mitigation strategies.

Our website is designed to be user-friendly and easy to navigate, with a simple and intuitive interface that allows users to quickly fill out forms and submit them with ease. By providing this valuable service, we aim to simplify people's lives and help them achieve their goals more efficiently.

We hope that this system analysis report will serve as a valuable resource for anyone interested in our website and the technology behind it. By providing a comprehensive overview of our system, we hope to inspire confidence in our users and stakeholders and help them understand the value of our services.

## **2.2 Identification of Need:**

The need for a website that provides form filling services for various jobs arises from the growing demand for digital services and the need for people to complete important documents and applications quickly and efficiently. With the rise of the internet and the digitalization of many services, people are increasingly looking for ways to complete their tasks online without having to visit physical offices or mail in documents.

Furthermore, the process of filling out forms and applications can often be time-consuming and confusing, requiring users to navigate complex processes and requirements. This can be especially challenging for people who are not familiar with the process or who have limited access to resources such as computers, printers, and scanners.

Our website addresses these needs by providing a simple and intuitive interface that allows users to quickly fill out forms and applications online. By eliminating the need for physical forms and paper documents, we help users save time, reduce frustration, and streamline the process of completing important tasks.

In addition, our website offers a range of services that are tailored to the needs of different users, including job seekers, business owners, and individuals applying for government services. By offering a one-stop-shop for form filling services, we make it easy for users to find the forms they need and complete them quickly and efficiently.

Overall, the need for our website arises from the growing demand for digital services and the need for a simple and user-friendly platform that can help users complete important tasks more efficiently.

## **2.3 Preliminary Investigation:**

Before beginning the development of our website, we conducted a preliminary investigation to determine the feasibility of the project and identify any potential challenges or roadblocks. This investigation involved a thorough analysis of the market demand, the target audience, and the technology requirements necessary to support the website's functionality.

**Market Demand:** We conducted market research to determine the demand for form filling services and identify any potential competitors in the market. Our research revealed that there is a growing demand for digital services and that many users are looking for a simple and user-friendly platform that can help them complete important forms and applications quickly and efficiently.

**Target Audience:** We identified the target audience for our website as individuals, job seekers, business owners, and government agencies who need to complete various forms and applications. By targeting this specific audience, we can tailor our services to their needs and provide a platform that meets their requirements.

**Technology Requirements:** We conducted an analysis of the technology requirements necessary to support our website's functionality, including hardware, software, and network requirements. We determined that we would need a reliable web hosting service, a database management system, and a variety of programming languages and tools to develop the website.

Overall, our preliminary investigation revealed that there is a strong market demand for form filling services and that our target audience is in need of a simple and user-friendly platform to complete important forms and applications.

## Chapter 3

### Feasibility Study

#### 3.1 Introduction:

After choosing a project, a feasibility investigation is the next phase in the project development process.

Phases of Feasibilitiy Study:



**Fig.3.1 Feasibility Study Phases**

1. Plan: we plan each module in this step like signup login logout and post adding, post saving.
2. Do: We analyze and collect data to implement the modules.
3. Study: We study the prosed change with the current solution. Like updating the signup details.
4. Act: if the change was good then we implement the change and publish it on service.

The development of a website that provides form filling services for various jobs requires a feasibility study to assess the viability of the project. The website is developed using the MERN stack, which includes MongoDB, Express, React, and Node.js. The feasibility study will evaluate the technical, economic, social, legal, and organizational aspects of the project.

The objective of the feasibility study is to determine whether the project is feasible, taking into consideration the resources, timelines, and risks associated with its development and operation. The study will provide a comprehensive analysis of the project and will help in identifying potential challenges and risks, as well as their mitigation strategies.

This feasibility study will be divided into various sections that will examine the different aspects of the project, including technical feasibility, economic feasibility, social feasibility, legal feasibility, and organizational feasibility. The study will also provide a recommendation on the viability of the project and suggest any further steps that need to be taken before proceeding with the development of the website.

Overall, the feasibility study will be an important tool for making informed decisions regarding the development of the website. It will help in identifying potential challenges, assessing the feasibility of the project, and developing strategies to mitigate any risks associated with the project. With this feasibility study, the people developing the project will be able to make an informed decision about the feasibility of the project and ensure that it is developed in a manner that is both cost-effective and sustainable.

### **3.2 Goals & Objectives**

1. To provide a user-friendly interface that allows users to easily access and complete job application forms.
2. To ensure that the website is secure and user data is protected.
3. To provide accurate and up-to-date information about various job application processes.
4. To ensure that the website is accessible to a diverse range of users, including those with disabilities.
5. To optimize the website for search engines to increase visibility and attract more users.
6. To develop a sustainable business model that generates revenue from the form filling services provided.
7. To establish partnerships with employers and organizations that can help promote the website and its services.
8. To continuously improve the website and its services based on user feedback and analytics.
9. To maintain high levels of customer satisfaction and retention.
10. To expand the range of services offered on the website over time to include additional form filling services for various types of applications.

### **3.3 Technical Feasibility:**

The technical feasibility of the project involves assessing the availability of technology, infrastructure, and resources required to develop and maintain the website. This section will examine the technical requirements of the website and assess the feasibility of meeting them within the project timeline and budget.

#### Technical Requirements:

The website is developed using the MERN stack technology, which includes MongoDB, Express, React, and Node.js. The technical requirements for the website include the following:

1. Front-end development using React.js
2. Back-end development using Node.js and Express.js
3. Integration with MongoDB as the database for storing user data and other information
4. Implementation of security measures such as HTTPS, encryption, and user authentication to protect user data
5. Integration with third-party services such as payment gateways and email providers
6. Optimization of website performance and scalability to accommodate increasing user traffic and data volume.

#### Feasibility Assessment:

To assess the technical feasibility of the project, the availability of the technology, infrastructure, and resources needed to develop and maintain the website will be evaluated. The assessment will consider the following factors:

1. Availability of qualified technical staff with expertise in the MERN stack technology
2. Availability of technology infrastructure such as servers, storage, and networking
3. Availability of third-party services and APIs that can be integrated into the website
4. Feasibility of meeting technical requirements within the project timeline and budget.

### **3.4 Potential Risks:**

The technical feasibility assessment will also identify potential risks associated with the development and operation of the website. Risks may include technical challenges such as software bugs, system failures, and data breaches. To mitigate these risks, the following strategies may be implemented:

1. Regular testing and quality assurance to identify and fix software bugs.
2. Implementation of disaster recovery and backup procedures to mitigate system failures
3. Implementation of security measures such as encryption, firewalls, and user authentication to protect user data
4. Regular monitoring and updating of the website to ensure that it is optimized for performance and scalability.

Overall, the technical feasibility assessment will provide valuable insights into the feasibility of developing and maintaining the website. The assessment will help identify potential challenges and risks, as well as their mitigation strategies, to ensure that the website is developed in a technically feasible manner.

### **3.5 Economic Feasibility:**

The economic feasibility of the project involves evaluating the costs and benefits associated with the development and maintenance of the website. This section will assess the viability of the project from a financial perspective by estimating the initial and ongoing costs of development, marketing, and maintenance of the website, as well as the potential benefits that can be derived from it.

#### Cost-Benefit Analysis:

A cost-benefit analysis will be conducted to evaluate the economic feasibility of the project. The analysis will compare the expected costs of development, marketing, and maintenance of the website against the expected benefits that can be derived from it. The benefits may include revenue generated from form filling services, cost savings for users who utilize the website, and other potential benefits such as increased user engagement and satisfaction.

#### Cost Estimation:

The cost estimation for the website will consider the following factors:

1. Development costs: including the cost of hiring technical staff, software licenses, and hardware infrastructure required for development.
2. Marketing costs: including the cost of advertising and promoting the website to potential users.
3. Maintenance costs: including the cost of ongoing maintenance and updates to the website to ensure that it remains secure, up-to-date, and optimized for performance.

#### Revenue Generation:

The revenue generation potential of the website will depend on the pricing model and user adoption rate. The pricing model for the form filling services can

be structured on a per-form basis or a subscription basis. Revenue can also be generated through partnerships with employers and organizations that require form filling services for their job applications.

**Risk Assessment:**

To assess the economic feasibility of the project, potential risks associated with the development and operation of the website will be identified. Risks may include lower than expected user adoption rate, unexpected costs, and competition from other similar websites. The mitigation strategies for these risks can be included in the risk assessment plan.

**Conclusion:**

The economic feasibility analysis will provide valuable insights into the viability of the project. It will help identify potential challenges and risks and their mitigation strategies, and provide a framework for decision-making regarding the financial aspects of the project.

# **Chapter 4**

## **Software Requirement Specification - SRS**

### **4.1 Introduction**

In today's digital age, the need for efficient and reliable online services has become more crucial than ever. The internet has become an integral part of our lives, and people rely on it for various tasks, from socializing to conducting business. With the rise of online transactions, the need for secure and user-friendly form filling services has also increased.

Our project aims to provide a reliable and efficient solution to this problem. We are developing a website that offers form filling services for various job applications. Our website will simplify the application process by providing users with pre-filled forms that they can customize to their specific requirements. The website will also provide users with a platform to submit their applications online, eliminating the need for paper-based applications.

This project report aims to provide a comprehensive overview of the software requirements for our website. It will cover all the functional and non-functional requirements, system architecture, data model, user interface design, system testing, and project management. The report will also outline the benefits and key features of our website and provide insights into the development process.

We believe that our website will be a game-changer in the online job application process. By simplifying the application process and providing a secure platform for users, we aim to make the job application process more accessible and convenient. We hope that this project report will provide valuable insights into

the development of our website and help us achieve our goal of making the job application process more efficient and user-friendly.

## **4.2 Functional Requirements:**

### 1. User Authentication:

- Users should be able to create an account and log in to the website.
- Users should be able to reset their passwords in case they forget them.

### 2. Form Pre-filling:

- Users should be able to select the job application they want to fill out.
- Users should be able to upload their resume or CV.
- The system should automatically pre-fill the application form with the information from the user's resume or CV.

### 3. Form Customization:

- Users should be able to edit the pre-filled form.
- Users should be able to add or remove sections or fields from the form.

### 4. Form Submission:

- Users should be able to review and finalize their application before submitting it.
- Users should be able to submit their application online through the website.

- The system should generate a confirmation message after the application is submitted.

## 5. Administration:

- Administrators should be able to manage user accounts and permissions.
- Administrators should be able to view and download submitted applications.
- Administrators should be able to generate reports on the application process.

These are some basic functional requirements for your form filling website. You can further refine and expand these requirements based on your specific needs and goals.

## **4.3 Non-Functional Requirements:**

### 1. Performance:

- The website should be fast and responsive, with minimal lag time.
- The website should be able to handle a large number of users simultaneously without crashing.

### 2. Security:

- The website should be secure and protect user data from unauthorized access.

- The website should encrypt sensitive user data, such as passwords and personal information.
- The website should implement secure authentication and authorization mechanisms to prevent unauthorized access.

### 3. Usability:

- The website should be easy to use and navigate for users with different levels of computer proficiency.
- The website should have clear instructions and guidance on how to use the form filling services.
- The website should be accessible for users with disabilities, such as visually impaired users.

### 4. Compatibility:

- The website should be compatible with different web browsers and operating systems.
- The website should be designed to work on different screen sizes, including mobile devices.

### 5. Reliability:

- The website should be reliable and available 24/7, with minimal downtime for maintenance.
- The website should be able to recover quickly from any technical issues or errors.

## 6. Scalability:

- The website should be scalable and able to handle an increase in users or traffic over time.
- The website should be designed to accommodate future enhancements and upgrades.

These are some basic non-functional requirements for your form filling website. You can further refine and expand these requirements based on your specific needs and goals.

# **Chapter 5**

## **Project Monitoring System - Planning**

### **5.1 Introduction:**

As the owner of Forms World, it's essential to have a project monitoring and planning system in place to ensure the smooth and efficient operation of your website. A project report is a critical tool for tracking the progress of your projects and keeping stakeholders informed of your progress. With a project monitoring and planning system, you can easily generate detailed project reports that highlight key metrics, milestones, and deliverables.

To create an effective project monitoring and planning system for your project report, consider the following steps:

1. Define your project goals and objectives: These objectives ought to be SMART, or specific, measurable, achievable, relevant, and time-limited.
2. Break down your project into smaller tasks: Once you have established your project goals, you need to break down your project into smaller, more manageable tasks.
3. Set up a system for tracking progress: To track progress, you need to establish a system for monitoring and reporting on each task. This can be done using project management software or a spreadsheet.
4. Monitor your progress: As your project progresses, it's important to regularly monitor your progress and make adjustments as necessary.
5. Generate regular project reports: To keep stakeholders informed of your progress, you should generate regular project reports.

By implementing a project monitoring and planning system for your project report, you can ensure that your projects stay on track and achieve their goals.

With detailed progress reports, you can keep stakeholders informed and make data-driven decisions to improve your project's success.

## 5.2 Gantt Chart

A Gantt chart is an effective tool for visualising a project's timeline and tracking its advancement towards completion. It offers a graphical depiction of the project schedule. The chart makes it simple for team members and project managers to understand the order of tasks and their interdependencies, as well as to monitor progress and modify timetables as necessary.

Forms World Gantt Chart:

	February				March				April						
<b>Requirements Gathering</b>															
<b>Analysis</b>															
<b>Design</b>															
<b>Coding</b>															
<b>Testing</b>															
<b>Implementation</b>															
	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12			

**Table 5.1 Gantt chart of Forms World**

This “Forms World” Gantt chart shows the pictorial representation of the activities completed in which sequence and for how much time.

# **Chapter 6**

## **System Requirements & Specifications**

### **6.1 Introduction:**

When we are about to build some software project, then we have some requirements. We write down them in a document. That document is known as SRS i.e. software requirement and specification document.

Basically, SRS describe the requirements associated with project. And specification of the software functionality.

In general words, SRS is the picture of our entire project. SRS have in-depth description of the project.

SRS describe the requirements and describe how to overcome from the requirements. It describes all resources associated with project and how to overcome out of them.

### **Functions of Software Requirement and specification**

- SRS defines the internal calculations
- It describes the internal details
- It works as an agreement between client and company.

## **6.2 Hardware Requirements are as follows**

RAM	:	4 GB or More
Processor	:	Intel i3 or Later
Hard disk	:	51GB or more
Monitor	:	Any Compatible Monitor
Keyboard & Mouse	:	Any QWERTY Keyboard and compatible Mouse

## **6.3 Software Requirements are as follows**

Front-End	:	HTML, CSS, JavaScript, Bootstrap, React JS
Backend	:	Express JS, Node JS
Database	:	Mongo DB
IDE	:	VS Code
Web-Browser	:	Mozilla Firefox, Google Chrome, Microsoft Edge
Window	:	Linux, Windows 7 & later supporting Node JS.

# **Chapter 7**

## **System Design**

### **7.1 Introduction**

In today's digital age, job applications are increasingly done online, and filling out these forms can be a daunting task for many job seekers. As such, there is a growing demand for services that assist with filling out job applications. This is where our website comes in - we provide form filling services for various jobs, making the job application process easier and more convenient for users.

Our website is built using the MERN stack, which includes MongoDB, Express.js, React.js, and Node.js, and is deployed on Firebase. The MERN stack provides a modern and robust set of tools for building web applications, and Firebase provides an easy and reliable platform for hosting and deploying web applications.

In this system design, we will outline the key components and architecture of our website, including how user data is stored and processed, how payments are handled, and how website content is managed. We will also discuss how Firebase's built-in scalability features will allow our website to handle increased traffic and user demand.

By providing form filling services for various jobs, our website aims to make the job application process less stressful and more accessible to all job seekers. Our system design will outline the technical details of how we achieve this goal, ensuring that our website is reliable, scalable, and secure for our users.

## **7.2 Architecture**

Your website will follow a typical client-server architecture, where the client will be the user's web browser and the server will handle requests and responses.

The server-side will be built using the MERN stack, which includes:

- MongoDB: A NoSQL document-oriented database to store user data and website content.
- Express.js: A web application framework for Node.js that will handle routing and server-side logic.
- React.js: A JavaScript library for building user interfaces that will handle the client-side.
- Node.js: A JavaScript runtime that will power the server.

Firebase will be used as the hosting and deployment platform for your application.

## **7.3 Components**

The main components of your website will include:

### **User Interface**

The user interface will be built using React.js and will provide a clean and intuitive experience for users. It will include pages for users to view available jobs, fill out job applications, and submit payment for services rendered. Users will also be able to create an account and manage their profile information.

### **Application Processing**

When a user submits a job application, the application data will be stored in MongoDB. A server-side endpoint will handle the processing of the application

and will perform any necessary validation and verification steps. If the application is valid, the server will generate an invoice for the user and provide a payment link.

## **Payment Processing**

When a user submits payment for services rendered, the payment data will be securely transmitted to a payment processor such as Stripe. Once payment is processed, the server will mark the job application as complete and notify the user.

## **Content Management**

Your website will require a content management system (CMS) to allow you to manage website content such as job descriptions and pricing information. The CMS will be built using Express.js and will allow you to make changes to website content without requiring any code changes.

## **Authentication and Security**

To ensure the security of user data, your website will use Firebase Authentication to handle user authentication. All sensitive data will be encrypted using a secure encryption algorithm such as AES.

## **Scaling**

Firebase provides built-in scalability features that can handle increased traffic and user demand. These features include:

- Auto-scaling: Automatically scale your application resources to match demand.
- Global CDN: Serve your application content from a global content delivery network for improved performance.

- Real-time database: Use Firebase's real-time database to handle real-time data synchronization and collaboration.

## Conclusion

In conclusion, your MERN stack based website hosted on Firebase will provide a clean and intuitive user experience for job seekers. By leveraging modern web development techniques and technologies, your website will be able to handle large volumes of traffic and user demand, ensuring that your users have a smooth and reliable experience. Firebase's built-in scalability features will allow your website to handle growth and continue to provide a high-quality experience for users.

## **Chapter 8**

### **Flow Chart**

A flowchart is a visual representation of the steps in a process or system. It provides a step-by-step illustration of the various stages involved in completing a task or achieving a goal. In the context of a project report, a flowchart can be a powerful tool for communicating the workflow of the project and identifying areas for improvement.

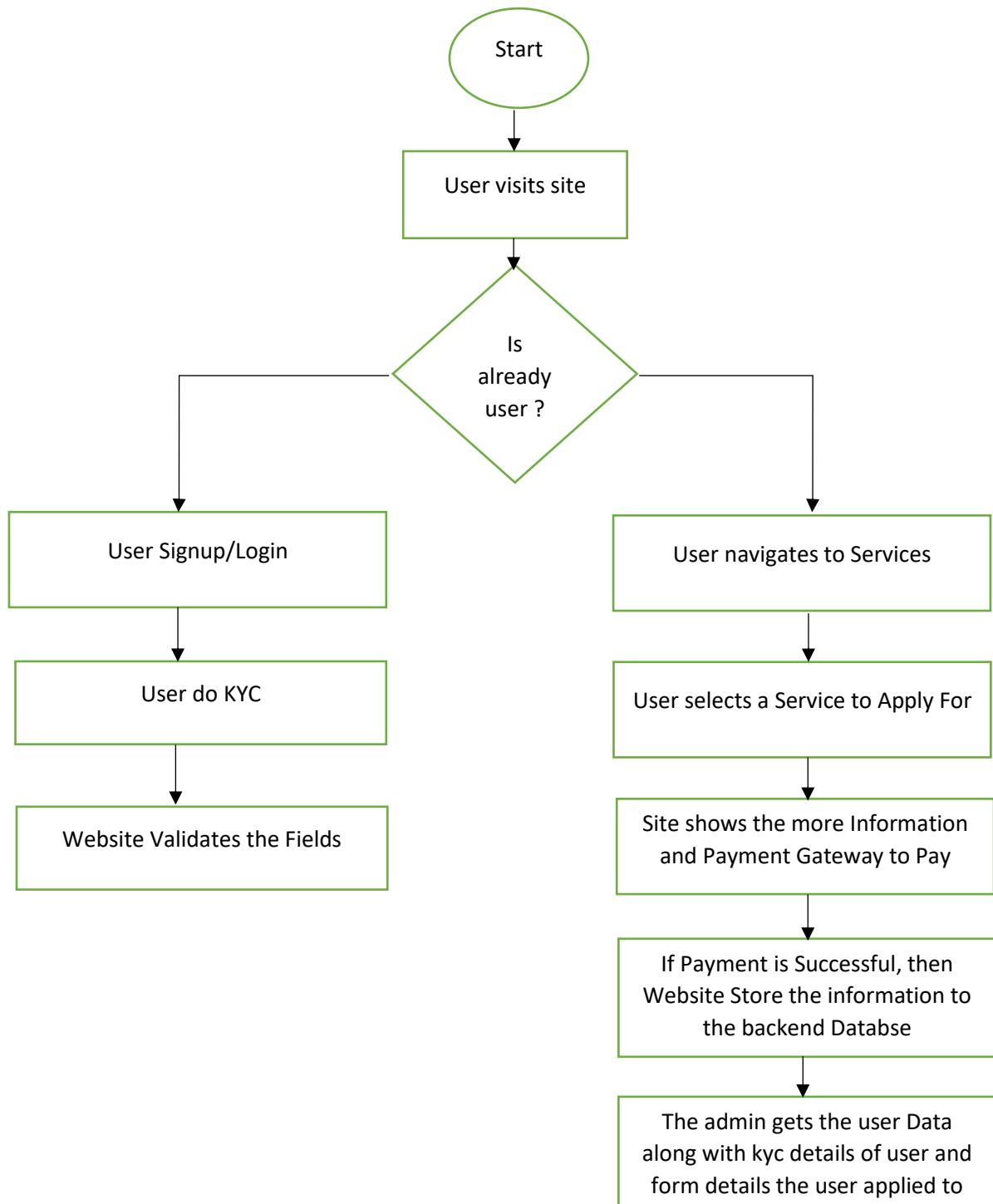
The use of a flowchart in a project report can help to make complex processes more accessible and easy to understand.

In addition to providing clarity, a flowchart can also help to identify potential bottlenecks or inefficiencies in the project. By examining the flow of tasks and identifying areas where tasks are taking longer than expected or where there is a backlog, project managers can make data-driven decisions about how to optimize the workflow and improve the project's efficiency.

When creating a flowchart for a project report, it's important to keep the chart clear and concise. Use clear and concise labels for each step, and use arrows to show the flow of tasks. Avoid cluttering the chart with unnecessary details, and focus on the key steps in the project workflow.

Overall, a flowchart can be an invaluable tool for project managers and team members seeking to optimize their project workflow and achieve their objectives in a timely and efficient manner. A flowchart can help to ensure the success of the project and the satisfaction of stakeholders.

Here's Forms World Flowchart:



**Fig. 7.1 Flow Chart of Forms World**

This “Forms World” shows the sequence of activities in which they were carried out.

# **Chapter 9**

## **Data Modelling Description**

### **9.1 Introduction**

A data model is the conceptual representation of the data structures of that are required by a database. It defines primary data objects, composition, of each data object and attributes of the project, relationships between each object and other object and between objects and processes.

### **9.2 List of Tables**

1. Users
2. KYC
3. Forms
4. Orders
5. Payments

#### **1. Users**

Name	Type
Uid	Varchar(255)
Name	Varchar(255)
Email	Varchar(255)
Phone	Varchar(255)
Password	Varchar(255)

**Table 9.1 Users Database Model**

## 2. KYCs

Name	Type
KID	Varchar(255)
Uid	Varchar(255)
Full Name	Varchar(255)
Aadhar No.	Varchar(255)
Mothers Name	Varchar(255)
Passport Image	Varchar(255)
Signature Image	Varchar(255)
Marksheet 10 <sup>th</sup>	Varchar(255)
Marksheet 12 <sup>th</sup>	Varchar(255)
Domicile Image	Varchar(255)
Caste Certificate	Varchar(255)
Left thumb	Varchar(255)
Right thumb	Varchar(255)

**Table 9.2 Users KYC Model**

## 3. Forms

Name	Type
Fid	Varchar(255)
Title	Varchar(255)
Last Date	DateTime
Total Post	Varchar(255)
Age	Varchar(255)
Qualification	Varchar(255)
Price	Number

**Table 9.3 Forms Model**

#### 4. Orders

Name	Type
Order Id	Varchar(255)
Form Id	Varchar(255)
Uid	Varchar(255)
DateTime	DateTime
Payment Done	Boolean

**Table 9.4 Orders Model**

#### 5. Payments

Name	Type
Pid	Varchar(255)
Order Id	Varchar(255)
Amount	Varchar(255)
Currency	Varchar(255)
Razorpay Order Id	Varchar(255)
Razorpay Payment Id	Varchar(255)
Razorpay Signature	Varchar(255)
Created At	DateTime

**Table 9.4 Payments Model**

#### Main Description of the module

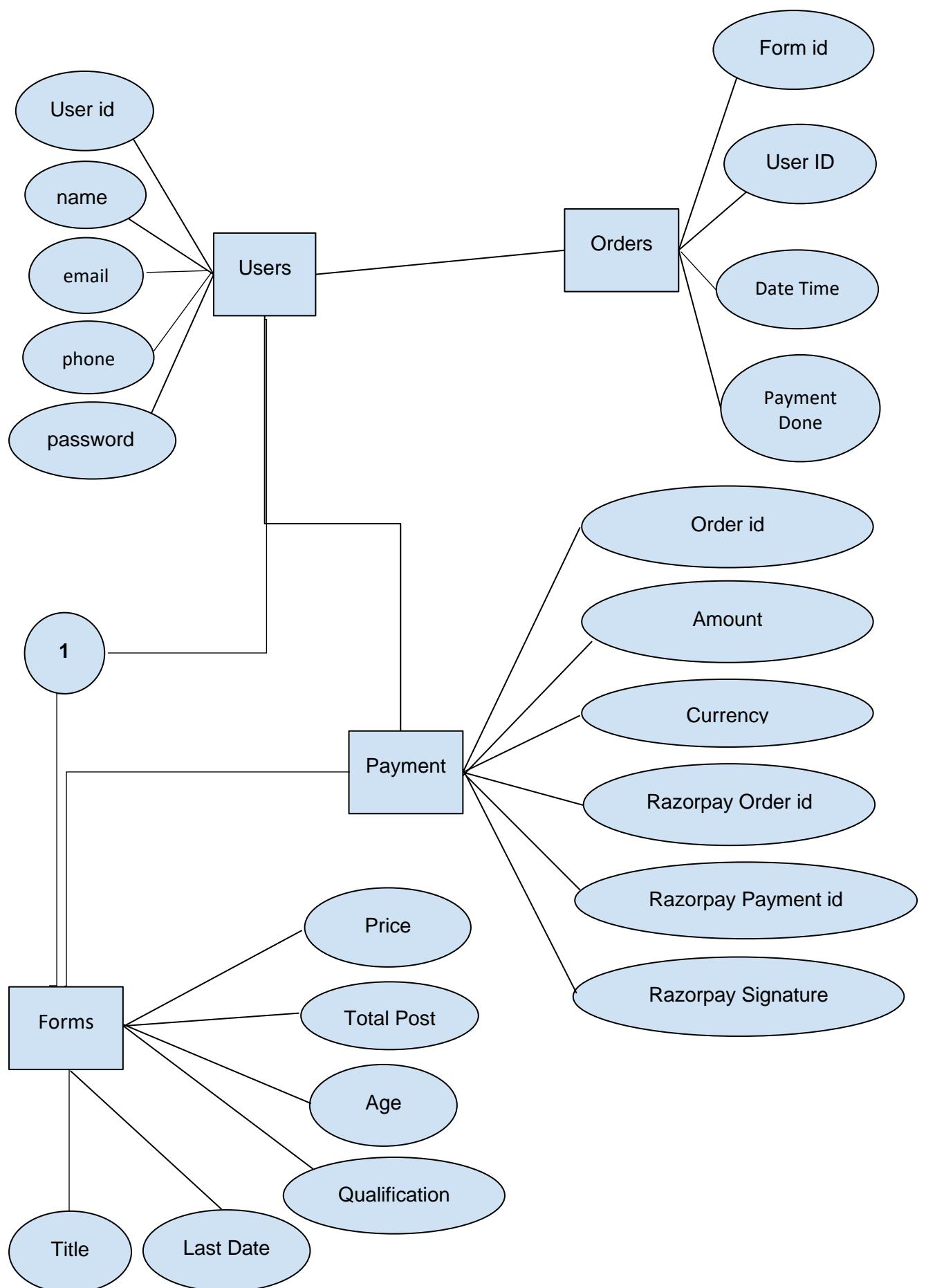
All the above mentioned data are stored in the backend and will be used by the designed algorithms.

### **9.3 ER Diagram**

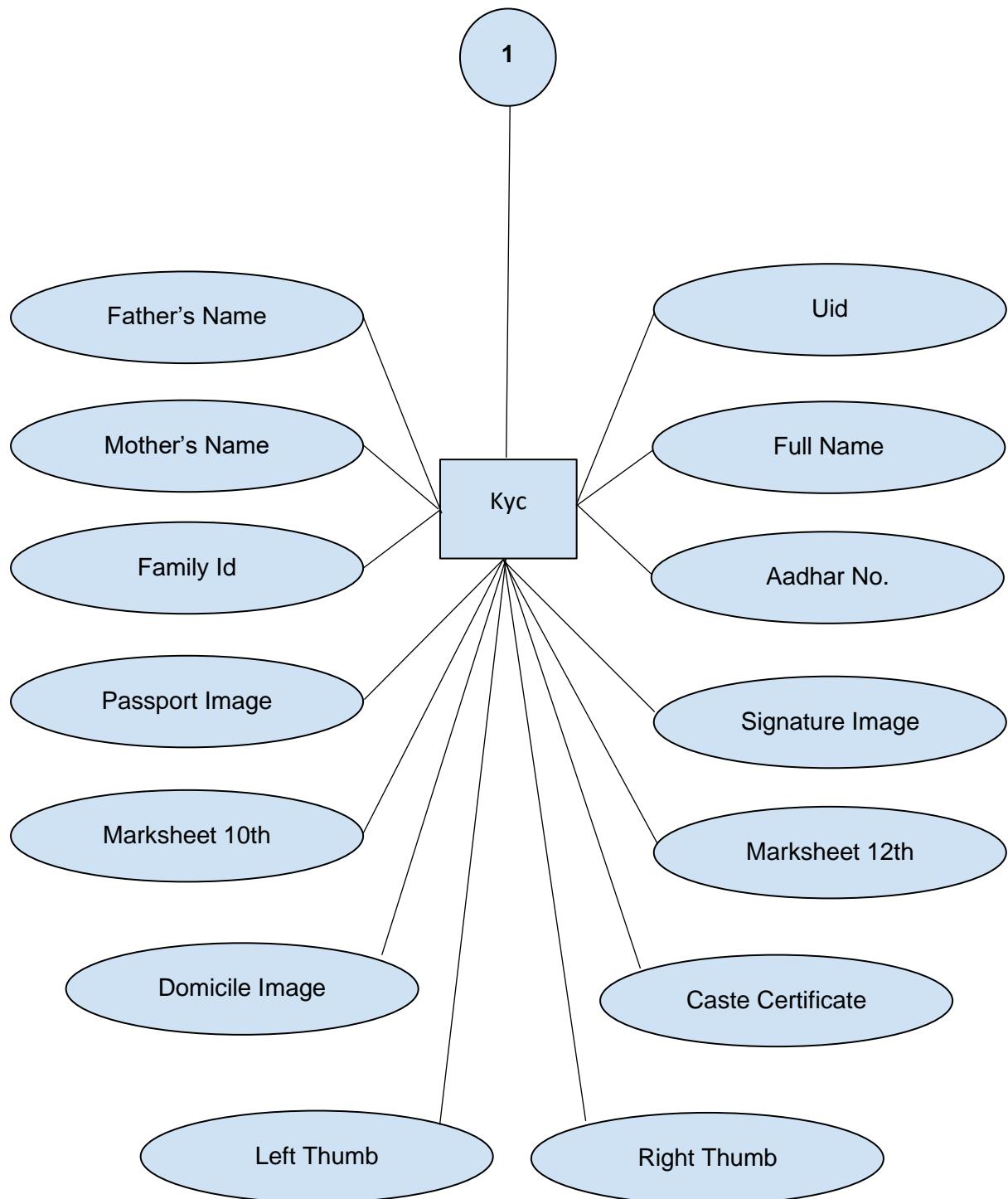
Entity-relationship (ER) diagrams are an essential tool for designing databases and understanding the relationships between entities. An ER diagram is a graphical representation of entities, their attributes, and the relationships between them. ER diagrams are commonly used in database design to illustrate the logical structure of a database and to help ensure that the database is structured in a way that meets the needs of its users.

In this project, we have created an ER diagram for a website that provides form filling services for various jobs. The website allows users to request form filling services for a range of jobs, from visa applications to government forms. The ER diagram shows the entities involved in the system, including users, jobs, forms, and fields, as well as the relationships between these entities.

The goal of the ER diagram is to provide a clear and concise representation of the database schema and to help ensure that the database is structured in a way that is efficient, accurate, and easy to use. By using an ER diagram, we can better understand the relationships between the entities involved in the system and ensure that the database is designed in a way that meets the needs of its users.



**Fig. 6.1 Entity Relationship diagram**



**Fig. 6.2 Entity Relationship diagram Continued**

The ER diagram shows that:

- The forms model has a one-to-many relationship with the orders model, as one form can have multiple orders.
- The orders model has a many-to-one relationship with both the forms and users models, as an order belongs to one form and one user, but one user and one form can have multiple orders.
- The payment model has a one-to-one relationship with the orders model, as each order can have only one payment.
- The users model has a many-to-one relationship with the orders model, as one user can have multiple orders, but each order belongs to only one user.

## **9.4 Entity Relationship Dictionary**

### **1. User**

A user can create account in Forms World and can login and access the services we provide there.

#### Attributes:

Uid (User id):	user id of the user, automatically generated for new user.
Name:	name of the user
Email:	email of the user
Phone:	phone number of the users
Password:	password of the user

### **2. KYC**

A user have to do KYC in order to successfully apply to a service.

#### Attributes:

Kid (kyc id):	automatically generated for user
uid:	takes reference of user from users database
full_name:	password filled when signing-up
aadhar_no:	user's aadhar no.
fathers_name:	user's father's name
mothers_name:	user's mother's name
passport_image:	user's passport size image
signature_image:	user's signature image
marksheet_10th:	user's 10 <sup>th</sup> marksheets image
marksheet_12th:	user's 12 <sup>th</sup> marksheets image

domicile_image:	domicile image of user
caste_certificate:	caste certificate image of user
left_thumb:	left thumb impression image
right_thumb:	right thumb impression image

### 3. Form

The admin will add the form to the database and it will be displayed on the service nav for the user.

#### Attributes:

title:	title of the form
last_date:	last date of form
total_post:	posts for form applying
age:	required age group for applying
qualification:	minimum qualification for form
price:	price of the form service

### 4. Orders

When user successfully apply & pay for the service from the service tab, the order then will come to Orders db.

#### Attributes:

form_id:	reference form id
uid:	reference user id
dateTime:	date-time of order
payment_done:	if payment is successful for order

## 5. Payment

This contains the details for payment of order.

### Attributes:

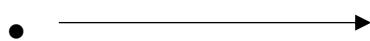
order_id:	reference order_id
amount:	amount of transaction
currency:	currency of transaction
razorpay_order_id:	transaction order id from razorpay
razorpay_payment_id:	transaction payment id from razorpay
razorpay_signature:	transaction signature from razorpay
created_at:	date-time information of payment

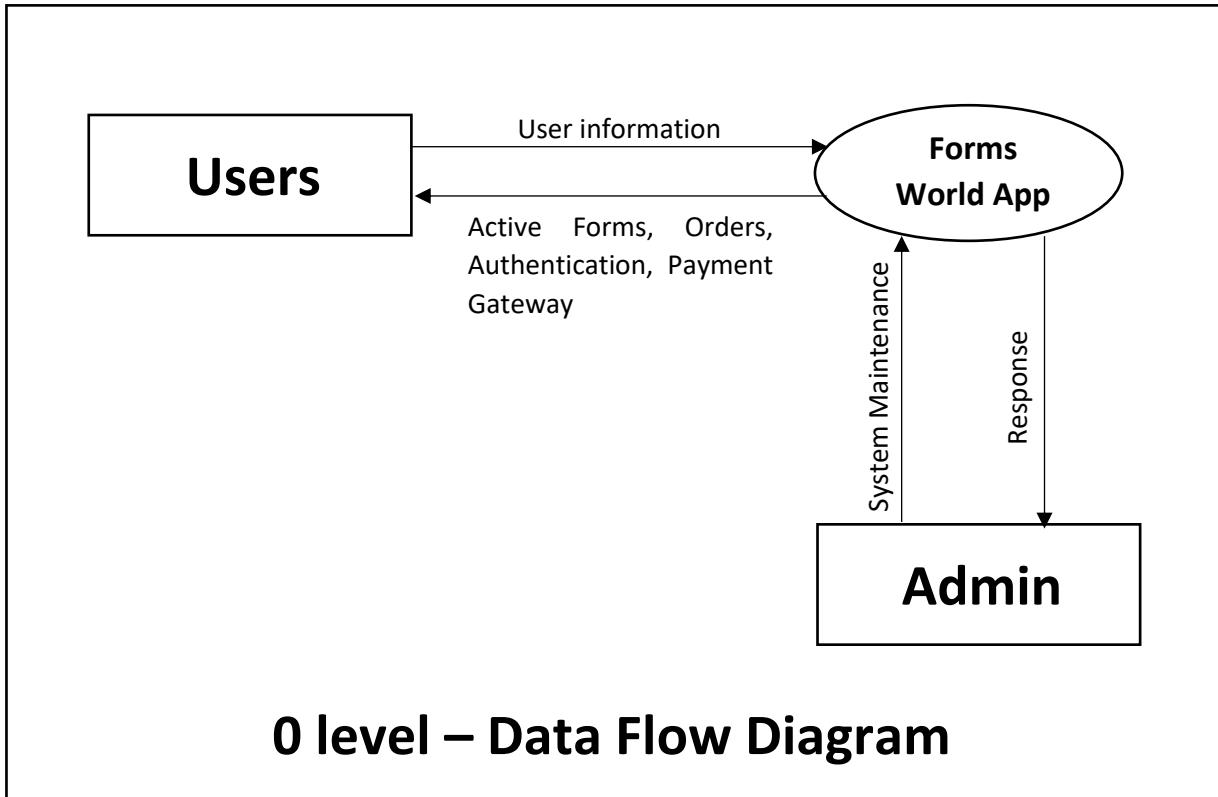
## **Chapter 10**

### **Data Flow Diagram**

Data flow diagrams (DFD) are a component of a structured model used in the process of software development. They are a way of graphically representing data flow within the application system as data moves from input to db, db to output. It is similar to a flowchart, but with DFDs illustrating the movement of data throughout the system.

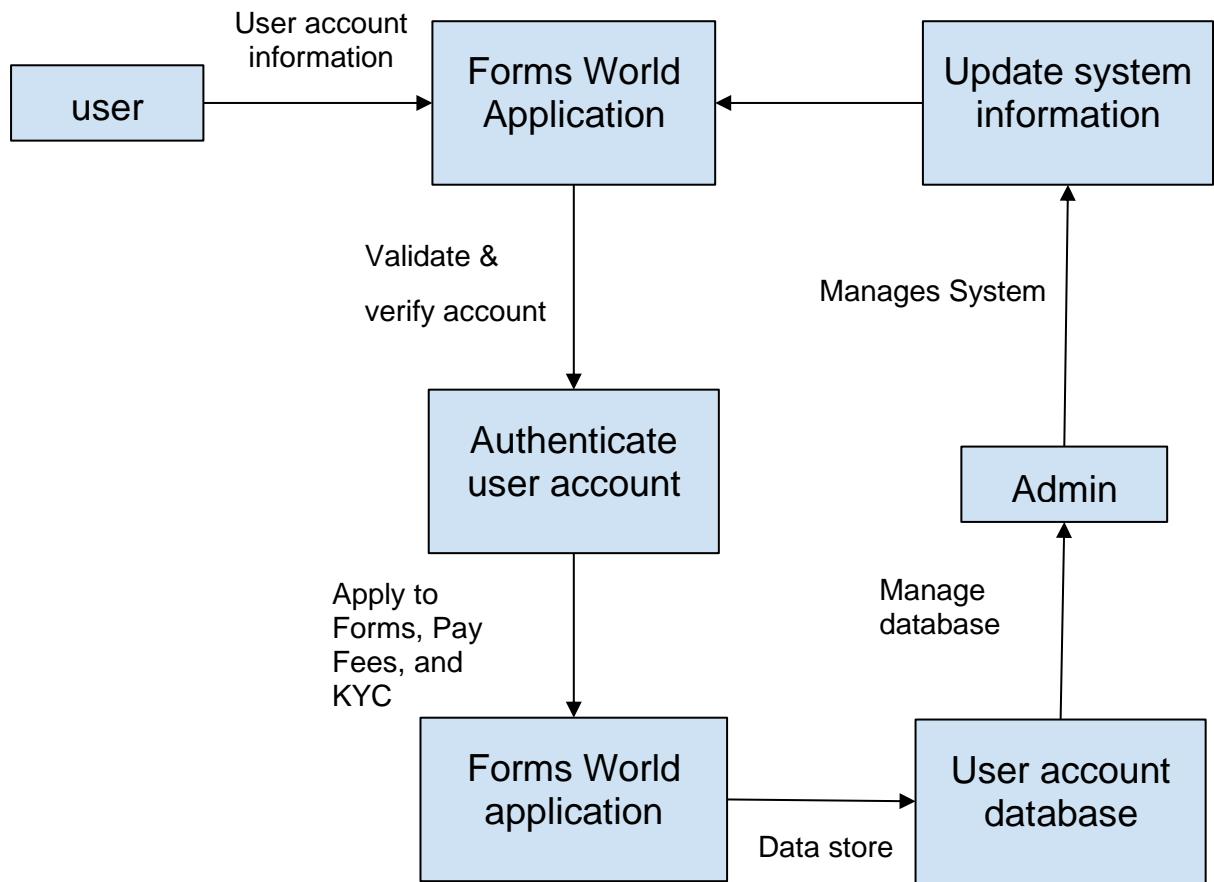
#### **Data Flow Diagram Symbols**

-  : Data Flow
-  : Process
-  : Entity
-  : Data



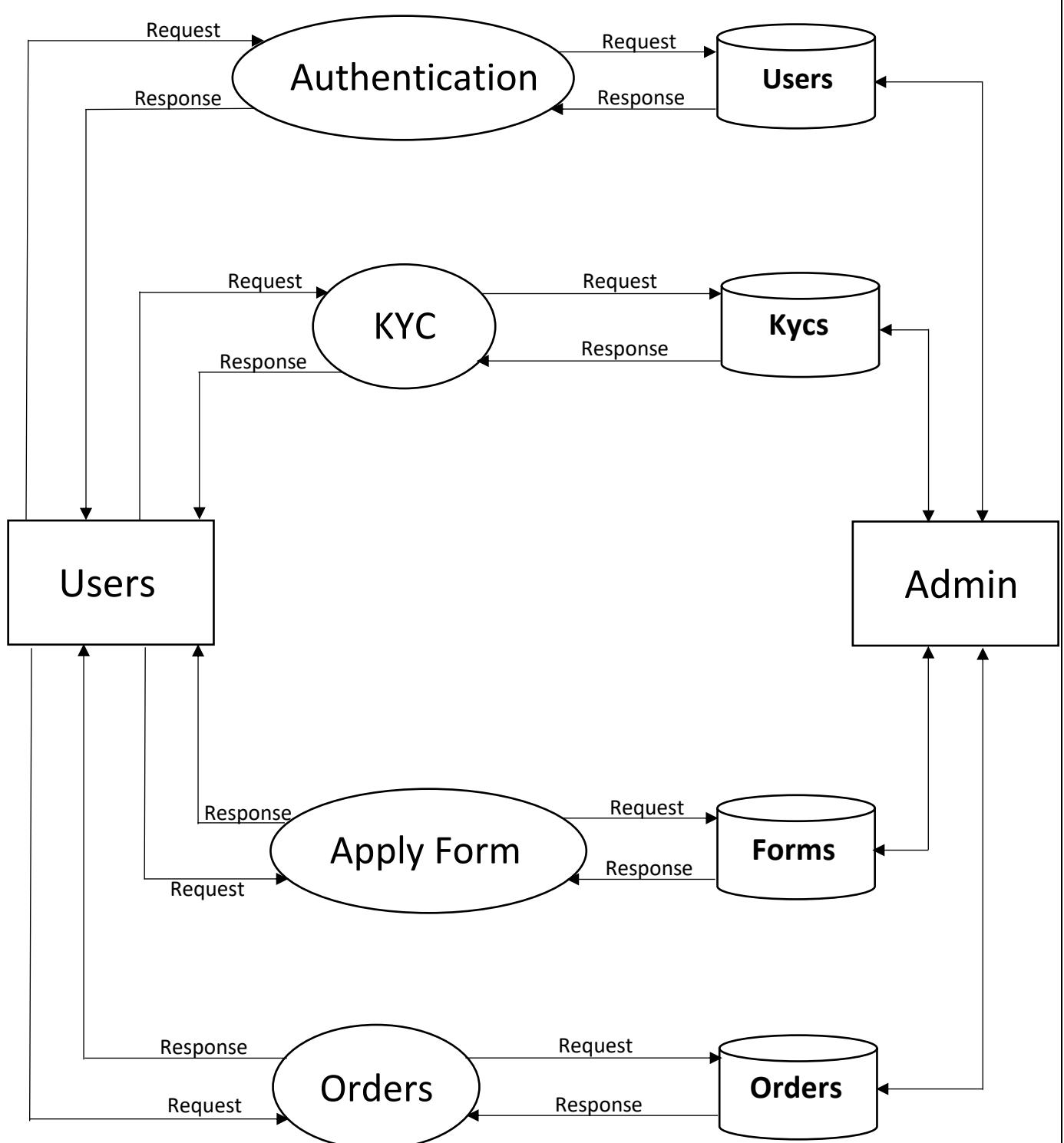
**Fig. 9.1 0<sup>th</sup> level – Data Flow Diagram**

The above DFD shows the inputs and outputs of the “Forms World”, as well as the various external entities that interact with it. External entities includes users of website, and admin.



**Fig. 9.2 1<sup>st</sup> level – Data Flow Diagram**

The above DFD of “Forms World” shows the processes and data flows within the system into more specific and detailed components.



## 2<sup>nd</sup> level – Data Flow

# Chapter 11

## Project Design

### 11.1 Database Design:

#### 1. Database design and collections

The screenshot shows the MongoDB Compass interface connected to the database 'formsworld'. On the left, the 'Collections' sidebar lists 'forms', 'kycs', 'orders', 'payments', and 'users'. The main area displays five collections: 'forms', 'kycs', 'orders', 'payments', and 'users'. Each collection card provides storage statistics: 'Storage size', 'Documents', 'Avg. document size', 'Indexes', and 'Total index size'. A bottom bar indicates the connection is via 'MONGOSH'.

Collection	Storage size	Documents	Avg. document size	Indexes	Total index size
forms	20.48 kB	7	139.00 B	1	36.86 kB
kycs	4.10 kB	0	0 B	1	4.10 kB
orders	20.48 kB	1	126.00 B	1	20.48 kB
payments	20.48 kB	1	258.00 B	1	20.48 kB
users	20.48 kB	1	105.00 B	2	73.73 kB

#### 2. Forms stored in database

The screenshot shows two documents in the 'forms' collection. Both documents have the same structure: '\_id', 'title', 'last\_date', 'total\_post', 'age', 'qualification', 'price', and '\_\_v'. The first document is for 'Aadhar Card' and the second for 'Driver Licence'.

```
_id: ObjectId('644e3bbb2672e34ca3d71058')
title: "Aadhar Card"
last_date: 2023-04-30T16:00:00.000+00:00
total_post: null
age: "0-200"
qualification: "Everyone"
price: 150
__v: 0

_id: ObjectId('644e3bdd2672e34ca3d7105b')
title: "Driver Licence"
last_date: 2023-04-30T16:00:00.000+00:00
total_post: null
age: "0-200"
qualification: "Everyone"
price: 2000
__v: 0
```

### 3. Data stored in database kyc

```
▶ _id: ObjectId('644e2893dd5c35895a090f30')
  __v: 0
  aadhar_no: 1234567890123456
  caste_certificate: "/9j/4AAQSkZJRgABAQAAAQABAAD/4gHYSUNDX1BST0ZJTEUAAQEEAAHIAAAAAA...QwAABtbn..."
  domicile_image: "/9j/4AAQSkZJRgABAQAAAQABAAD/4gHYSUNDX1BST0ZJTEUAAQEEAAHIAAAAAA...QwAABtbn..."
  family_id: "abc123def"
  fathers_name: "Dilbag Singh Dahiya"
  full_name: "Shubham Dahiya"
  left_thumb: "/9j/4AAQSkZJRgABAQAAAQABAAD/4gHYSUNDX1BST0ZJTEUAAQEEAAHIAAAAAA...QwAABtbn..."
  marksheet_10th: "/9j/4AAQSkZJRgABAQAAAQABAAD/4gHYSUNDX1BST0ZJTEUAAQEEAAHIAAAAAA...QwAABtbn..."
  marksheet_12th: "/9j/4AAQSkZJRgABAQAAAQABAAD/4gHYSUNDX1BST0ZJTEUAAQEEAAHIAAAAAA...QwAABtbn..."
  mothers_name: "Susheela Dahiya"
  passport_image: "/9j/4AAQSkZJRgABAQAAAQABAAD/4gHYSUNDX1BST0ZJTEUAAQEEAAHIAAAAAA...QwAABtbn..."
  right_thumb: "/9j/4AAQSkZJRgABAQAAAQABAAD/4gHYSUNDX1BST0ZJTEUAAQEEAAHIAAAAAA...QwAABtbn..."
  signature_image: "/9j/4AAQSkZJRgABAQAAAQABAAD/4gHYSUNDX1BST0ZJTEUAAQEEAAHIAAAAAA...QwAABtbn..."
```

### 4. Orders stored in database

```
▶ _id: ObjectId('644e3ddb2672e34ca3d71070')
  form_id: ObjectId('644e3bbb2672e34ca3d71058')
  uid: ObjectId('644e2893dd5c35895a090f30')
  payment_done: true
  payment_id: ObjectId('644e3ddb2672e34ca3d7106e')
  dateTime: 2023-04-30T10:07:23.282+00:00
  __v: 0
```

```
_id: ObjectId('644e454d2b21186acc13115b')
form_id: ObjectId('644e3c812672e34ca3d71066')
uid: ObjectId('644e2893dd5c35895a090f30')
payment_done: true
payment_id: ObjectId('644e454d2b21186acc131159')
dateTime: 2023-04-30T10:39:09.792+00:00
__v: 0
```

## 5. Payments stored in database

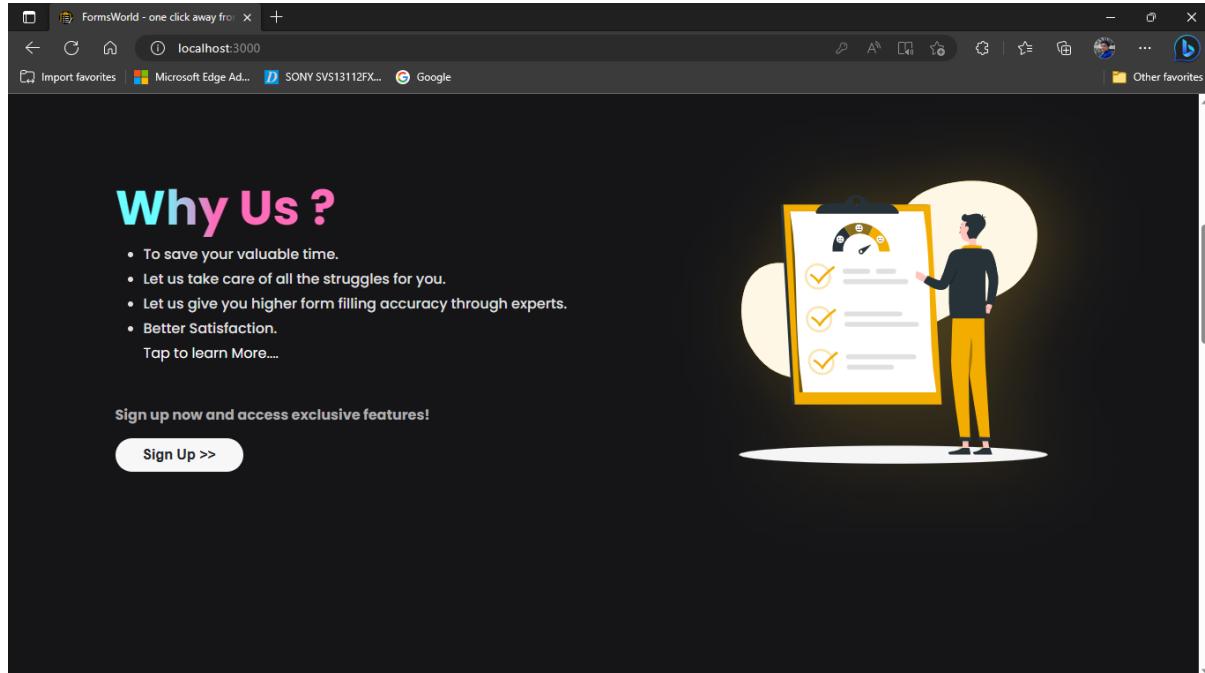
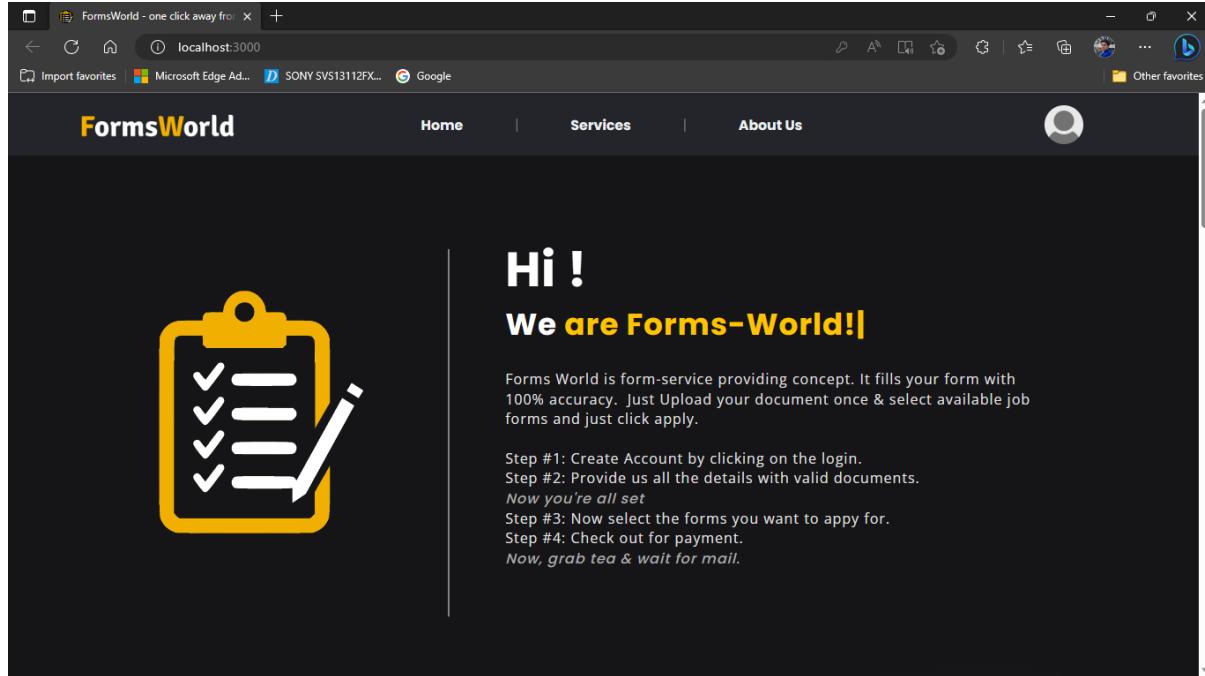
```
_id: ObjectId('644e3ddb2672e34ca3d7106e')
amount: 150
currency: "INR"
razorpay_order_id: "order_LjxoiIS9SPfnIG"
razorpay_payment_id: "pay_LjxpZDUxEZOZIn"
razorpay_signature: "5b3624bc96009d57dd577e60e6e0a69a2a3345ee961c70604b111292827035a9"
created_at: 2023-04-30T10:07:23.248+00:00
__v: 0
```

## 6. Users likes stored in database

```
_id: ObjectId('644e2893dd5c35895a090f30')
name: "Shubham"
email: "shubham.sd878@gmail.com"
password: "123456"
__v: 0
```

## 11.2 Screen Designs:

### 1. Landing page of Forms World



## Social Reviews

 Shubham

I used their service for filling out a government job application and it was a great experience. They were very helpful and provided me with all the necessary information. Highly recommended!

5 ★ Reviewed on: 2023-04-25

 Chirag

The website was very user-friendly and I was able to fill out a government schema with ease. Their service is highly recommended for anyone who needs help with government applications.

4 ★ Reviewed on: 2023-04-24

 Karan

I used their service to fill out a government application and it was a great experience. The staff was very friendly and knowledgeable. I would highly recommend this service to anyone who needs help with government forms.

5 ★ Reviewed on: 2023-04-22

 Sneha

Their service was very helpful filling out a government application. They provided clear instructions and were very responsive to my questions. Highly recommended!

4 ★ Reviewed on: 2023-04-21

 Siddharth

I had to apply for a PAN card and the team at this website helped me do that easily. They were very professional and guided me through the whole process. Highly recommend their services!

Reviewed on: 2023-05-04

 Chaman

The team at this website helped me apply for my driving license and made the process seamless. They were very responsive and helped me with all my doubts. Highly recommend their services!

4 ★ Reviewed on: 2023-05-05

 Rahul

I had to apply for my passport and the team at this website made the whole process easy and hassle-free. They were very responsive and helped me with all my doubts. Would definitely use their services again!

5 ★ Reviewed on: 2023-05-06

 Simran

I had a great experience with this website while applying for my Aadhaar card. The team was very professional and guided me through the whole process. Highly recommend their services!

4 ★ Reviewed on: 2023-05-07

FormsWorld - one click away from... X +

localhost:3000

Import favorites Microsoft Edge Ad... SONY SVS13112FX... Google Other favorites

## Frequently Asked Questions - FAQs

Question #1: What kinds of forms do you offer assistance with?	▼
Question #2: How much do your services cost?	▼
Question #3: How long does the form filling process take?	▼
Question #4: Can I trust you with my personal information?	▼
Question #5: What if there are errors or issues with the completed forms?	▼
Question #6: Do you offer rush services for urgent forms?	▼
Question #7: How do I get started with your services?	▼
Question #8: What if I have additional questions or concerns during the form filling process?	▼
Question #9: What if I need to make changes or updates to the completed forms?	▼
Question #10: Are there any forms that you cannot provide assistance with?	▼

The screenshot shows a Microsoft Edge browser window with the URL [localhost:3000](http://localhost:3000). The page content is a list of frequently asked questions, each with a collapse/expand arrow icon:

- Question #5: What if there are errors or issues with the completed forms?
- Question #6: Do you offer rush services for urgent forms?
- Question #7: How do I get started with your services?
- Question #8: What if I have additional questions or concerns during the form filling process?
- Question #9: What if I need to make changes or updates to the completed forms?
- Question #10: Are there any forms that you cannot provide assistance with?

Below the FAQ section, there are three columns: "Contact Us", "Navigation", and "Follow Us".

**Contact Us**

- Phone: +91-930-625-5317
- Email: [formsworldcare@gmail.com](mailto:formsworldcare@gmail.com)
- Address: 123 Sonipat, Sonipat - 131001, Haryana - Zip

**Navigation**

- [Home](#)
- [About Us](#)
- [Services](#)

**Follow Us**

- 
- 
- 
- 

At the bottom of the page, there is a copyright notice and a footer menu:

© 2023 Forms World Pvt. Ltd. All Rights Reserved.

[Welcome Page](#) [Why Us](#) [Site Map](#) [FAQ](#) [Testimonials](#)

## 2. Services Page of Forms World

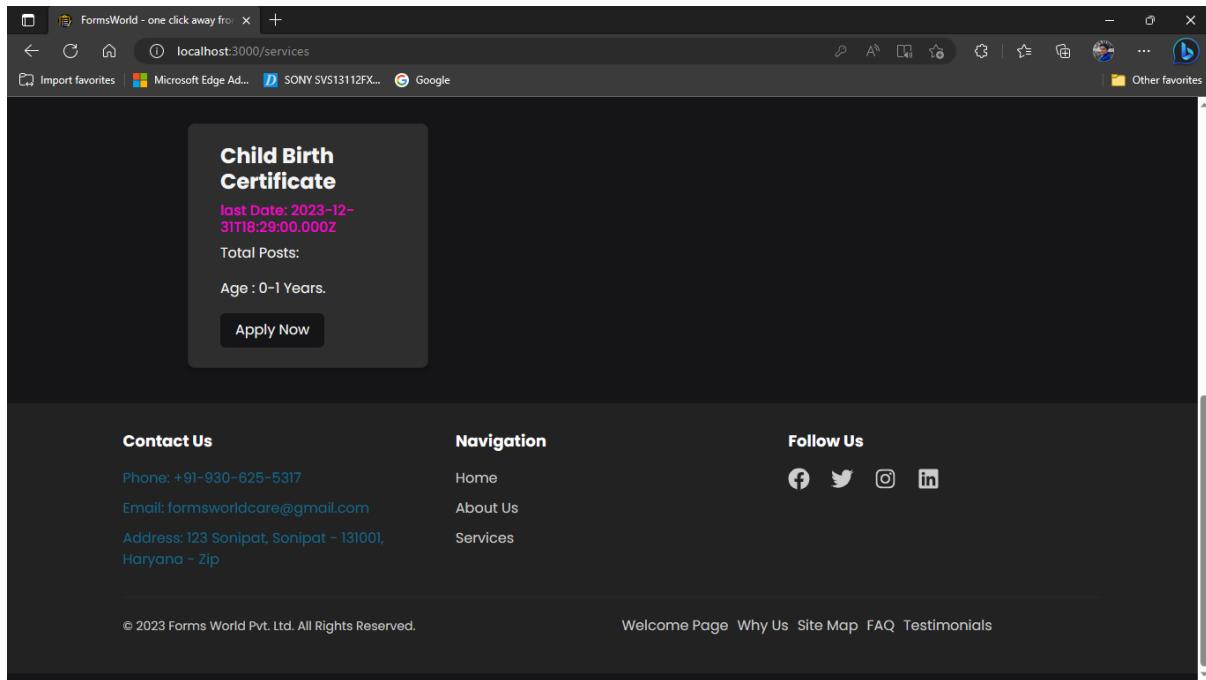
The screenshot shows a Microsoft Edge browser window with the URL [localhost:3000/services](http://localhost:3000/services). The page features a dark header with the "FormsWorld" logo and navigation links for "Home", "Services", and "About Us".

The main content area displays six service cards arranged in two rows of three:

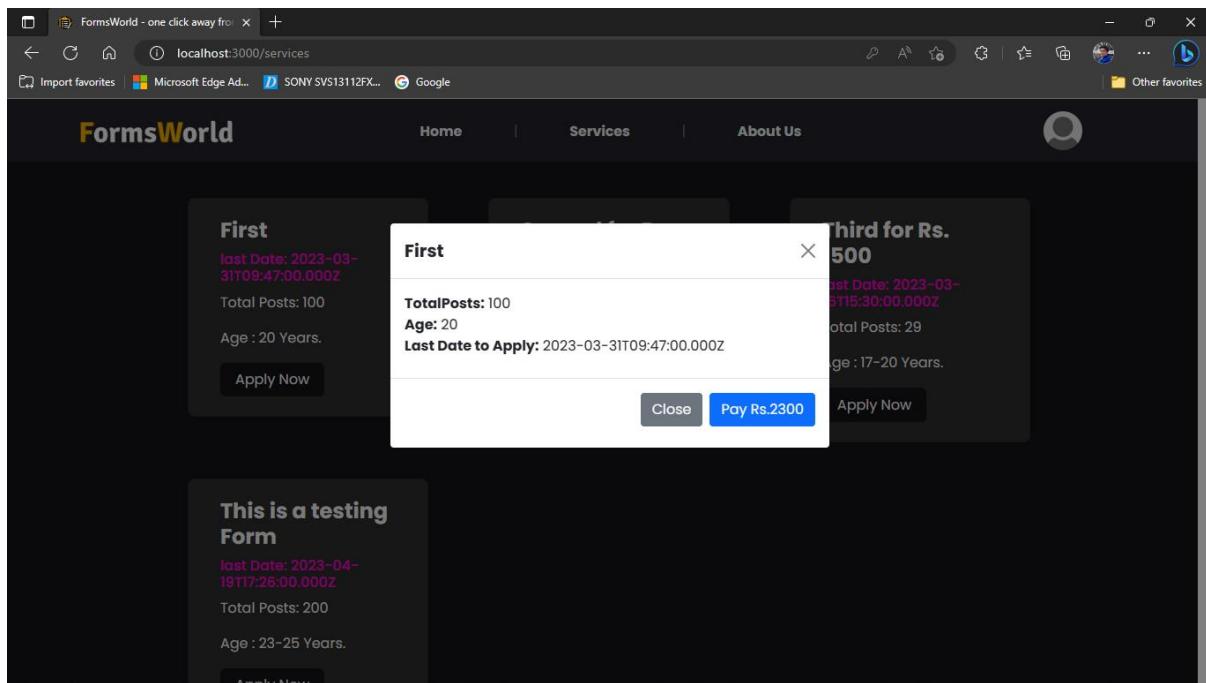
- Aadhar Card**  
Last Date: 2023-04-30T16:00:00.000Z  
Total Posts:  
Age : 0-200 Years.  
[Apply Now](#)
- Driver Licence**  
Last Date: 2023-04-30T16:00:00.000Z  
Total Posts:  
Age : 0-200 Years.  
[Apply Now](#)
- Passport**  
Last Date: 2023-04-30T16:00:00.000Z  
Total Posts:  
Age : 0-200 Years.  
[Apply Now](#)

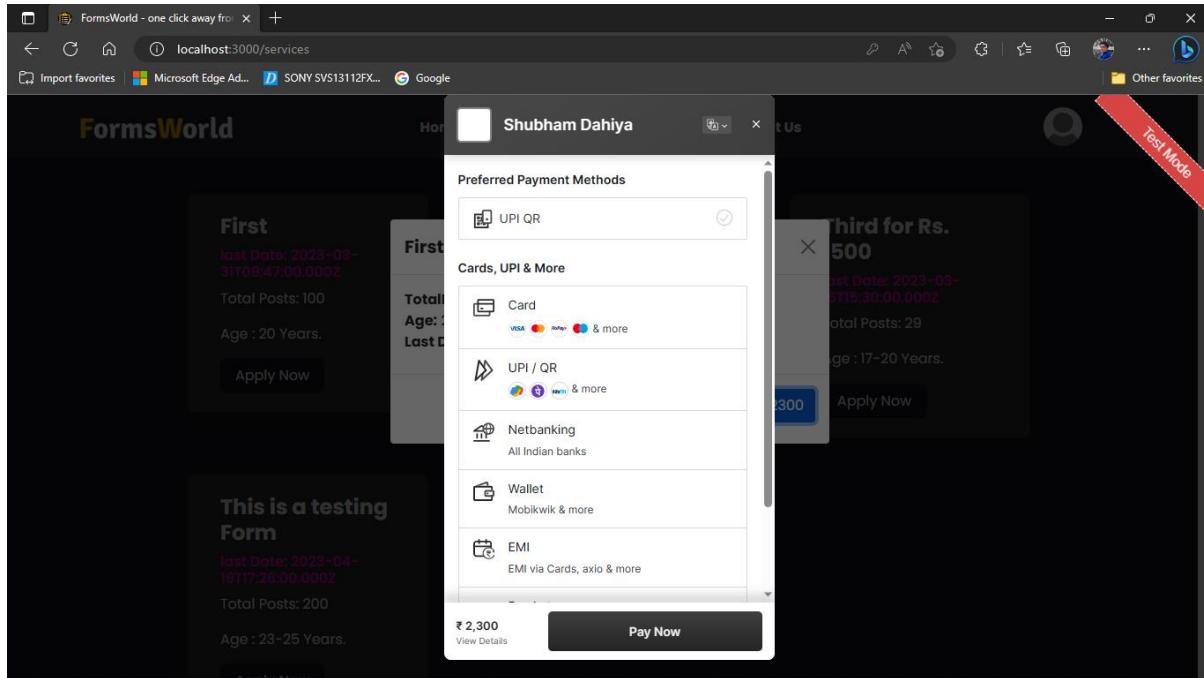
- Pan Card**  
Last Date: 2023-04-30T16:00:00.000Z  
Total Posts: 30000  
Age : 0-200 Years.  
[Apply Now](#)
- GST Registration**  
Last Date: 2023-04-30T16:00:00.000Z  
Total Posts:  
Age : 0-200 Years.  
[Apply Now](#)
- LPG Subsidy**  
Last Date: 2023-04-30T16:00:00.000Z  
Total Posts:  
Age : 0-200 Years.  
[Apply Now](#)



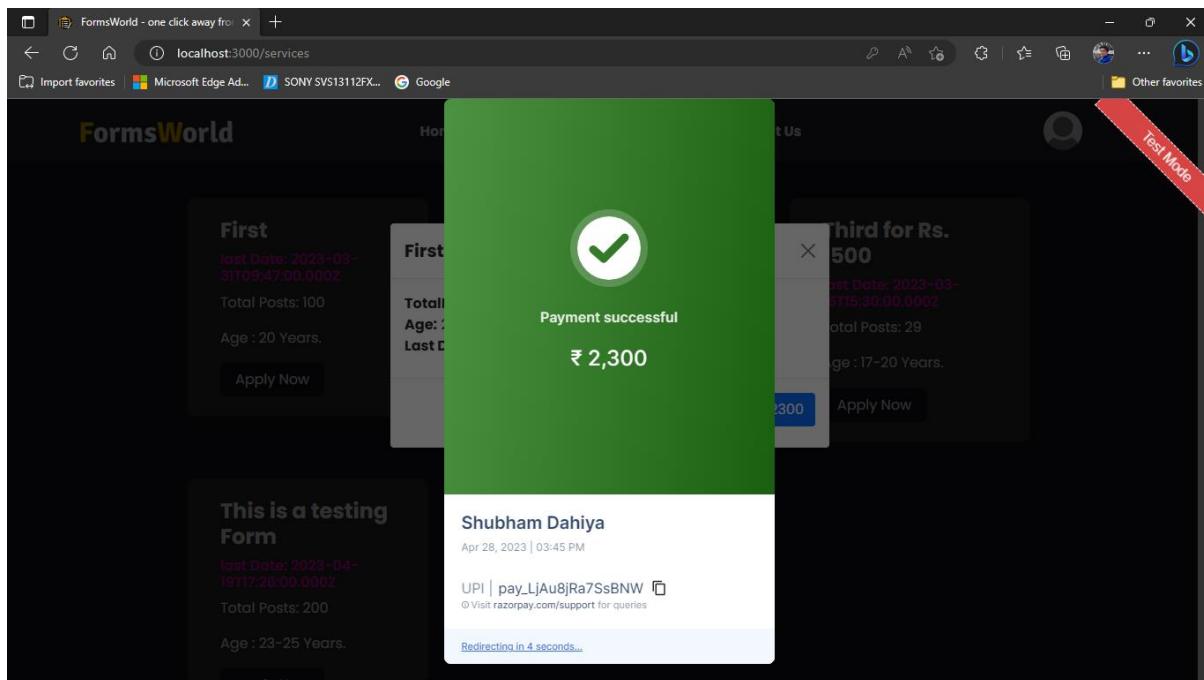
### 3. Form Details Modal



## 4. Payment Gateway



## 5. Payment



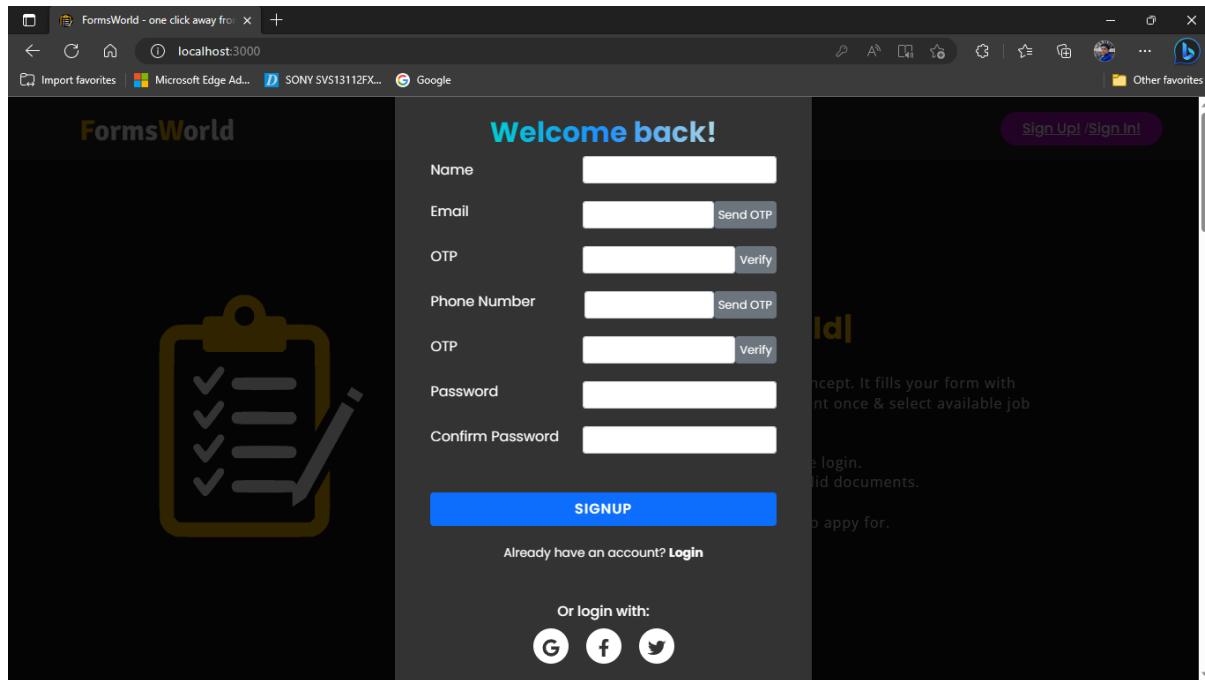
## 6. About us Page of Forms World

The screenshot shows the 'About Us' page of the FormsWorld website. The page has a dark header with the 'FormsWorld' logo and navigation links for 'Home', 'Services', and 'About Us'. A 'Sign Up! / Sign In!' button is located in the top right corner. The main content area features a large red 'About Us' heading. Below it, there are three paragraphs of text: one about the team's experience and service quality, another about their expertise in various fields, and a third about their goal to make the form filling process smooth and stress-free. At the bottom, there are footer sections for 'Contact Us' (with phone number +91-930-625-5317), 'Navigation' (links to Home, About Us, and Services), and 'Follow Us' (links to social media). The URL in the address bar is localhost:3000/about.

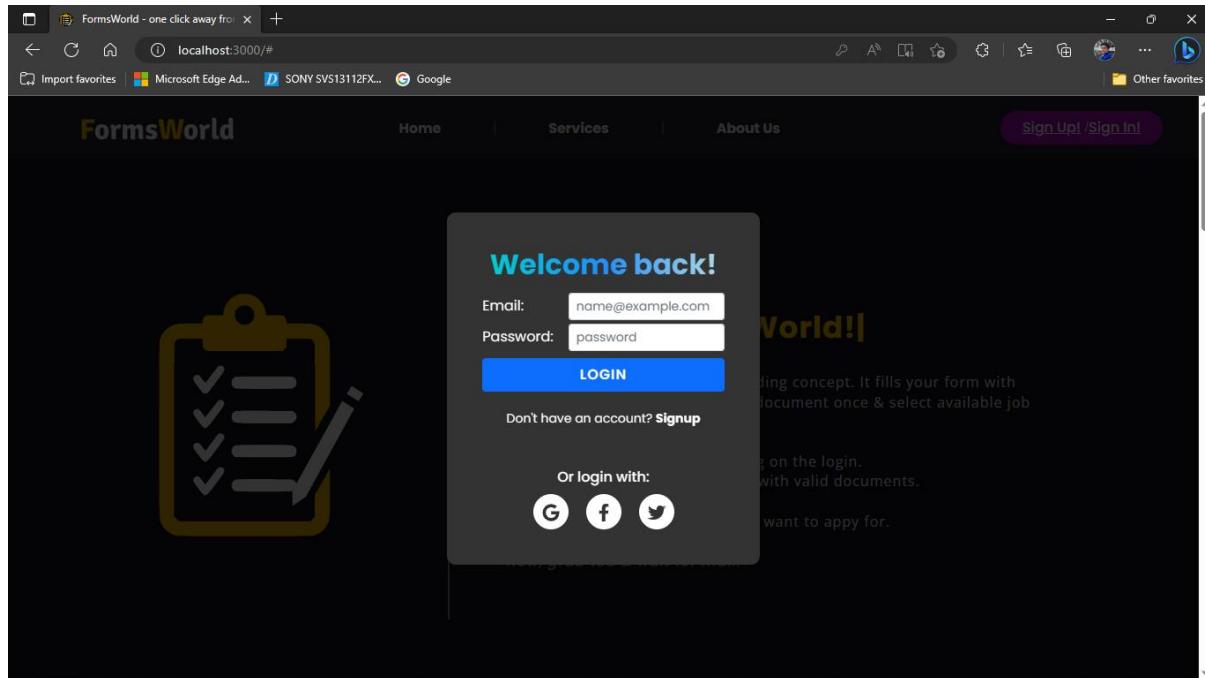
## Footer

The screenshot shows the footer section of the FormsWorld website. It includes a 'Contact Us' section with phone number +91-930-625-5317, email formsworldcare@gmail.com, and address 123 Sonipat, Sonipat - 131001, Haryana - Zip. A 'Navigation' section links to Home, About Us, and Services. A 'Follow Us' section provides links to social media platforms. The footer also contains copyright information (© 2023 Forms World Pvt. Ltd. All Rights Reserved.) and a navigation menu (Welcome Page, Why Us, Site Map, FAQ, Testimonials).

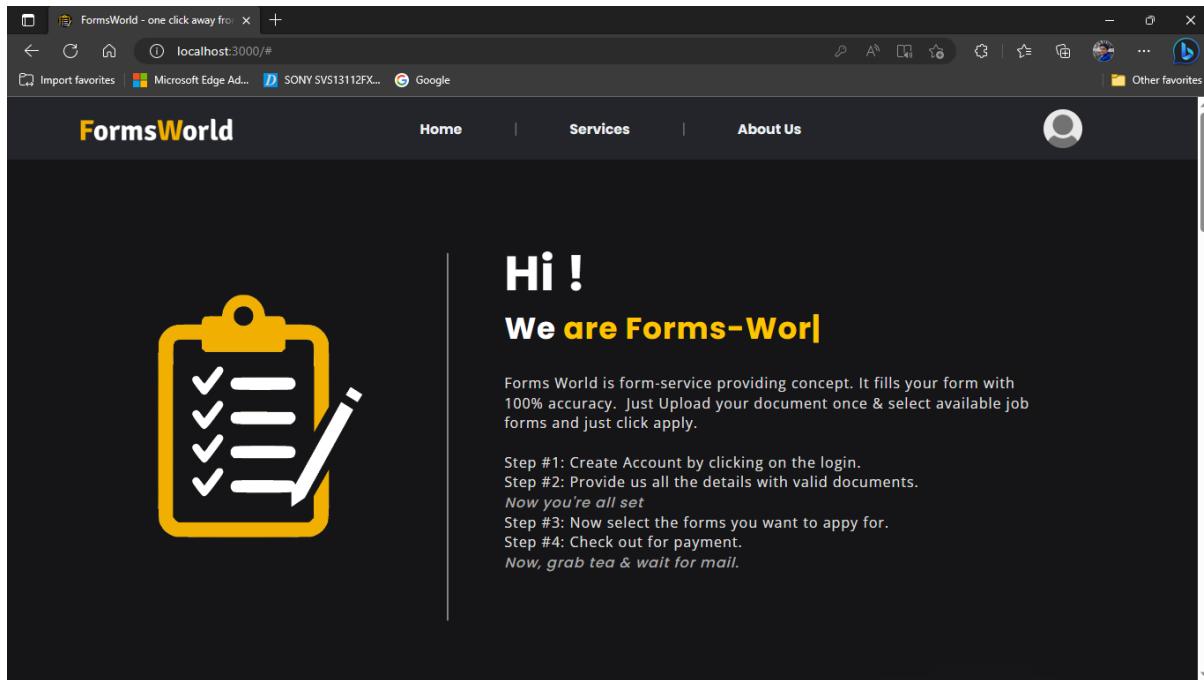
## 7. Sign up popup on Forms World



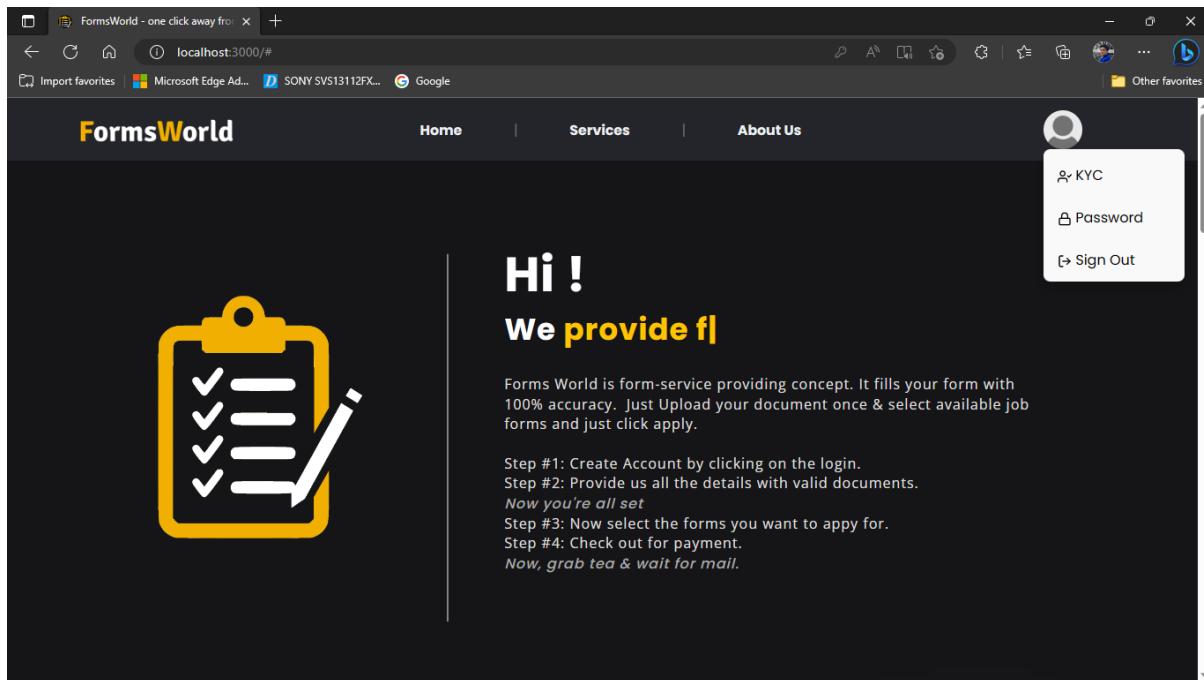
## 8. Sign in popup on Forms World:



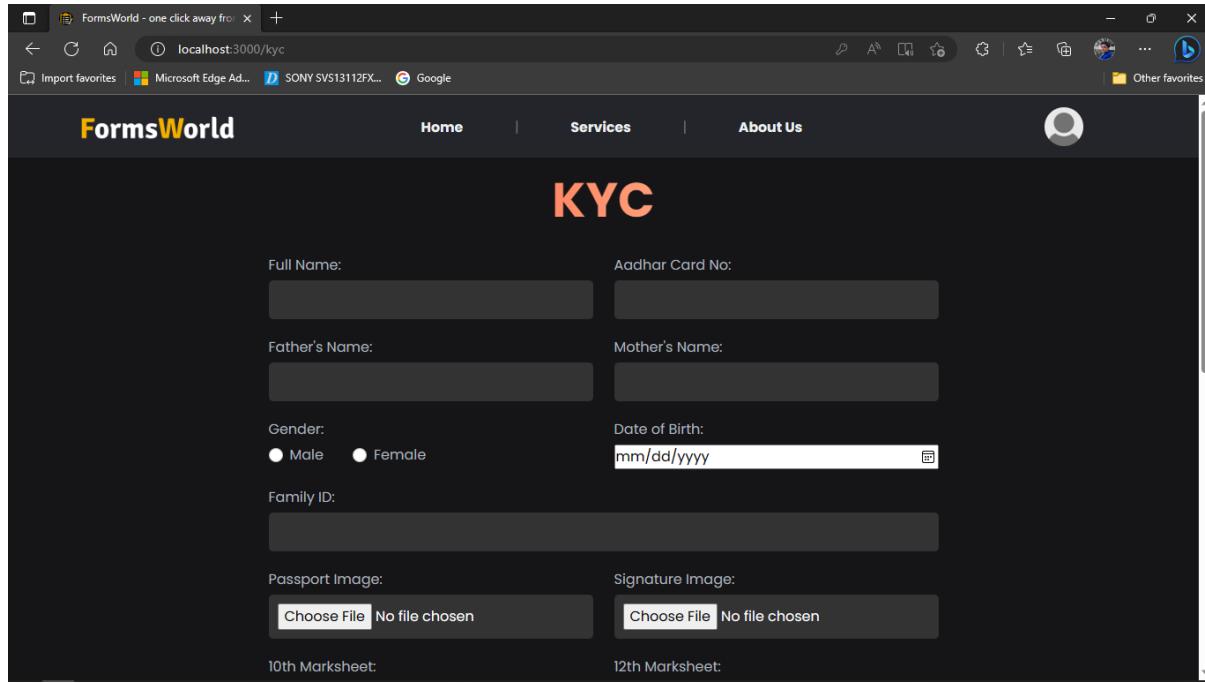
## 9. Signed in user page



## 10. Signed user options



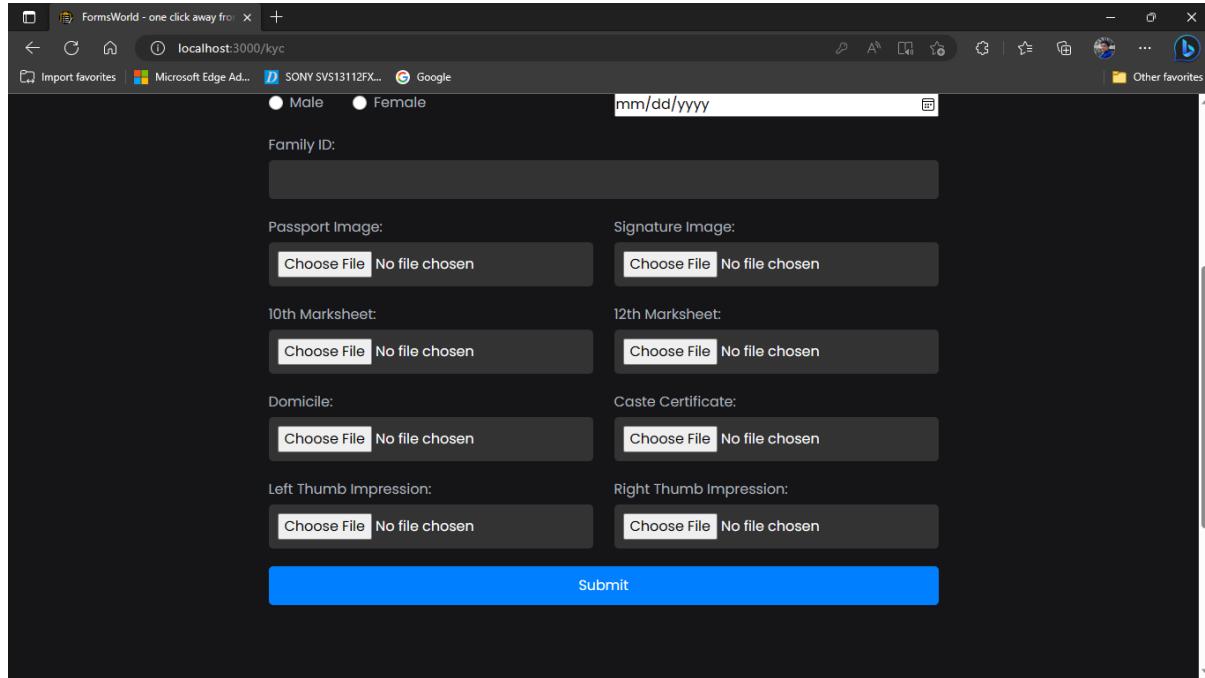
## 11. KYC page for user on Forms World



A screenshot of a Microsoft Edge browser window showing a KYC (Know Your Customer) form on a website called "FormsWorld". The page has a dark theme with orange and white text. At the top, there are navigation links for "Home", "Services", and "About Us". The main title "KYC" is centered at the top in large orange letters. Below the title are several input fields and controls:

- Full Name: [Text input field]
- Aadhar Card No.: [Text input field]
- Father's Name: [Text input field]
- Mother's Name: [Text input field]
- Gender:  
 Male    Female
- Date of Birth: [Text input field] mm/dd/yyyy
- Family ID: [Text input field]
- Passport Image: [File upload button] Choose File   No file chosen
- Signature Image: [File upload button] Choose File   No file chosen
- 10th Marksheets: [Text input field]
- 12th Marksheets: [Text input field]

scrolled



A screenshot of the same KYC form from the previous image, but with a vertical scroll bar visible on the right side of the browser window, indicating that the page content is longer than the screen height. The form fields are identical to the first screenshot.

## Scrolled

A screenshot of a web browser displaying a KYC (Know Your Customer) form on the URL [localhost:3000/kyc](http://localhost:3000/kyc). The page has a dark background. At the top, there are four file upload fields labeled 'Domicile:', 'Caste Certificate:', 'Left Thumb Impression:', and 'Right Thumb Impression:', each with a 'Choose File' button and the message 'No file chosen'. Below these is a large blue 'Submit' button. At the bottom of the page, there is a footer section with three columns: 'Contact Us' (Phone: +91-930-625-5317, Email: [formsworldcare@gmail.com](mailto:formsworldcare@gmail.com), Address: 123 Sonipat, Sonipat - 131001, Haryana - Zip), 'Navigation' (Home, About Us, Services), and 'Follow Us' (links to Facebook, Twitter, Instagram, and LinkedIn). The footer also includes copyright information: '© 2023 Forms World Pvt. Ltd. All Rights Reserved.' and links to 'Welcome Page', 'Why Us', 'Site Map', 'FAQ', and 'Testimonials'.

## 12. Admin page on Forms World

A screenshot of a web browser displaying the admin login page on the URL [localhost:3000/admin](http://localhost:3000/admin). The page has a light blue background. In the center, there is a teal-colored login card with rounded corners. The card features the 'FormsWorld' logo at the top, followed by the text 'Welcome back'. It contains two input fields: 'Username' and 'Password' (represented by a line of dots). Below the password field is a 'Login' button. The rest of the page is a plain light blue color.

### 13. Admin logged in showing Active Forms

Title	Last Date	Total Posts	Age	Qualification	Price	Edit
Aadhar Card	2023-04-30T16:00:00.000Z		0-200	Everyone	150	
Driver Licence	2023-04-30T16:00:00.000Z		0-200	Everyone	2000	
Passport	2023-04-30T16:00:00.000Z		0-200	Everyone	2500	
Pan Card	2023-04-30T16:00:00.000Z	30000	0-200	Everyone	200	
GST Registration	2023-04-30T16:00:00.000Z		0-200	Everyone	3500	
LPG Subsidy	2023-04-30T16:00:00.000Z		0-200	Everyone	100	
Child Birth Certificate	2023-12-31T18:29:00.000Z		0-1	Everyone	50	

### 14. Add Form popup Modal

The screenshot shows the 'Active Forms' page with a modal overlay titled 'Add Form'. The modal contains input fields for 'Title' (with a placeholder 'Form Name'), 'Date' (with a date picker icon), 'Total Posts' (text input), 'Age' (text input), 'Qualification' (text input), and 'Price' (text input). At the bottom of the modal are 'Close' and 'Publish Form' buttons.

Title	Last Date	Total Posts	Age	Qualification	Price	Edit
Aadhar Card	2023-04-30T16:00:00.000Z		0-200	Everyone	150	
Driver Licence	2023-04-30T16:00:00.000Z		0-200	Everyone	2000	
Passport	2023-04-30T16:00:00.000Z		0-200	Everyone	2500	
Pan Card	2023-04-30T16:00:00.000Z		0-200	Everyone	200	
GST Registration	2023-04-30T16:00:00.000Z		0-200	Everyone	3500	
LPG Subsidy	2023-04-30T16:00:00.000Z		0-200	Everyone	100	
Child Birth Certificate	2023-12-31T18:29:00.000Z		0-1	Everyone	50	

## 15. Edit Form popup modal

The screenshot shows a web application interface for managing forms. On the left, there's a sidebar with a search icon and a list of items. The main area is titled 'Active Forms' and contains a table with columns: Title, Last Date, Total Posts, Age, Qualification, Price, and Edit. A modal window titled 'Edit Form' is open over the table, containing input fields for each column. The table data is as follows:

Title	Last Date	Total Posts	Age	Qualification	Price	Edit
Aadhar Card	2023-04-30	200	Everyone	150		
Driver Licence	2023-04-30	200	Everyone	2000		
Passport	2023-04-30	200	Everyone	2500		
Pan Card	2023-04-30	200	Everyone	200		
GST Registration	2023-04-30	200	Everyone	3500		
LPG Subsidy	2023-04-30	200	Everyone	100		
Child Birth Certificate	2023-04-30	100	Everyone	50		

The 'Edit Form' modal has fields for Title (Aadhar Card), Date (04/30/2023 04:00 PM), Total Posts (200), Age (0-200), Qualification (Everyone), and Price (150). It includes 'Close' and 'Update Form' buttons.

## 16. Orders Nav on Admin Screen

The screenshot shows a web application interface for managing orders. On the left, there's a sidebar with a search icon and a list of items. The main area is titled 'Orders' and contains a table with columns: name, email, form\_id, Applying dateTime, and payment. The table data is as follows:

name	email	form_id	Applying dateTime	payment
Shubham	shubham.sd878@gmail.com	Aadhar Card	2023-04-30T10:07:23.282Z	true
Shubham	shubham.sd878@gmail.com	GST Registration	2023-04-30T10:39:09.792Z	true

## 17. User Details modal on Orders nav on Admin page

A screenshot of a web browser showing a modal window titled "Shubham". The modal displays a table of user information with columns "Field" and "Value". The fields listed are Full Name, Email, Phone\_no., Aadhar No., Father's Name, Mother's Name, Family Id, Passport Image, Signature Image, Marksheets (10th and 12th), Domicile Image, Caste Certificate, Left Thumb, and Right Thumb. Each field has a corresponding "Download" link next to its value. To the right of the modal, there is a vertical sidebar with a section titled "payment" containing two entries: "true" and "true".

Field	Value
Full Name	Shubham Dahiya
Email	shubham.sd878@gmail.com
Phone_no.	<b>Phone_no</b>
Aadhar No.	1234567890123456
Father's Name	Dilbag Singh Dahiya
Mother's Name	Susheela Dahiya
Family Id	abc123def
Passport Image	<a href="#">Download</a>
Signature Image	<a href="#">Download</a>
Marksheet_10th	<a href="#">Download</a>
Marksheet_12th	<a href="#">Download</a>
Domicile Image	<a href="#">Download</a>
Caste Certificate	<a href="#">Download</a>
Left Thumb	<a href="#">Download</a>
Right Thumb	<a href="#">Download</a>

## 18. Form Details on Orders nav on Admin page

A screenshot of a web browser showing a table of orders with columns "name", "email", "form\_id", "Applying date/time", and "payment". There are two rows in the table. The first row corresponds to the "Aadhar Card" form, and the second row corresponds to the "GST Registration" form. Below the table, a modal window titled "Aadhar Card" displays a table of form details with columns "Field" and "Values". The fields listed are Title, \_id, Age, Last date, Price, Qualification, and Total Post.

name	email	form_id	Applying date/time	payment
Shubham	shubham.sd878@gmail.com	Aadhar Card	2023-04-30T10:07:23.282Z	true
Shubham	shubham.sd878@gmail.com	GST Registration	2023-04-30T10:39:09.792Z	true

Field	Values
Title	Aadhar Card
_id:	644e3bbb2672e34ca3d71058
Age:	0-200
Last date:	2023-04-30T16:00:00.000Z
Price:	150
Qualification:	Everyone
Total Post:	

## **Chapter 12**

### **Testing**

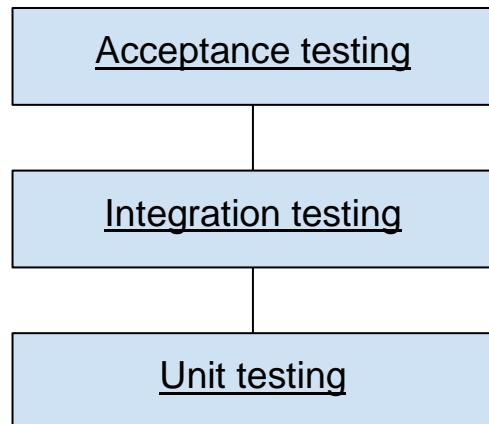
Testing is an integral part of any software development process, and it ensures that the software being developed is of high quality, reliable, and free from any errors or bugs.

In the case of the MERN stack-based website that provides form filling services for various jobs, testing is particularly crucial to ensure that the website works as expected and meets the requirements of the end-users.

The testing process for this project can be broken down into several stages, including unit testing, integration testing, and user acceptance testing (UAT).

#### **Testing Process:**

- 1) Unit testing
- 2) Integration testing
- 3) User Acceptance testing



**Fig. 12.1 Types of Testing**

Unit testing involves testing individual units or components of the website in isolation to ensure that they function correctly. The unit tests can cover various aspects of the website, including the user interface, database operations, and server-side logic.

Integration testing involves testing the website's interaction with other external systems or services, such as APIs, payment gateways, and email services. This can be done using tools such as Postman, which allows developers to test the integration of various APIs with the website.

User acceptance testing (UAT) is the final stage of testing, where end-users are invited to test the website to ensure that it meets their needs and requirements. This can be done by creating test scenarios that simulate real-world scenarios and testing the website's response to these scenarios. The feedback obtained from UAT can be used to improve the website and ensure that it meets the users' expectations.

In addition to the above testing stages, it is also essential to perform security testing to ensure that the website is free from any vulnerabilities or security threats.

Overall, testing process is very important for the success of the MERN stack-based website that provides form filling services for various jobs. By ensuring that the website is thoroughly tested and free from errors or bugs, we can guarantee that the end-users have a positive experience when using the website, which may ultimately end in higher satisfaction with customers and business achievement.

## 1. Signup and login testing

TEST	CASE	EXPECTED	RESULT
Signup	Insufficient details	Error fill the details	PASS
Signup	Wrong email entered	@ is required	PASS
Signup	Send otp to mail.	User receive otp to mail	PASS
Signup	Try to submit without otp	Show alert.	PASS
Signup	Verify mail otp	Verify the otp else show alert.	PASS
Signup	Send otp to number	User receive otp on number	PASS
Signup	Verify number otp	Verify the otp else show alert.	PASS
Signup	Try to submit without number otp	Show alert	PASS
Signup	All details correctly filled	Popup for Successful Registration	PASS
Sign In	Enter incorrect details	Show invalid details	PASS
Sign In	Enter correct details	Login	PASS
Sign In	After login redirect to home page	Redirection to home page	PASS

**Table 12.1 Signup and Login Testing**

## SignUp

### 1. Insufficient details

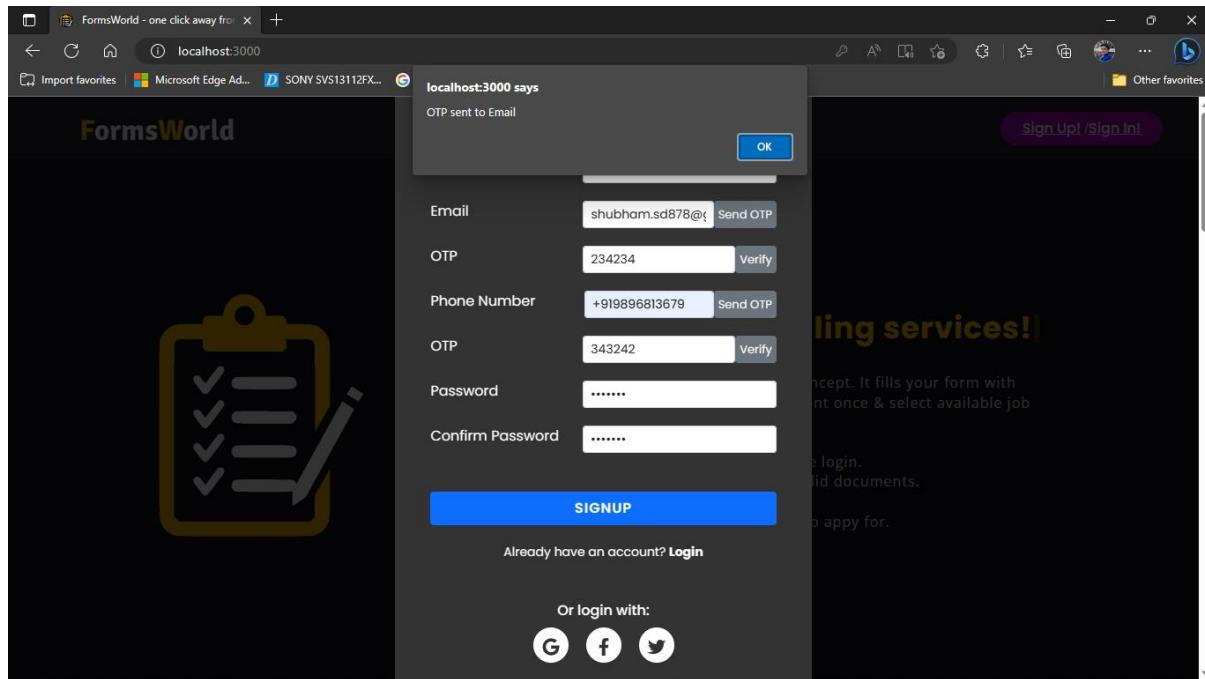
The screenshot shows the 'Welcome back!' sign-up page. The 'Name' field is empty and highlighted with a red border, displaying a yellow warning icon and the message 'Please fill out this field.' Below it, the 'Email' field is also empty and highlighted with a red border, displaying a yellow warning icon and the message 'Please fill out this field.' The 'OTP' field contains '123456' and has a 'Verify' button next to it. The 'Phone Number' field contains '+919896813679' and has a 'Send OTP' button next to it. The 'OTP' field contains '343242' and has a 'Verify' button next to it. The 'Password' and 'Confirm Password' fields both contain '\*\*\*\*\*'. A large blue 'SIGNUP' button is at the bottom. Below the button, there's a link 'Already have an account? [Login](#)' and social login options for Google, Facebook, and Twitter.

If all the details are not filled up then sign up will not be completed. Prompt will be showing one by one to fill up the details.

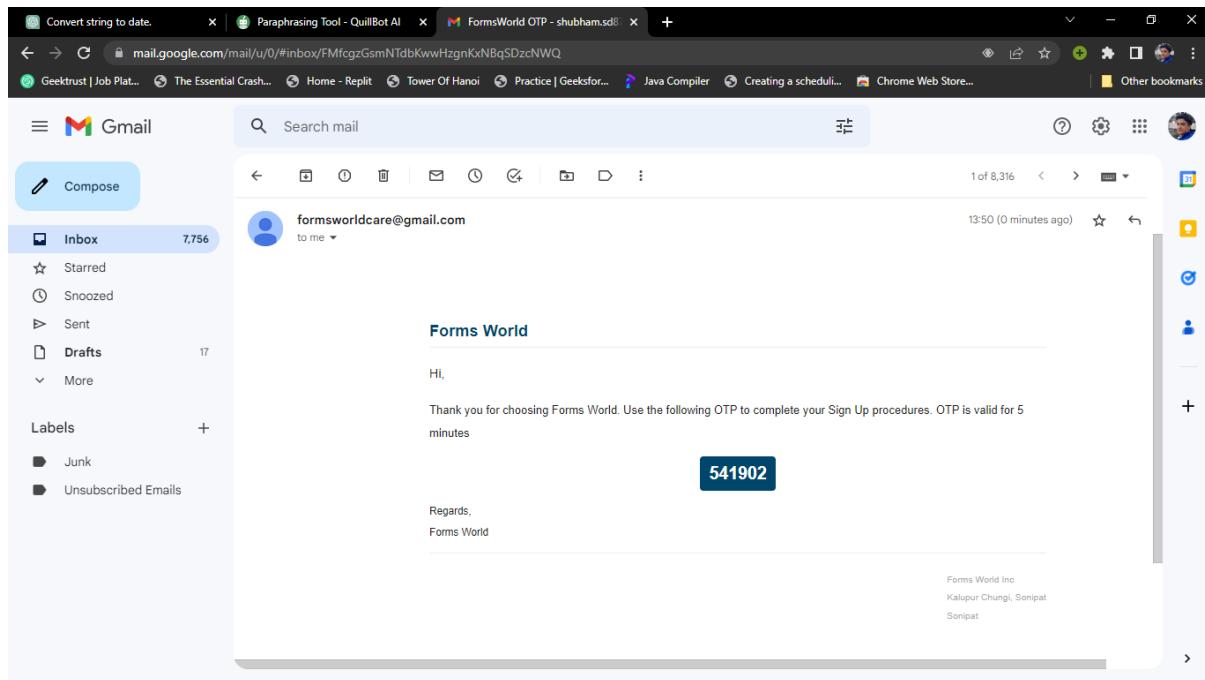
### 2. No Email or improper email format

The screenshot shows the 'Welcome back!' sign-up page. The 'Name' field contains 'Shubham'. The 'Email' field is empty and highlighted with a red border, displaying a yellow warning icon and the message 'Please fill out this field.' The 'OTP' field contains '123456' and has a 'Verify' button next to it. The 'Phone Number' field contains '+919896813679' and has a 'Send OTP' button next to it. The 'OTP' field contains '343242' and has a 'Verify' button next to it. The 'Password' and 'Confirm Password' fields both contain '\*\*\*\*\*'. A large blue 'SIGNUP' button is at the bottom. Below the button, there's a link 'Already have an account? [Login](#)' and social login options for Google, Facebook, and Twitter.

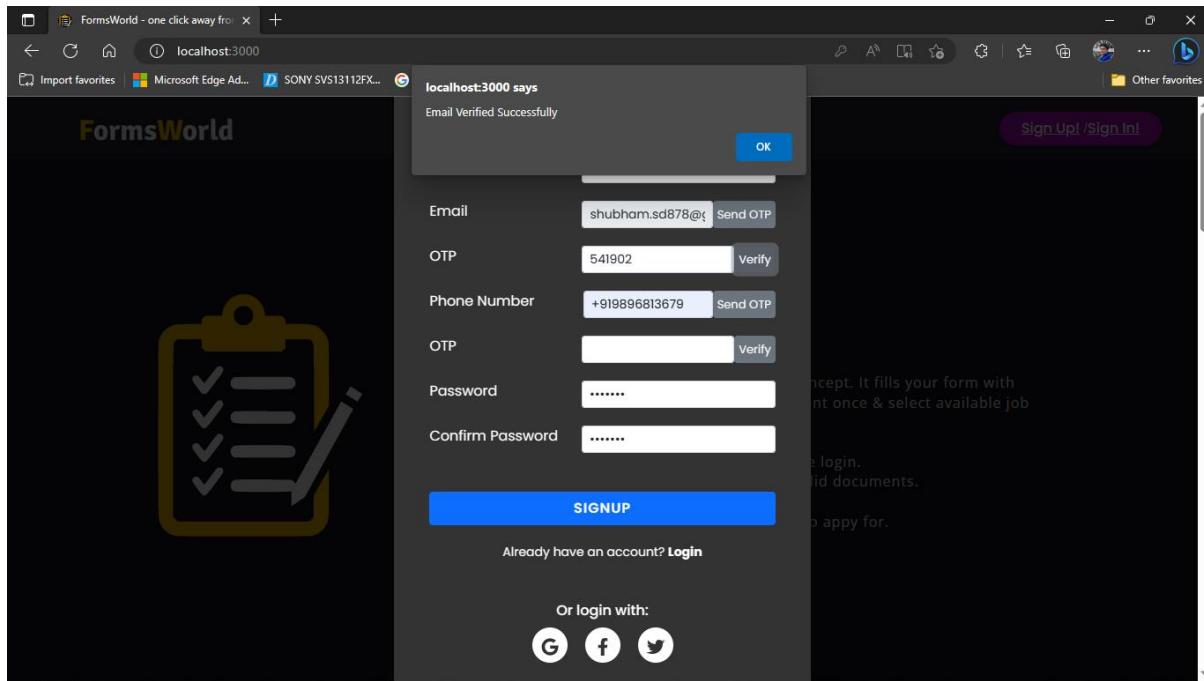
### 3. Send otp to mail



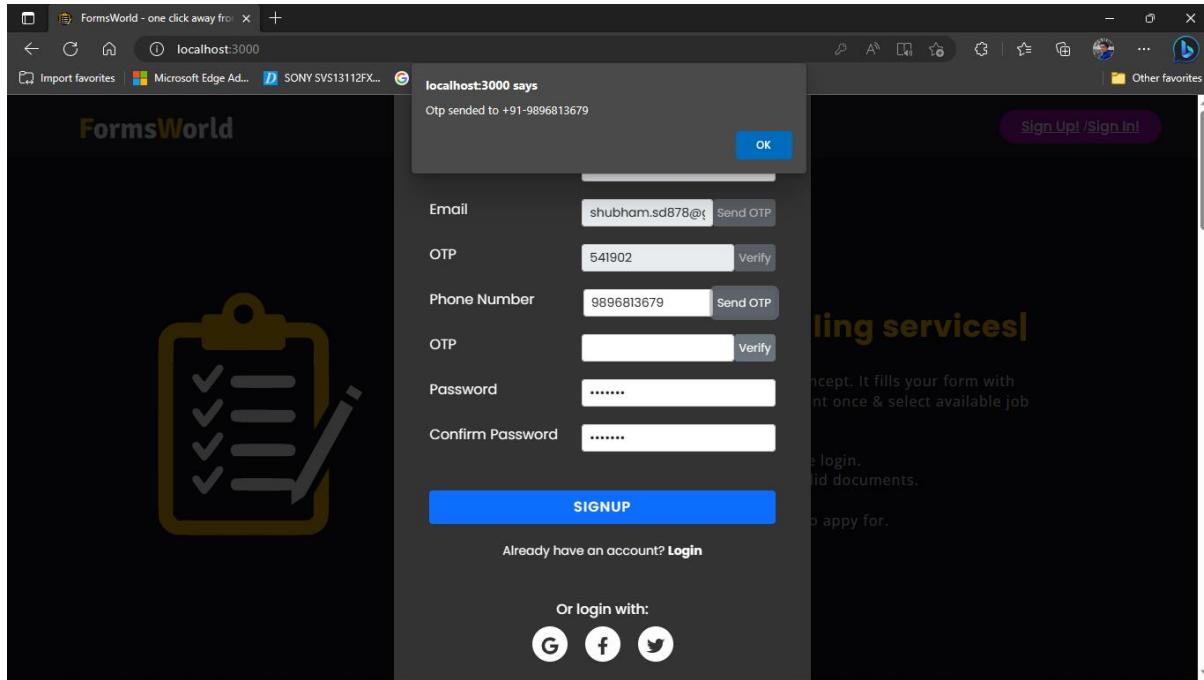
### Otp on mail



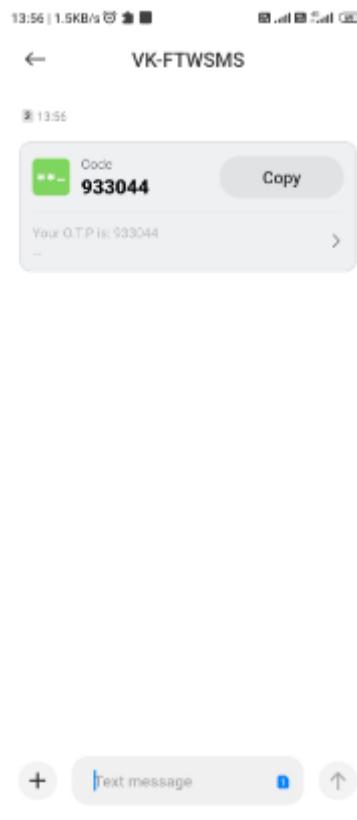
#### 4. Verify Email otp



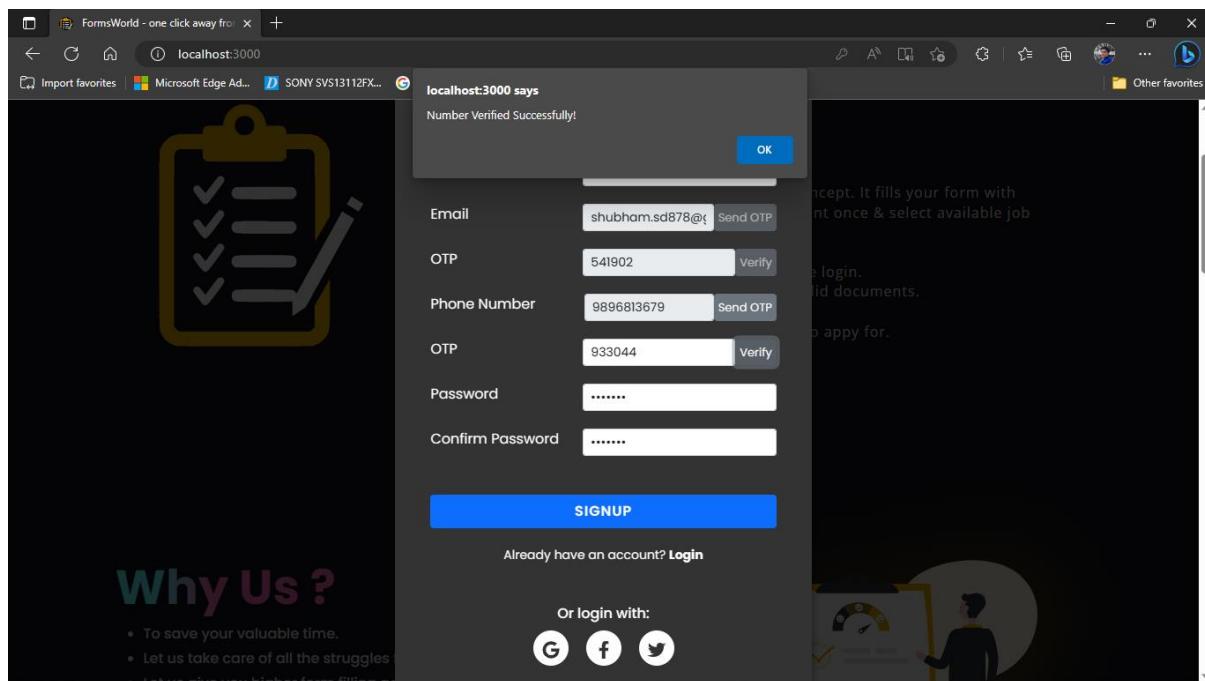
#### 5. Sent otp to number



## Phone otp:



## 6. Verify Number otp



## 7. All Details correctly filled

The screenshot shows the 'Welcome back!' sign-up page. The form fields are filled with the following data:

Name	Shubham
Email	shubham.sd878@gmail.com
OTP	541902
Phone Number	9896813679
OTP	933044
Password	.....
Confirm Password	.....

Below the form, a message says "Signup Successful". At the bottom, there is a blue "SIGNUP" button and a link "Already have an account? Login". To the right, there is a sidebar with the heading "Job filling services!" and a "Why Us?" section.

## Login

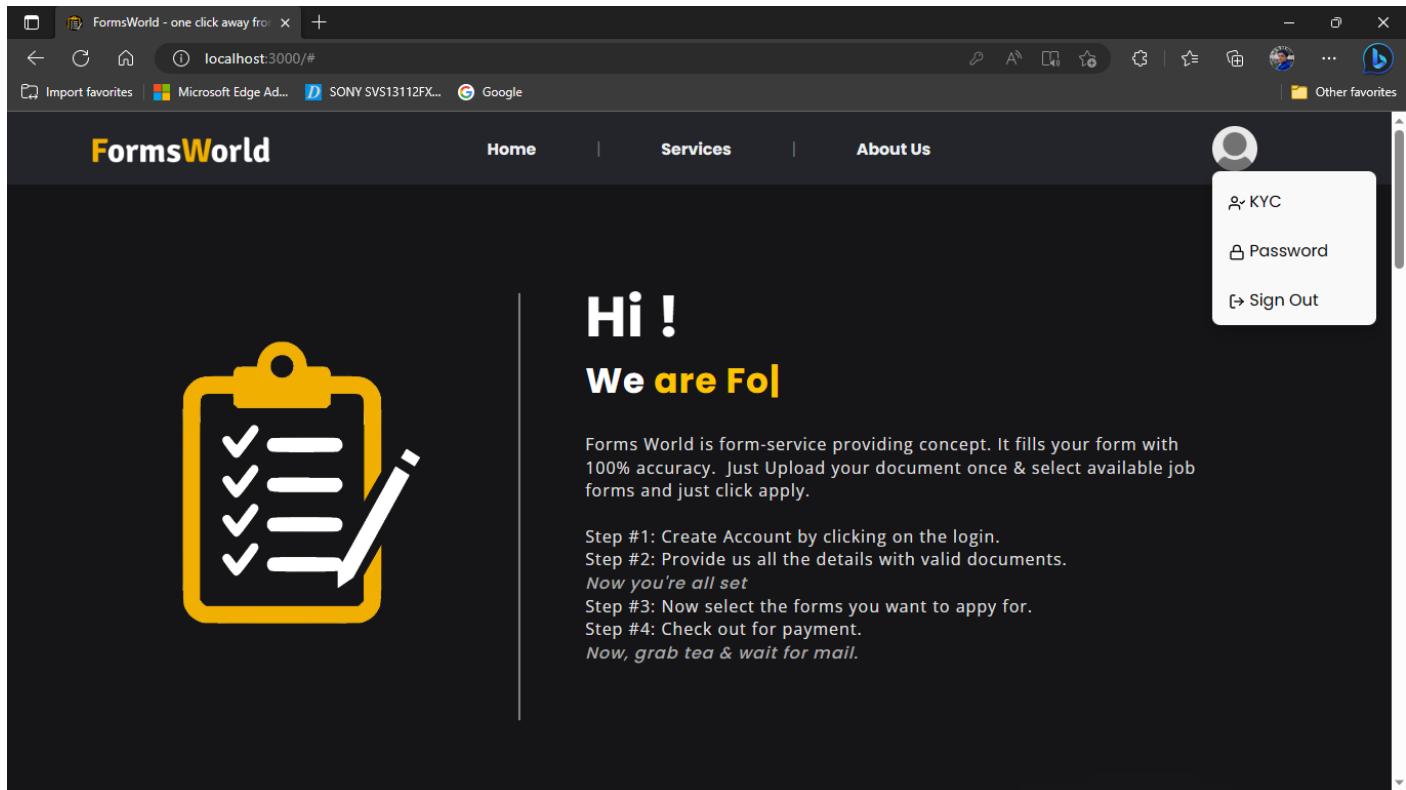
### 8. Enter incorrect details

The screenshot shows the 'Welcome back!' login page. The form fields are filled with the following data:

Email:	shubham.sd878@gmail.com
Password:	.....

An error message "Invalid Password" is displayed below the password field. At the bottom, there is a blue "LOGIN" button and a link "Don't have an account? Signup". To the right, there is a sidebar with the heading "Job filling services!" and a "Why Us?" section.

## 9. After login redirect to home page



If a user fills email and password correct then user will be redirected to home page of swagZinn showing posts of following users.

## 2. User KYC

TEST	CASE	EXPECTED	RESULT
Incomplete KYC	KYC without Full Name	Error to fill the details	PASS
Incomplete KYC	KYC without Full Aadhar No.	Error to fill the details	PASS
Incomplete KYC	KYC without Father's Name	Error to fill the details	PASS
Incomplete KYC	KYC without Mother's Name	Error to fill the details	PASS
Incomplete KYC	KYC without Gender	Error to fill the details	PASS
Incomplete KYC	KYC without DOB	Error to fill the details	PASS
Incomplete KYC	KYC without Family Id	Error to fill the details	PASS
Incomplete KYC	KYC without Passport Image	File upload	PASS
Incomplete KYC	KYC without Signature Image	File upload failed	PASS
Incomplete KYC	KYC without 10 <sup>th</sup> Marksheets Image	File upload failed	PASS
Incomplete KYC	KYC without 12 <sup>th</sup> Marksheets Image	File upload failed	PASS
Incomplete KYC	KYC without Domicile Image	File upload failed	PASS
Incomplete KYC	KYC without Full Caste Certificate Image	File upload failed	PASS
Incomplete KYC	KYC without Left Thumb Impression Image	File upload failed	PASS
Incomplete KYC	KYC without Right Thumb Impression Image	File upload failed	PASS
Complete KYC	KYC with all details	Alert to notify user that KYC is Successful	PASS

**Table 12.2 User kyc Testing**

## 1. No Name

FormsWorld

KYC

Full Name:

Aadhar Card No: 1234567890123456

Father's Name:  Please fill out this field.

Mother's Name:

Gender:  Male  Female

Date of Birth: 12/01/2002

Family ID: abc123def

Passport Image: Choose File 01\_passport.jpg

Signature Image: Choose File 02\_Signature.jpg

10th Marksheets:

12th Marksheets:

## 2. No Aadhar No.

FormsWorld

KYC

Full Name: Shubham Dahiya

Aadhar Card No:  Please fill out this field.

Father's Name: Dilbagh Singh Dahiya

Mother's Name:  Please fill out this field.

Gender:  Male  Female

Date of Birth: 12/01/2002

Family ID: abc123def

Passport Image: Choose File 01\_passport.jpg

Signature Image: Choose File 02\_Signature.jpg

10th Marksheets:

12th Marksheets:

If user tries to upload post without file then operation will be rejected by Forms World.

### 3. Without Father's Name

Full Name: Shubham Dahiya

Aadhar Card No: 1234567890123456

Father's Name:

Mother's Name: Sushila Dahiya

Gender: Male

Date of Birth: 12/01/2002

Family ID: abc123def

Passport Image: Choose File 01\_passport.jpg

Signature Image: Choose File 02\_Signature.jpg

10th Marksheets:

12th Marksheets:

### 4. No Mother's Name

Full Name: Shubham Dahiya

Aadhar Card No: 1234567890123456

Father's Name: Dilbagh Singh Dahiya

Mother's Name:

Gender: Male

Date of Birth: 12/01/2002

Family ID: abc123def

Passport Image: Choose File 01\_passport.jpg

Signature Image: Choose File 02\_Signature.jpg

10th Marksheets:

12th Marksheets:

## 5. No family Id

The screenshot shows a KYC (Know Your Customer) form on a dark-themed web page. The form fields include:

- Full Name: Shubham Dahiya
- Aadhar Card No: 1234567890123456
- Father's Name: Dilbag Singh Dahiya
- Mother's Name: Sushila Dahiya
- Gender: Male (radio button selected)
- Date of Birth: 12/01/2002
- Family ID: (This field is empty, indicated by a vertical bar |.)
- Passport Image: Choose File 01\_passport.jpg (with a tooltip: Please fill out this field.)
- Signature Image: Choose File 02\_Signature.jpg
- 10th Marksheets: (empty field)
- 12th Marksheets: (empty field)

If user tries to upload empty post, then it will be rejected by Forms World.

## 6. Without Passport Image

The screenshot shows a KYC (Know Your Customer) form on a dark-themed web page. The form fields include:

- Full Name: abc123def
- Passport Image: Choose File No file chosen (with a tooltip: Please select a file.)
- Signature Image: Choose File No file chosen
- 10th Marksheets: Choose File No file chosen (with a tooltip: Please select a file.)
- 12th Marksheets: Choose File No file chosen
- Domicile: Choose File No file chosen
- Caste Certificate: Choose File No file chosen
- Left Thumb Impression: Choose File No file chosen
- Right Thumb Impression: Choose File No file chosen

**Note:** You may require to share more documents for filling various forms through WhatsApp.

**Submit**

## 7. Without Signature Image

Passport Image: Choose File 01\_passport.jpg

Signature Image: Choose File No file chosen

10th Marksheets: Choose File No file chosen

12th Marksheets: Choose File No file chosen

Domicile: Choose File No file chosen

Caste Certificate: Choose File No file chosen

Left Thumb Impression: Choose File No file chosen

Right Thumb Impression: Choose File No file chosen

**Note:** You may require to share more documents for filling various forms through whatsapp.

**Submit**

## 8. Without 10<sup>th</sup> Marksheets

Passport Image: Choose File 01\_passport.jpg

Signature Image: Choose File 02\_Signature.jpg

10th Marksheets: Choose File No file chosen

12th Marksheets: Choose File No file chosen

Domicile: Choose File No file chosen

Caste Certificate: Choose File No file chosen

Left Thumb Impression: Choose File No file chosen

Right Thumb Impression: Choose File No file chosen

**Note:** You may require to share more documents for filling various forms through whatsapp.

**Submit**

## 9. Without 12<sup>th</sup> Marksheets

The screenshot shows a web browser window with a dark theme. At the top, the address bar displays "localhost:3000/kyc". The page content is a form for KYC (Know Your Customer) submission. It includes the following fields:

- Passport Image: Choose File 01\_passport.jpg
- Signature Image: Choose File 02\_Signature.jpg
- 10th Marksheets: Choose File 03\_10th\_marksheet.jpg
- 12th Marksheets: Choose File No file chosen (highlighted with a blue border)
- Domicile: Choose File No file chosen
- Caste Certificate: Choose File (with a tooltip: Please select a file.) No file chosen
- Left Thumb Impression: Choose File No file chosen
- Right Thumb Impression: Choose File No file chosen

**Note:** You may require to share more documents for filling various forms through whatsapp.

**Submit**

## 10. Without Domicile

Passport Image: Choose File 01\_passport.jpg

Signature Image: Choose File 02\_Signature.jpg

10th Marksheets: Choose File 03\_10th\_marksheet.jpg

12th Marksheets: Choose File 04\_12th\_marksheet.jpg

Domicile: Choose File No file chosen

Caste Certificate: Choose File No file chosen

Left Thumb Impression: Choose File No file chosen

Right Thumb Impression: Choose File No file chosen

**Note:** You may require to share more documents for filling various forms through whatsapp.

**Submit**

## 11. Without Left Thumb Impression

Passport Image: Choose File 01\_passport.jpg

Signature Image: Choose File 02\_Signature.jpg

10th Marksheets: Choose File 03\_10th\_marksheet.jpg

12th Marksheets: Choose File 04\_12th\_marksheet.jpg

Domicile: Choose File 05\_Domicile.jpg

Caste Certificate: Choose File 06\_Caste\_Certificate.jpg

Left Thumb Impression: Choose File No file chosen

Right Thumb Impression: Choose File No file chosen

**Note:** You may require to share more documents for filling various forms through whatsapp.

**Submit**

## 12. Without Right Thumb Impression

The screenshot shows a web application interface for a KYC (Know Your Customer) form. The page has a dark background. At the top, there is a header bar with browser controls and a title 'FormsWorld - one click away from...'. Below the header, there are several input fields for document uploads:

- Passport Image: Choose File 01\_passport.jpg
- Signature Image: Choose File 02\_Signature.jpg
- 10th Marksheets: Choose File 03\_10th\_marksheet.jpg
- 12th Marksheets: Choose File 04\_12th\_marksheet.jpg
- Domicile: Choose File 05\_Domicile.jpg
- Caste Certificate: Choose File 06\_Caste\_Certificate.jpg
- Left Thumb Impression: Choose File 07\_Left\_Thumb.jpg
- Right Thumb Impression: Choose File (highlighted in blue) No file chosen (with a tooltip: Please select a file.)

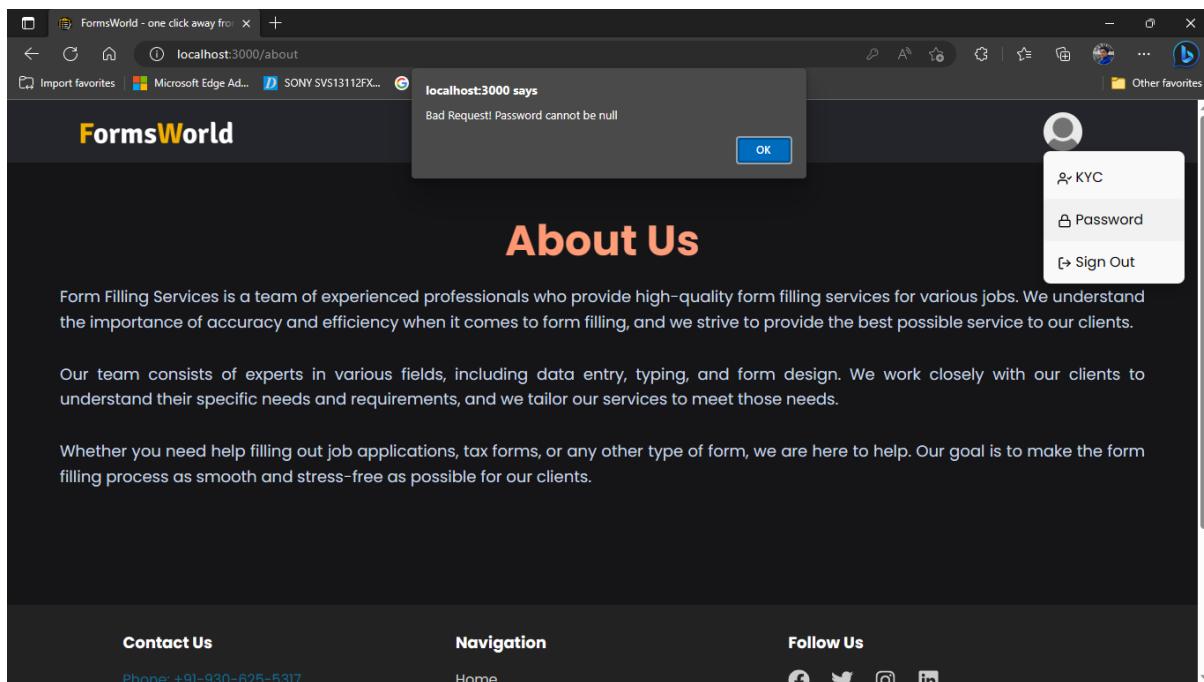
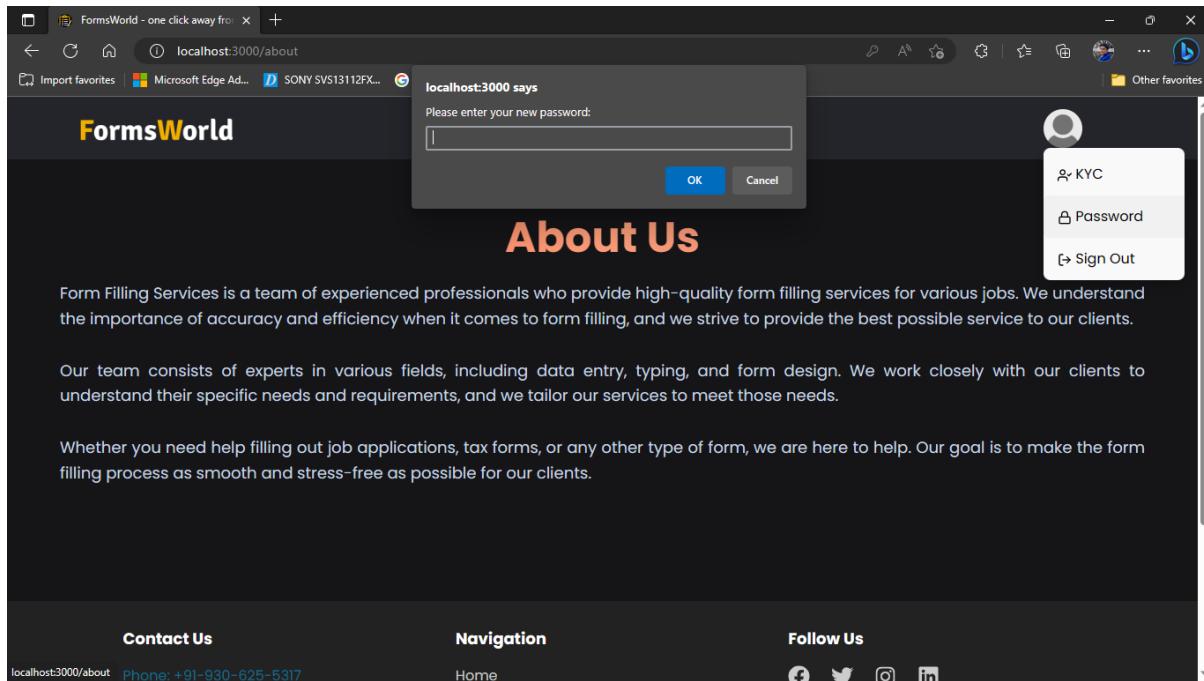
A note at the bottom of the form area says: "Note: You may require to share more documents for filling various forms via WhatsApp." At the very bottom is a large blue "Submit" button.

### 3. Updating user password

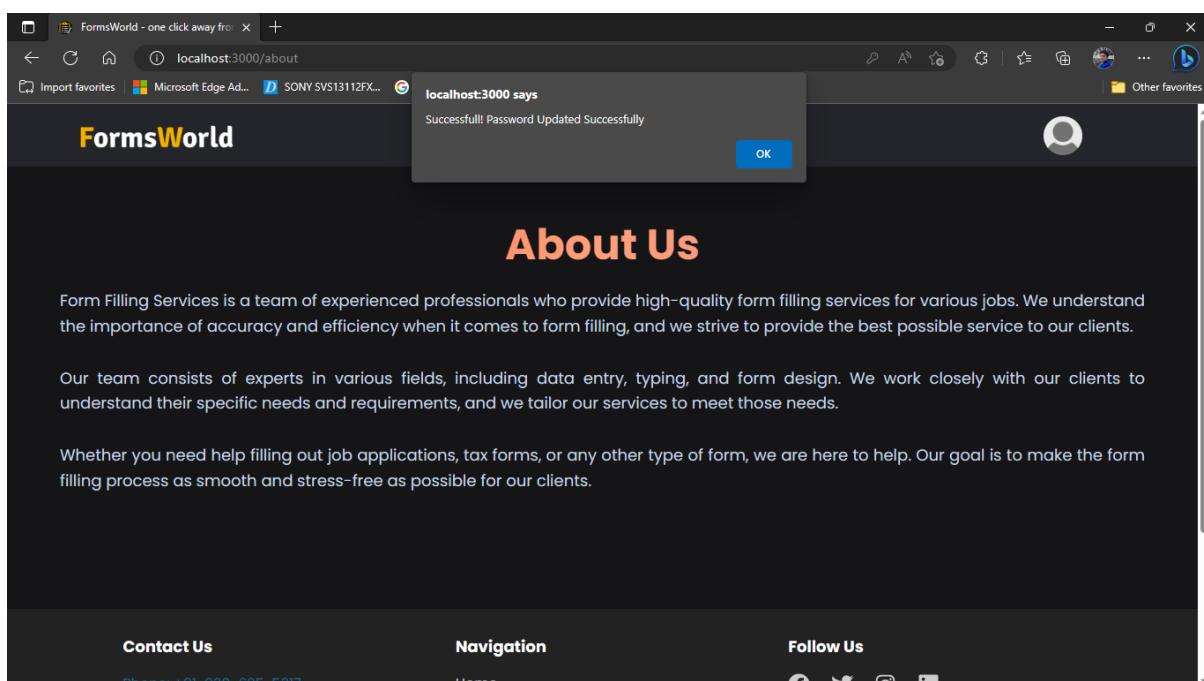
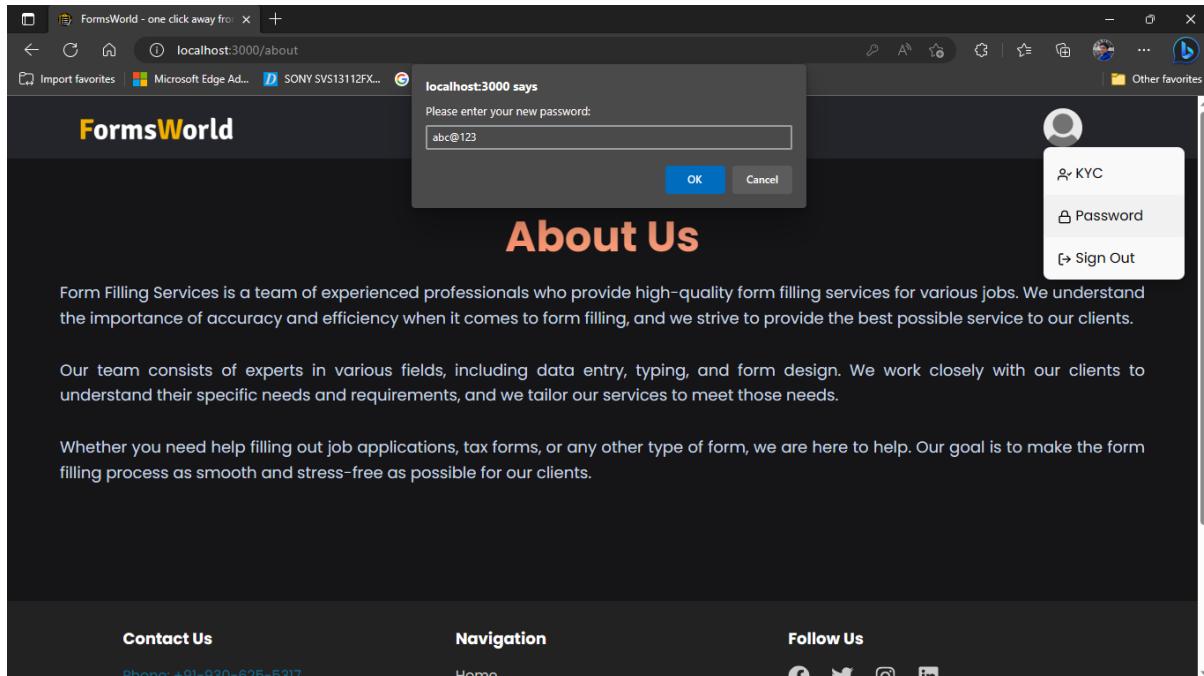
TEST	CASE	EXPECTED	RESULT
Updating Password	Blank Password	Alert to show Bad Request	PASS
Updating Password	New password	Account found	PASS

Table 12.3 Updating Password Testing

## 1. Blank Password



## 2. New Password

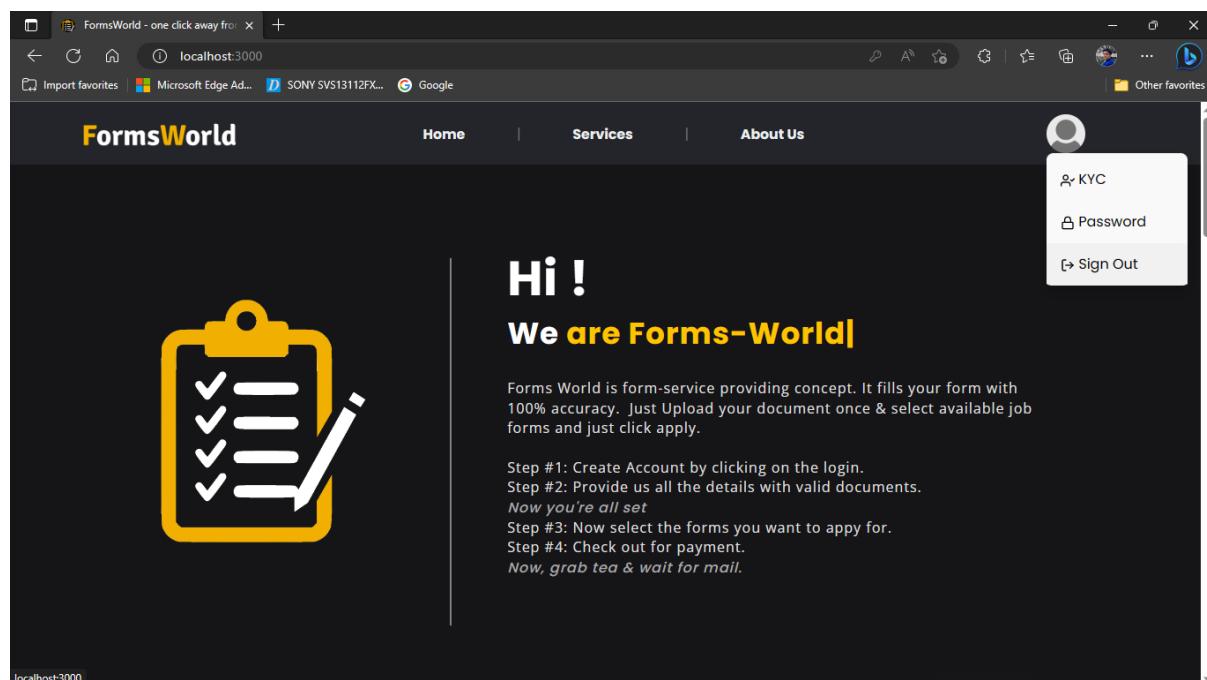


#### 4. Signout

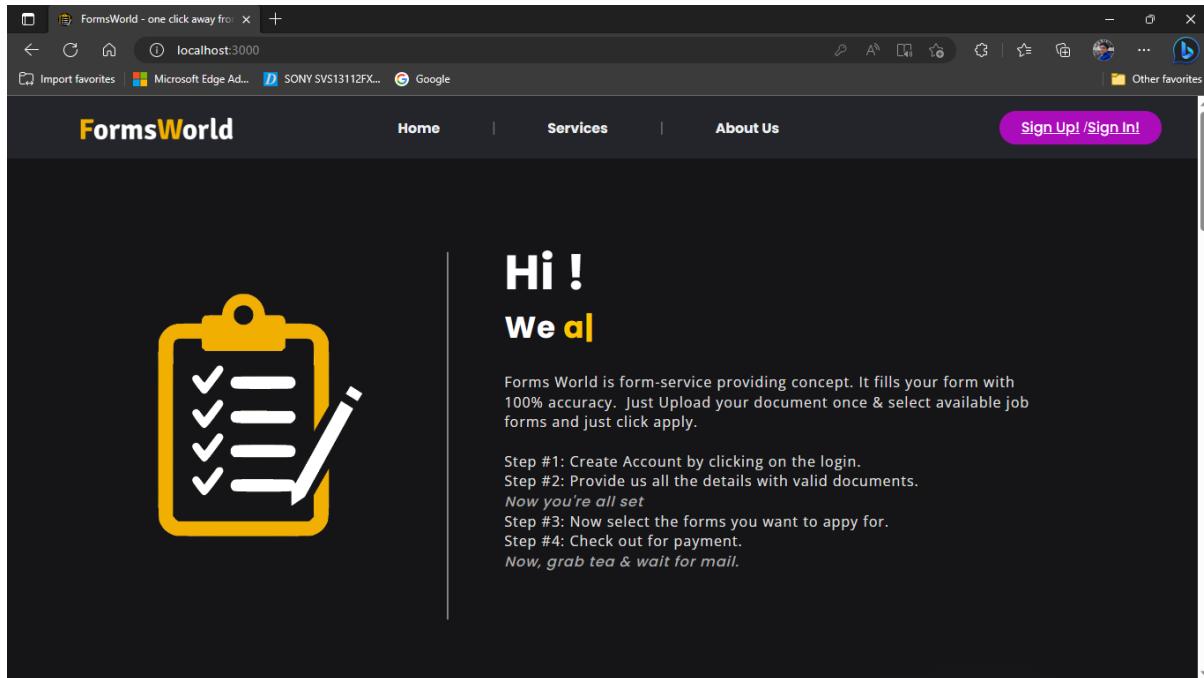
TEST	CASE	EXPECTED	RESULT
Signout	Signout User	Signout the user from signin state	PASS

**Table 12.4 Sign out Testing.**

##### 1. Signout



## Successful Signout

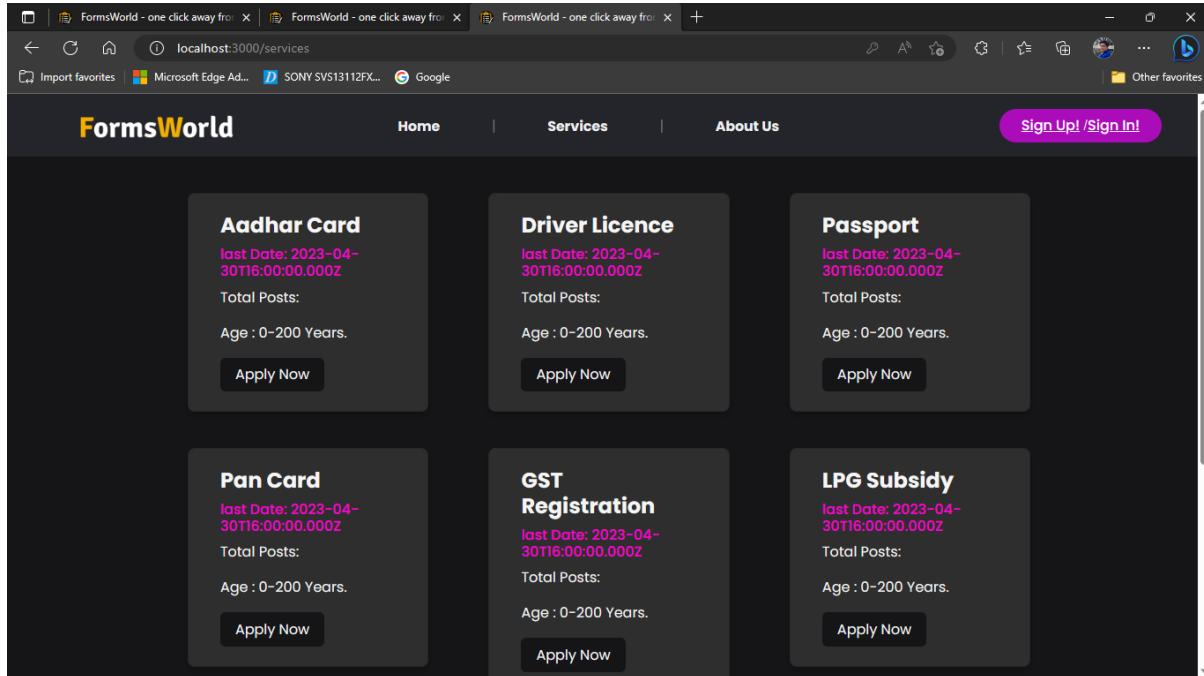


## 5. Services

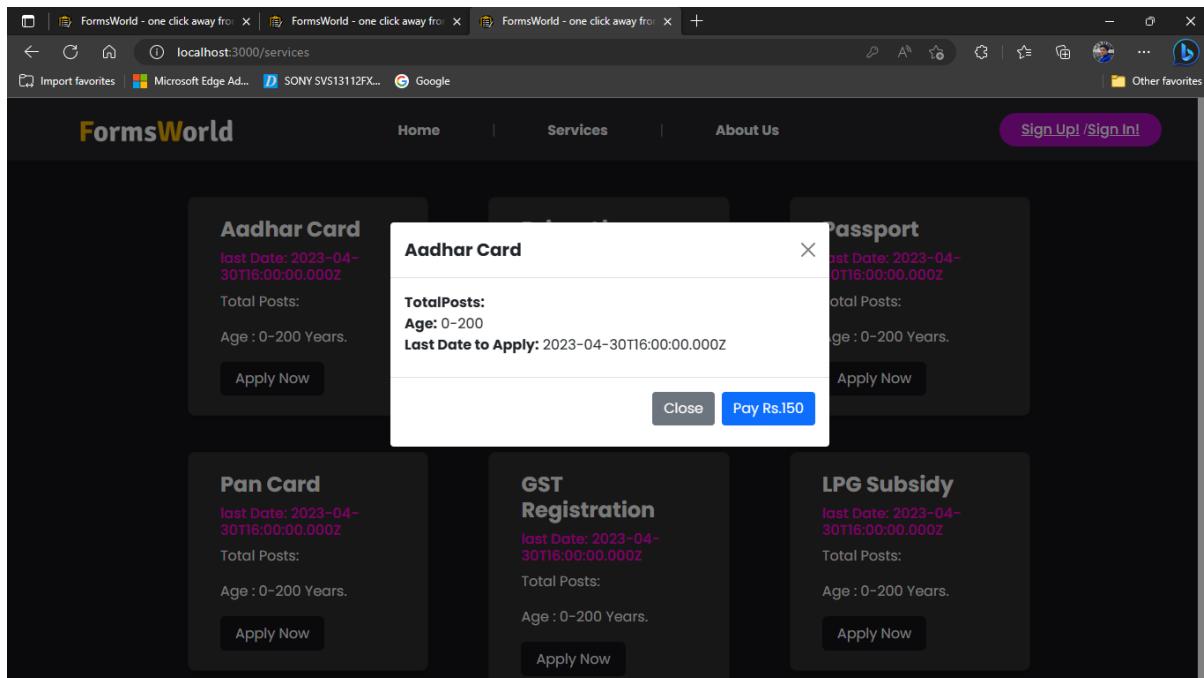
TEST	CASE	EXPECTED	RESULT
Services	Click Apply Now	Popup Modal containing Form Details	PASS
Services	Click Pay Rs. X without Signup	Alert to Signup	PASS
Services	Click Pay Rs. X	Open Payment Gateway for Payment of X	PASS
Services	Payment Success	Show Applied on Form Details Modal	PASS

**Table 12.5 Services Testing**

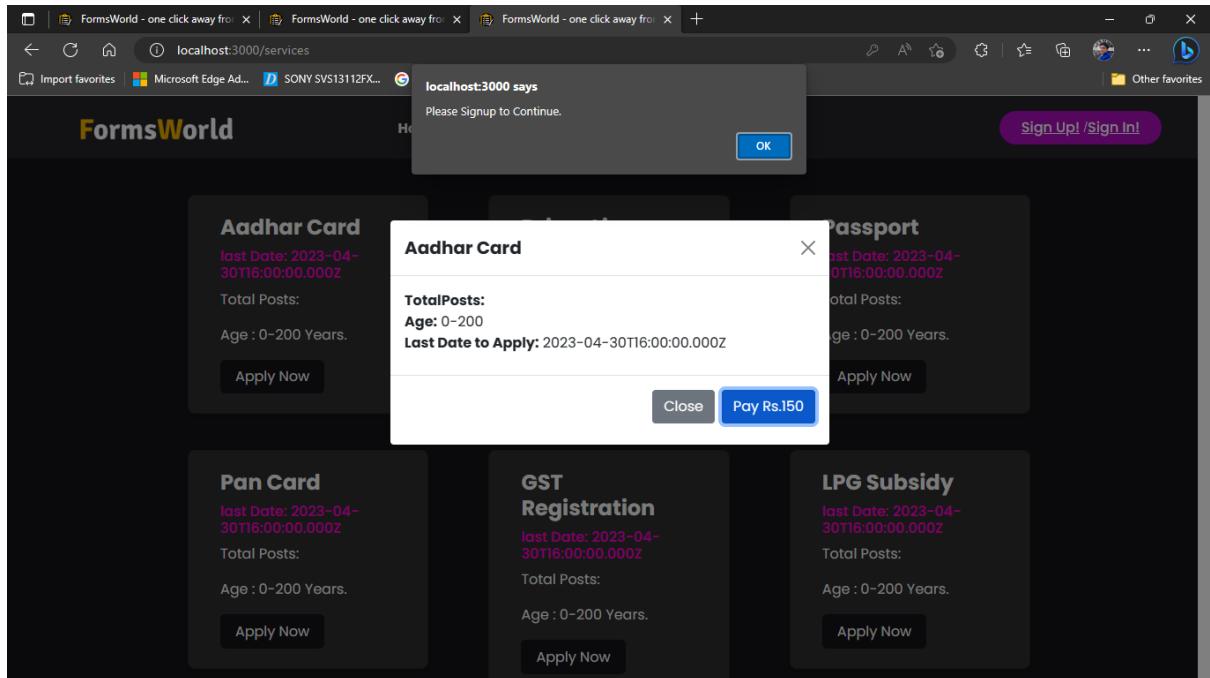
## 1. Click Apply Now



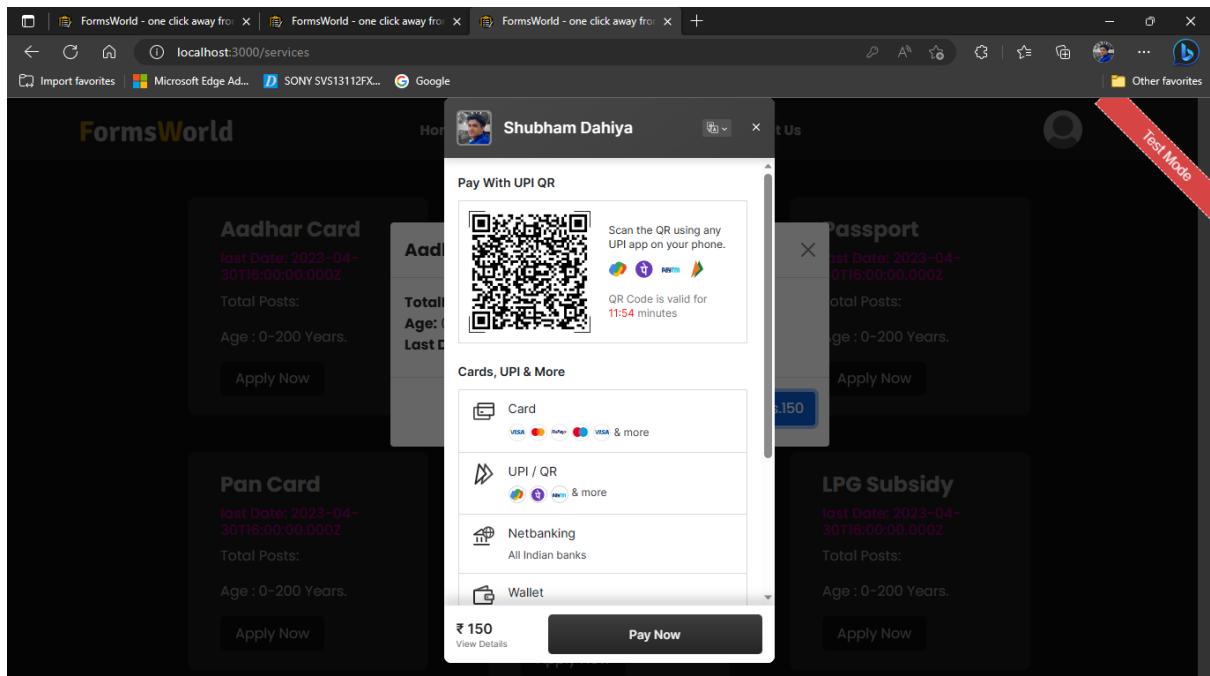
Apply Now clicked:



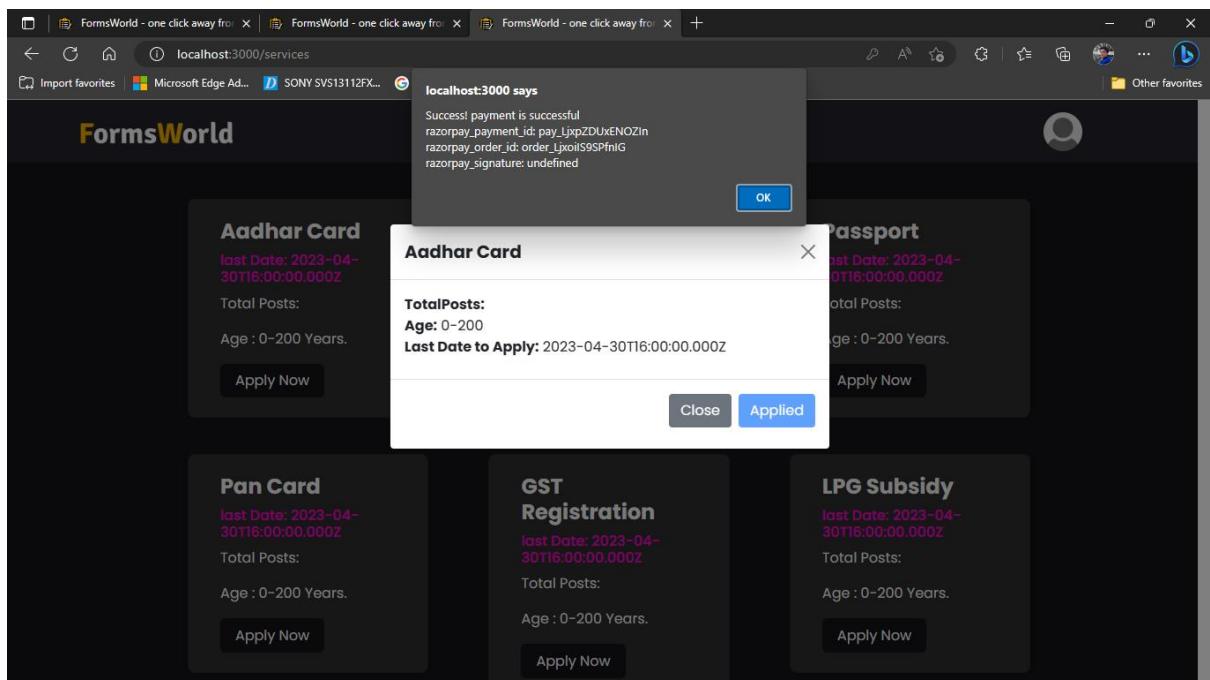
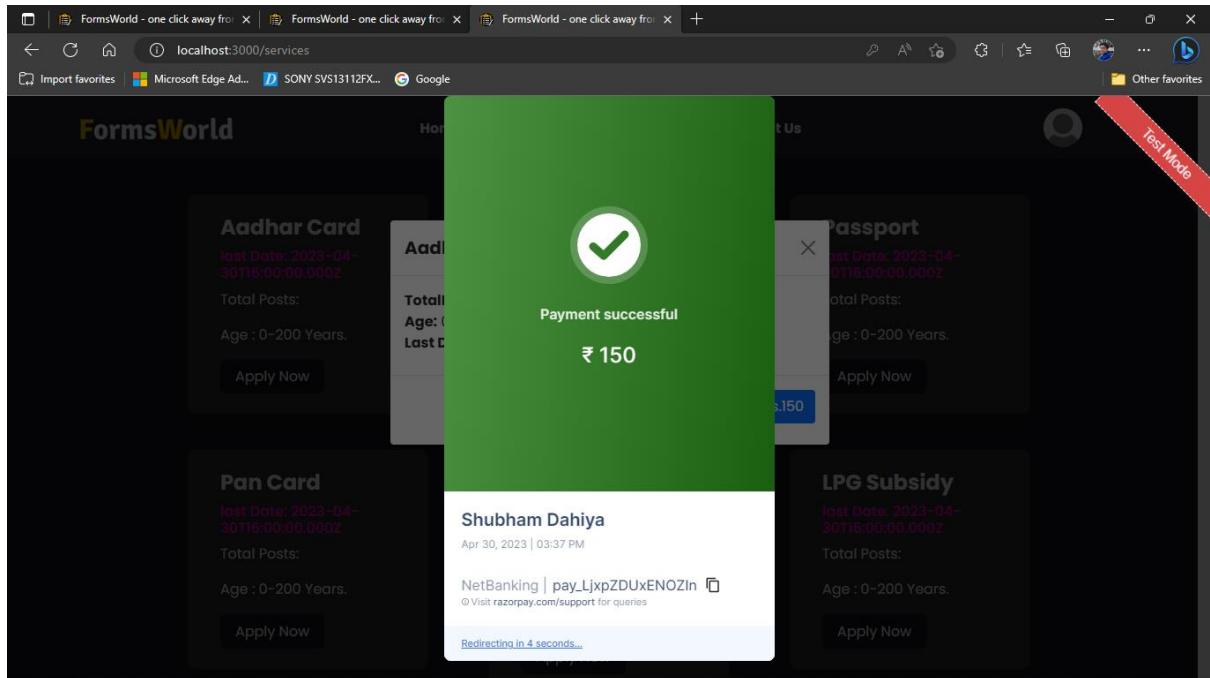
## 2. Click Pay Rs. X without Signup



## 3. Click Pay Rs. X



## 4. Payment Success



## 6. Admin/Active Forms

TEST	CASE	EXPECTED	RESULT
Add Form	clicking button	should display modal	PASS
Add Form	Clicking Publish From	Publish the newly Pusblished Form and shows to the Services page	PASS
Form Details	On Load page	Should fetch all the forms, active on the application.	PASS
Form Details	clicking edit icon	Opens the poup modal for modifying the previous details of form.	PASS
Update Form	Clicking update Form	Show alert of update, and update to the database and services tab across the application.	PASS

**Table 12.6 Admin/Active Forms Testing**

## 1. Add Form

The screenshot shows a web application titled 'Active Forms' on the Microsoft Edge browser. The page displays a table with columns: Title, Last Date, Total Posts, Age, Qualification, Price, and Edit. There are six rows of data:

Title	Last Date	Total Posts	Age	Qualification	Price	Edit
Aadhar Card	2023-04-30T16:00:00.000Z		0-200	Everyone	150	
Driver Licence	2023-04-30T16:00:00.000Z		0-200	Everyone	2000	
Passport	2023-04-30T16:00:00.000Z		0-200	Everyone	2500	
Pan Card	2023-04-30T16:00:00.000Z		0-200	Everyone	200	
GST Registration	2023-04-30T16:00:00.000Z		0-200	Everyone	3500	
LPG Subsidy	2023-04-30T16:00:00.000Z		0-200	Everyone	100	

Add Form Clicked:

The screenshot shows the same 'Active Forms' page with an 'Add Form' modal dialog open in the center. The modal has a title 'Add Form' and contains fields for Title, Date, Total Posts, Age, Qualification, and Price. The 'Title' field is populated with 'Aadhar Card'. The 'Date' field is a date input set to '2023-04-30'. The 'Total Posts' field is empty. The 'Age' field is empty. The 'Qualification' field is empty. The 'Price' field is empty. At the bottom of the modal are two buttons: 'Close' and 'Publish Form'.

Adding Details

The screenshot shows a web application titled "Active Forms" on a Microsoft Edge browser. The main table lists several forms: Aadhar Card, Driver Licence, Passport, Pan Card, GST Registration, and LPG Subsidy. A modal window titled "Add Form" is open in the center. It contains fields for Title (Child Birth Certificate), Date (12/31/2023 11:59 PM), Total Posts (--), Age (0-1), Qualification (Everyone), and Price (50). At the bottom of the modal are "Close" and "Publish Form" buttons.

Title	Last Date	Total Posts	Age	Qualification	Price	Edit
Aadhar Card	2023-04-01	0-000	Everyone	150		
Driver Licence	2023-04-01	0-000	Everyone	2000		
Passport	2023-04-01	0-000	Everyone	2500		
Pan Card	2023-04-01	0-000	Everyone	200		
GST Registration	2023-04-01	0-000	Everyone	3500		
LPG Subsidy	2023-04-01	0-000	Everyone	100		

## 2. Click Publishing Form

The screenshot shows the same "Active Forms" page as before, but now with a success message: "Success! Form added Successfully" displayed in a modal window above the table. The modal window for adding a new form is still visible below it, containing the same fields and values as in the previous screenshot.

Title	Last Date	Total Posts	Age	Qualification	Price	Edit
Aadhar Card	2023-04-01	0-000	Everyone	150		
Driver Licence	2023-04-01	0-000	Everyone	2000		
Passport	2023-04-01	0-000	Everyone	2500		
Pan Card	2023-04-01	0-000	Everyone	200		
GST Registration	2023-04-01	0-000	Everyone	3500		
LPG Subsidy	2023-04-01	0-000	Everyone	100		

## 3. Loading all Forms on Page load

	Title	Last Date	Total Posts	Age	Qualification	Price	Edit
	Aadhar Card	2023-04-30T16:00:00.000Z		0-200	Everyone	150	
	Driver Licence	2023-04-30T16:00:00.000Z		0-200	Everyone	2000	
	Passport	2023-04-30T16:00:00.000Z		0-200	Everyone	2500	
	Pan Card	2023-04-30T16:00:00.000Z		0-200	Everyone	200	
	GST Registration	2023-04-30T16:00:00.000Z		0-200	Everyone	3500	
	LPG Subsidy	2023-04-30T16:00:00.000Z		0-200	Everyone	100	

Total Post is empty, because these forms were available for everyone.

#### 4. Click Editing Form

	Title	Last Date	Total Posts	Age	Qualification	Price	Edit
	Aadhar Card	2023-04-30T16:00:00.000Z		200	Everyone	150	
	Driver Licence	2023-04-30T16:00:00.000Z		200	Everyone	2000	
	Passport	2023-04-30T16:00:00.000Z		200	Everyone	2500	
	Pan Card	2023-04-30T16:00:00.000Z		200	Everyone	200	
	GST Registration	2023-04-30T16:00:00.000Z		200	Everyone	3500	
	LPG Subsidy	2023-04-30T16:00:00.000Z		200	Everyone	100	
	Child Birth Certificate	2023-04-30T16:00:00.000Z		200	Everyone	50	

**Edit Form**

Title:

Date:

Total Posts:

Age:

Qualification:

price:

**Close** **Update Form**

#### 5. Updating form

The screenshot shows a web-based application for managing forms. On the left, there's a sidebar with icons for search, add, and delete. The main area is titled 'Active Forms' and contains a table with columns: Title, Last Date, Total Posts, Age, Qualification, Price, and Edit. The table lists several forms: Aadhar Card, Driver Licence, Passport, Pan Card, GST Registration, LPG Subsidy, and Child Birth Certificate. An 'Edit Form' modal is open over the table, containing fields for Title (Pan Card), Date (04/30/2023 04:00 PM), Total Posts (30000), Age (0-200), Qualification (Everyone), and price (200). At the bottom of the modal are 'Close' and 'Update Form' buttons.

### Clicking updating form:

This screenshot shows the same application after the update. A modal window from 'localhost:3000' displays the message 'localhost:3000 says Form Updated Successfully. Refresh to see updates.' with an 'OK' button. The main table of active forms remains the same as in the previous screenshot, with the 'Edit Form' modal still visible.

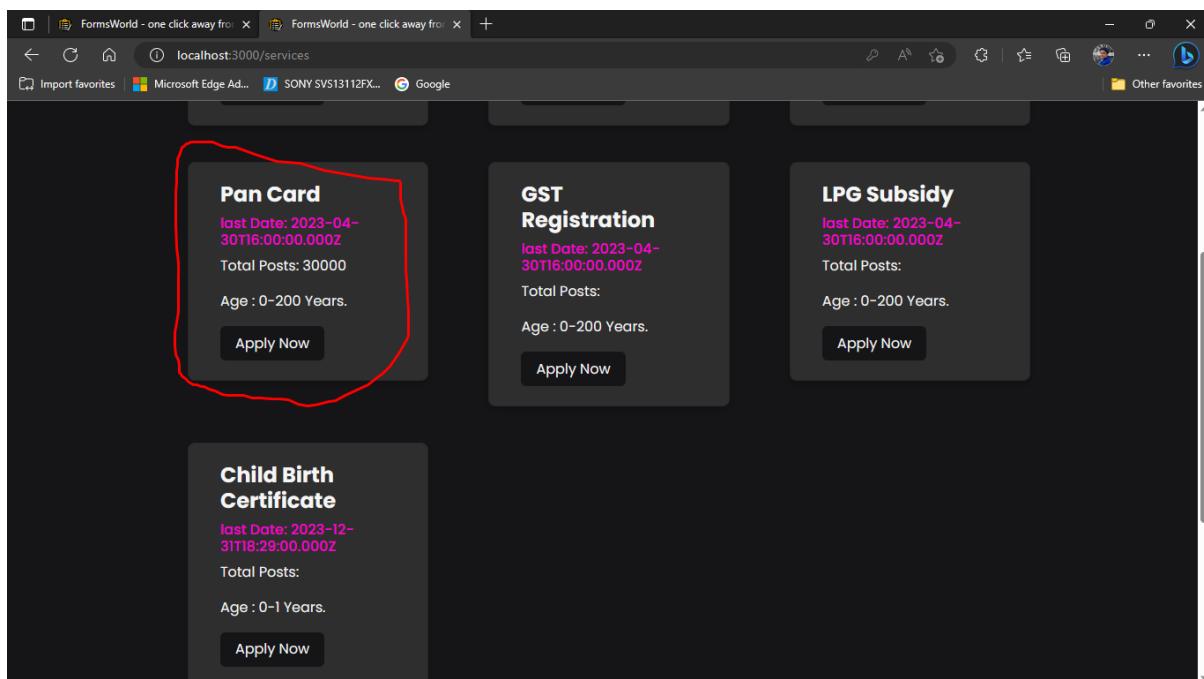
## 6. Viewing Updates

On admin tab:

A screenshot of a Microsoft Edge browser window showing a table titled "Active Forms". The table has columns for Title, Last Date, Total Posts, Age, Qualification, Price, and Edit. The data includes:

Title	Last Date	Total Posts	Age	Qualification	Price	Edit
Aadhar Card	2023-04-30T16:00:00.000Z		0-200	Everyone	150	
Driver Licence	2023-04-30T16:00:00.000Z		0-200	Everyone	2000	
Passport	2023-04-30T16:00:00.000Z		0-200	Everyone	2500	
Pan Card	2023-04-30T16:00:00.000Z	30000	0-200	Everyone	200	
GST Registration	2023-04-30T16:00:00.000Z		0-200	Everyone	3500	
LPG Subsidy	2023-04-30T16:00:00.000Z		0-200	Everyone	100	
Child Birth Certificate	2023-12-31T18:29:00.000Z		0-1	Everyone	50	

On user Services tab:

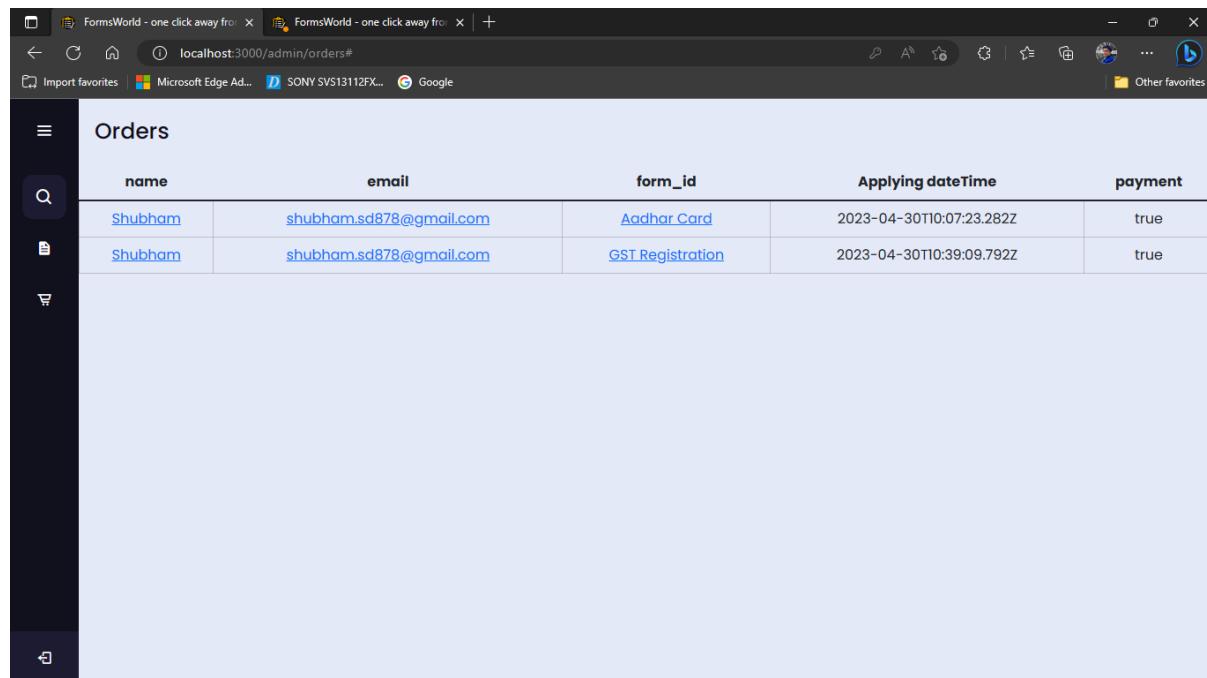


## 7. Admin/Orders

TEST	CASE	EXPECTED	RESULT
Orders	On load	Should display all the orders with payment status.	PASS
Orders	Clicking on name or email	Should popup the modal of user details to the admin.	PASS
Orders	Try to download Documents	Download document	PASS
Orders	Clicking Form Details	Should popup the modal for showing the form details to the admin.	PASS

**Table 12.7 Admin/Orders Testing**

### 1. Fetching all Orders on load



The screenshot shows a Microsoft Edge browser window with the URL `localhost:3000/admin/orders#`. The page title is "Orders". The table has columns: name, email, form\_id, Applying date/time, and payment. There are two rows of data:

name	email	form_id	Applying date/time	payment
Shubham	<a href="mailto:shubham.sd878@gmail.com">shubham.sd878@gmail.com</a>	Aadhar Card	2023-04-30T0:07:23.282Z	true
Shubham	<a href="mailto:shubham.sd878@gmail.com">shubham.sd878@gmail.com</a>	GST Registration	2023-04-30T0:39:09.792Z	true

## 2. Clicking on name or email

FormsWorld - one click away from... | FormsWorld - one click away from... | +  
localhost:3000/admin/orders# | Microsoft Edge Add... | SONY SVS13112FX... | Google  
Import favorites | Other favorites

Shubham

Field	Value
Full Name	Shubham Dahiya
Email	shubham.sd878@gmail.com
Phone_no.	<b>Phone_no</b>
Aadhar No.	1234567890123456
Father's Name	Dilbag Singh Dahiya
Mother's Name	Susheela Dahiya
Family Id	abc123def
Passport Image	<a href="#">Download</a>
Signature Image	<a href="#">Download</a>
Marksheet_10th	<a href="#">Download</a>
Marksheet 12th	<a href="#">Download</a>
Domicile Image	<a href="#">Download</a>
Caste Certificate	<a href="#">Download</a>
Left Thumb	<a href="#">Download</a>
Right Thumb	<a href="#">Download</a>

payment

true
true

## 3. Downloading Documents

FormsWorld - one click away from... | FormsWorld - one click away from... | +  
localhost:3000/admin/orders# | Microsoft Edge Add... | SONY SVS13112FX... | Google  
Import favorites | Other favorites

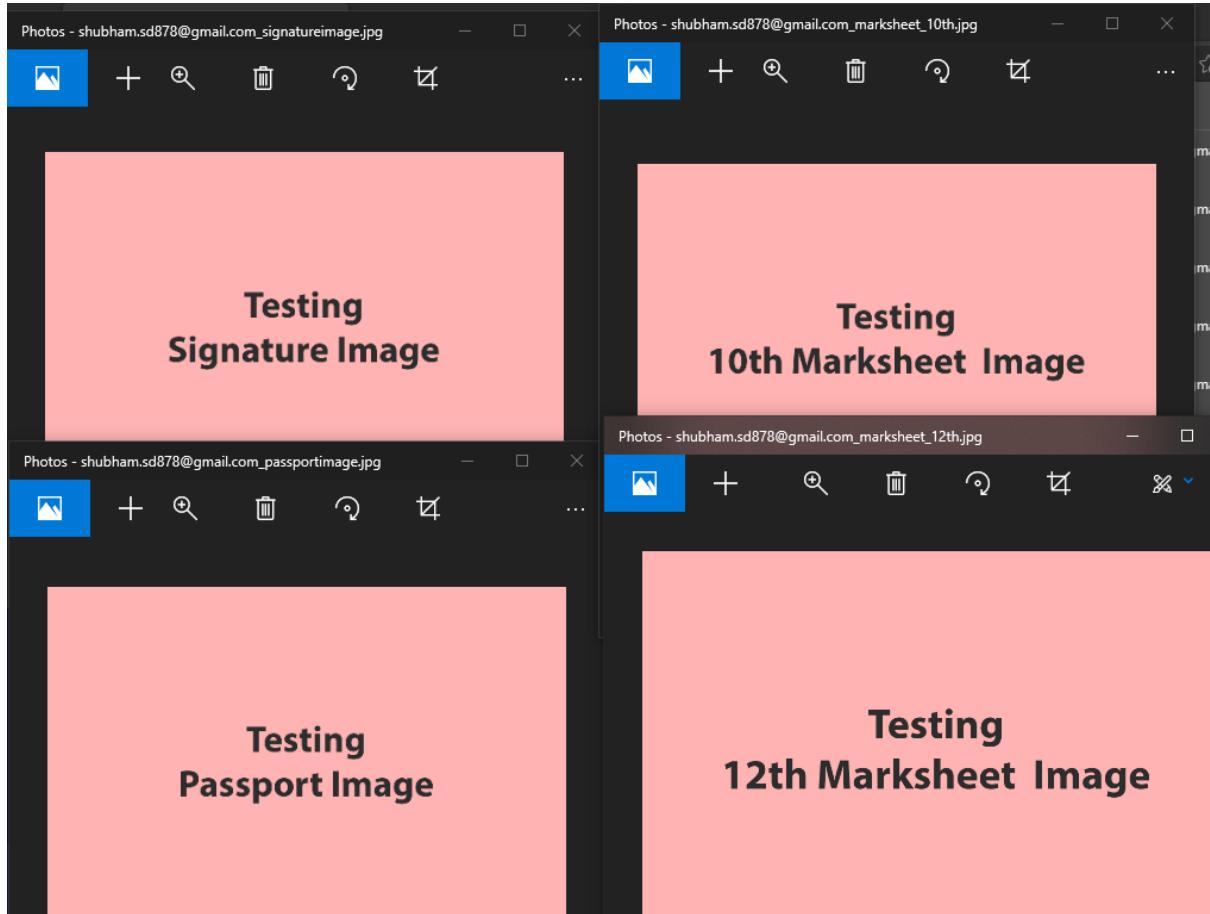
Shubham

Field	Value
Full Name	Shubham Dahiya
Email	shubham.sd878@gmail.com
Phone_no.	<b>Phone_no</b>
Aadhar No.	1234567890123456
Father's Name	Dilbag Singh Dahiya
Mother's Name	Susheela Dahiya
Family Id	abc123def
Passport Image	<a href="#">Download</a>
Signature Image	<a href="#">Download</a>
Marksheet_10th	<a href="#">Download</a>
Marksheet 12th	<a href="#">Download</a>
Domicile Image	<a href="#">Download</a>
Caste Certificate	<a href="#">Download</a>
Left Thumb	<a href="#">Download</a>
Right Thumb	<a href="#">Download</a>

Downloads

- shubham.sd878@gmail.com\_right\_thumb.jpg
- shubham.sd878@gmail.com\_left\_thumb.jpg
- shubham.sd878@gmail.com\_caste\_certificate.jpg
- shubham.sd878@gmail.com\_domicile\_image.jpg
- shubham.sd878@gmail.com\_marksheet\_12th.jpg
- shubham.sd878@gmail.com\_marksheet\_10th.jpg
- shubham.sd878@gmail.com\_signatureimage.jpg
- shubham.sd878@gmail.com\_passportimage.jpg
- redketchup.zip
- download (1).htm
- ConfirmationPage-233510325390.pdf
- download.htm
- settings icon-removebg-preview.png

## Trying to open some downloads



These were the files I uploaded while for KYC.

#### 4. Clicking Form Details Modal

The screenshot shows a Microsoft Edge browser window with two tabs open, both titled "FormsWorld - one click away from". The active tab displays an "Orders" table with the following data:

name	email	form_id	Applying date <b>Time</b>	payment
Shubham	shubham.sd878@gmail.com	Aadhar Card	2023-04-30T10:07:23.282Z	true
Shubham	shubham.sd878@gmail.com	GST Registration	2023-04-30T10:39:09.792Z	true

A modal window titled "Aadhar Card" is overlaid on the table, containing a table with the following data:

Field	Values
Title	Aadhar Card
_id:	644e3bbb2672e34ca3d71058
Age:	0-200
Last date:	2023-04-30T16:00:00.000Z
Price:	150
Qualification:	Everyone
Total Post:	

# **Chapter 13**

## **System Implementation**

### **13.1 Introduction**

In today's fast-paced world, time is a valuable commodity, and people are always looking for ways to save time and increase efficiency. One such way is by outsourcing mundane and repetitive tasks to specialized service providers. The goal of this project is to provide a solution for individuals and businesses who require assistance with form filling by creating a website that offers form filling services for various jobs.

The website was developed using the MERN stack, which stands for MongoDB, Express, React, and Node.js. MongoDB was used as the database to store user information, while Express and Node.js were used to create a back-end API that handles requests and responses. React was used for the front-end, providing a user-friendly interface for users to interact with the website.

The website was deployed on Firebase, a platform that offers a range of tools and services for hosting and managing web applications. The project aims to provide a hassle-free, secure, and efficient solution to the form filling needs of its users.

In this report, we will discuss the implementation of the website, including its system architecture, front-end and back-end implementation, database implementation, deployment and hosting, performance and scalability, and security and privacy measures.

## **13.2 System Architecture:**

The system architecture is a fundamental aspect of the website that determines its functionality and performance. The website was designed using the MERN stack, which consists of MongoDB, Express, React, and Node.js. Each component of the stack plays a critical role in the system architecture, as described below.

### **1. Front-End:**

The front-end of the website was built using React, a popular JavaScript library used for building user interfaces. The user interface includes various components, such as forms, buttons, and input fields, that allow users to interact with the website. The front-end also handles the display of data fetched from the back-end.

### **2. Back-End:**

The back-end of the website was built using Express and Node.js. Express is a minimalist web framework that provides a set of tools for creating APIs, while Node.js is a JavaScript runtime environment that enables server-side programming. The back-end handles requests and responses from the front-end and performs various tasks, such as data processing, validation, and authentication.

### **3. Database:**

The database used in the system architecture is MongoDB, a NoSQL document database that provides flexibility and scalability. MongoDB stores user information, such as login credentials, personal details, and form data. The database is accessed via the back-end API and provides fast and efficient data retrieval and storage.

#### **4. Deployment and Hosting:**

The website is hosted on Firebase, a platform that provides a range of tools and services for hosting and managing web applications. Firebase provides a secure and scalable environment for the website, including features such as automatic scaling, real-time database, and hosting.

#### **5. Third-Party Services:**

The system architecture includes various third-party services, such as payment gateways, email services, and analytics tools. These services are integrated into the website to enhance its functionality and provide a better user experience.

### **13.3 Front-End Implementation:**

The front-end of the website was built using React, a popular JavaScript library used for building user interfaces. React provides a flexible and modular structure for designing user interfaces, which makes it easy to create complex and dynamic web applications. The front-end of the website includes the following components:

#### **1. User Interface Design:**

The user interface design of the website was based on a modern and minimalist approach, with a focus on ease of use and simplicity. The website features a clean and intuitive interface, with prominent call-to-action buttons, clear instructions, and well-designed forms.

#### **2. Forms:**

Forms are a critical component of the website, as they allow users to input their information and receive customized form filling services. The website includes

various types of forms, such as personal information forms, job application forms, and legal document forms. The forms are designed using React components, which provide a modular and reusable approach to form design.

### 3. Input Validation:

Input validation is an essential part of the front-end implementation, as it ensures that user input is correct and conforms to specific standards. The website includes various input validation techniques, such as regular expressions, conditional rendering, and error messages.

### 4. Data Display:

The front-end is responsible for displaying data fetched from the back-end. The website includes various components for displaying data, such as tables, charts, and graphs. The data display components are designed using React components and are customizable and reusable.

### 5. Navigation:

Navigation is an essential aspect of the website, as it allows users to move between different pages and sections. The website includes a navigation bar that provides links to different pages, such as the home page, services page, and about page. The navigation bar is designed using React components and is customizable.

### **13.4 Backend Implementation:**

The back-end of the website was built using Express and Node.js. The back-end provides a range of functionalities that support the website's form filling services. The back-end implementation includes the following components:

#### **1. API Design:**

The API design is a critical part of the back-end implementation, as it defines the endpoints and methods used to communicate with the front-end. The website includes various APIs for handling user authentication, data retrieval, and form submission. The APIs are designed using Express and are RESTful, which ensures that they are scalable and maintainable.

#### **2. Authentication and Authorization:**

Authentication and authorization are essential aspects of the website, as they ensure that user data is secure and protected. The website includes various authentication and authorization techniques, such as password hashing, token-based authentication, and role-based access control.

#### **3. Database Integration:**

The back-end integrates with MongoDB, a NoSQL document database that provides flexibility and scalability. The back-end uses Mongoose, a popular object data modeling (ODM) library for MongoDB, to interact with the database. The back-end stores and retrieves user data, such as login credentials, personal details, and form data, using the database.

#### **4. Form Submission and Processing:**

Form submission and processing are the core functionalities of the website, as they provide customized form filling services to users. The back-end includes

various modules for processing form data, such as data validation, formatting, and storage. The back-end uses middleware functions to handle form submission and processing, which ensures that the data is processed efficiently and accurately.

#### 5. Third-Party Integration:

The back-end integrates with various third-party services, such as payment gateways to enhance the website's functionality. The back-end uses APIs provided by these services to interact with them and to provide a seamless user experience.

### **13.5 Database Implementation:**

The database implementation of the website was built using MongoDB, a NoSQL document database. MongoDB provides flexibility, scalability, and performance, which makes it an excellent choice for web applications. The database implementation includes the following components:

#### 1. Data Modeling:

Data modeling is a critical part of the database implementation, as it defines the structure and relationships between the data. The website uses Mongoose, a popular object data modeling (ODM) library for MongoDB, to define the data models. The data models include user profiles, form data, and other related data.

#### 2. Data Storage:

The website stores various types of data in the database, such as user profiles, form data, and session data. The data is stored in collections, which are similar

to tables in a relational database. The database implementation uses the CRUD (create, read, update, delete) operations to interact with the data, which ensures that the data is managed efficiently and accurately.

### 3. Data Retrieval:

Data retrieval is a crucial aspect of the database implementation, as it enables the website to fetch and display user data. The website includes various APIs for retrieving user data, such as form data and user profiles. The database implementation uses queries to retrieve the data, which ensures that the data is retrieved accurately and efficiently.

### 4. Indexing:

Indexing is a technique used to optimize database performance by creating indexes on the database fields. The website includes various indexes, such as indexes on the user ID field and the form submission date field. The indexing ensures that the database queries are executed efficiently, which enhances the website's performance.

### 5. Security:

Security is an essential aspect of the database implementation, as it ensures that the data is protected and secure. The website includes various security measures, such as data encryption and access control. The database implementation uses MongoDB's built-in security features, such as authentication and authorization, to ensure that the data is secure and protected.

## **13.6 Deployment and Hosting:**

The website was deployed and hosted on Firebase, a platform that provides various services for building, testing, and deploying web applications. The deployment and hosting implementation includes the following components:

### **1. Deployment:**

The website was deployed on Firebase using the Firebase CLI (Command-Line Interface), which is a set of tools for managing Firebase projects. The deployment process involved the following steps:

- Creating a Firebase project and configuring the project settings
- Installing the Firebase CLI on the development machine
- Creating a build of the website using the npm build command
- Deploying the build to Firebase using the Firebase deploy command

### **2. Hosting:**

The website was hosted on Firebase Hosting, which is a service that provides fast and secure hosting for web applications. The hosting implementation includes the following features:

- SSL/TLS encryption for secure communication between the client and server
- Content Delivery Network (CDN) for faster content delivery
- Custom domain support for branding and SEO.

## **Chapter 14**

### **Conclusion**

After successfully building and deploying "Forms World" using the MERN stack and Firebase, it can be concluded that the project has achieved its objectives of providing a platform for form filling services for various jobs.

The website offers a user-friendly interface that allows users to easily access and fill out the required forms. The MERN stack provided a robust and efficient framework for developing the website, while Firebase enabled seamless deployment and hosting. This combination of technologies helped in creating a responsive and interactive website that could handle complex applications.

The project faced various challenges, including ensuring data security and implementing reliable payment options. These challenges were addressed through careful planning and implementation of appropriate security measures and payment gateways.

Overall, the "Forms World" website has been designed to cater to the needs of users seeking form filling services, and the use of modern technologies has resulted in a highly functional and efficient website. Future improvements could include additional features such as integration with various job portals and the inclusion of more form templates to increase the website's usability.

In conclusion, the "Forms World" project has been a success, and it has the potential to become a valuable resource for job seekers and employers alike.

## **Chapter 15**

### **Future Enhancements**

Technology is changing every day. Everyday a new system comes out that makes other things outdated. It is not possible to develop a system that can fulfill all users requirements.

We will upgrade “Forms World” to provide reach user experience:

- We will implement status seeing and feature on both user and admin side.
- We will also add the ability to fetch the category of user ( like General, SC, BC, ST) and show them the price according them.
- We will add infinite scroll in services tab.
- We will improve the user experience.
- We will upgrade our project to mobile application platform.
- We will add functionality to notifications ability too.