e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
Volume:03/Issue:06/June-2021 Impact Factor- 5.354 www.irjmets.com

# A CENTRALIZED WEB PLATFORM FOR THE UNORGANIZED SECTOR

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## ABSTRACT

The unorganized sector plays a big role in the country's economy, yet there is no concrete provision to protect it. And with all the challenges faced by the people from the unorganized sector due to the COVID19 and global pandemic, we realized this is high time we do something to help the unorganized sector stand strong. Our objective in building this project is to create a platform for the unorganized sector and help people in this crisis. With this project, we want to create a platform to connect people like daily workers, vendors, shopkeepers, electricians, construction workers, etc. to the people and industries. Web Application platform will be build using new technology: React JS , Mongo DB, Node JS, Express. Moto of the project is to bring people from unorganized sector online for so more people can more people can be attracted so more work will be available. Project works on basic concept where workers who are looking for job will be represent themself on this platform so people like us and enterprises or industries can easy find these people at one place. It also removes the middle man and keeps every flow transparent.

**Keywords:** React JS, Jobs for unorganized sector, Web development.

## I. INTRODUCTION

According to the report of the Economic Survey released in 2019, the unorganized sector accounts for 73% of the total workforce of the country. The COVID19 pandemic has a huge impact on the unorganized sector of the country. Tons of businesses were forced to close and companies went bankrupt due to the lack of a workforce. Our objective is to create a centralized platform for people of the *Unorganized sector* in India and create transparency between industries, contractors, and laborers by bringing the unorganized sector to a digital world. Project works on basic concept where workers who are looking for job will be represent themself on this platform so people like us and enterprises or industries can easy find these people at one place. It also removes the middle man and keep every flow transparent. This Application will not only show workers details, it also allows you post jobs as per your required so workers can apply for such jobs which make our life also easier. Main Objective of this project to create such platform where you can find workers easily or workers can find you easily so it's a win win at both the ends.

## II. METHODOLOGY

The project's use case workflow can be divided into the following functional subsections covering broadly main sections of the projects working system:

**1. User authentication:** There are 3 types of Users

- Common User (common people)
- Enterprises (Local businesses/industries)
- Workers (Job-seekers)

**2. Job Posting:** Individual users or enterprises can post jobs based on their needs on the platform which is available for all the registered job seekers for opportunities of work.

**3. A record of Workers/Job-seekers:** Based on different categories and locations users can find respective workers for their job to get done. In this way, we intended to create two-way communication between them.

The following diagram gives an overview of the concept of the project.

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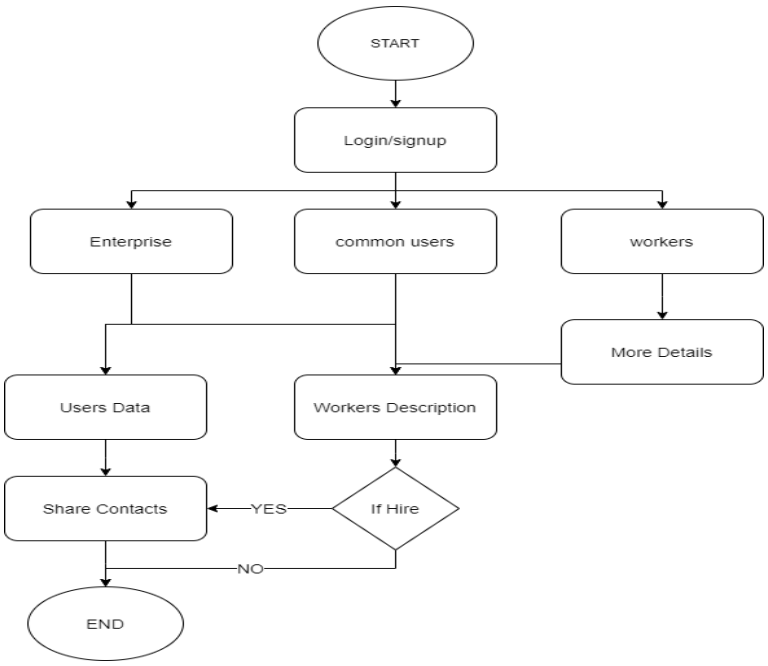


**Figure 1**: Workflow flowchart

## III. MODELING AND ANALYSIS

**a.** Hardware Requirements
1. Cloud Instance
2. 8GB Ram
3. Laptop / Computer

**b.** Software Requirements
1. Mongo DB Atlas (Database)
2. VS code Editor
3. Web Browser
4. Postman (For API development and testing)

**c.** Technology Stack
1. Node Js
2. React Js
3. Restful API
4. Mongo DB
5. Cloud Computing
6. JQuery
7. Tailwind CSS

**About the project**

A large proportion of socially and economically underprivileged sections of the society are concentrated in the informal activities of the unorganized sector. Unorganized sectors include skilled, semi-skilled workers that are part of a demand-supply chain. A centralized platform governed by ratings and reviews can open up jobs for the unemployed groups. This project is an attempt to identify the role of the unorganized sector in the economy and problems faced by unorganized sector and its employment system.

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Overview of the project, there are 4 nodes in this project. This project is structure based on these 4 nodes which are show in **Fig 2.** Overall foundation of the project is based on this format at client side user interface (UI) will be displayed which is our front end which is build using ReactJs . All users will be interacting with front end there will be no way for user to access database directly, this is where web API comes in place. With the help of an APIs will be accessing our Mongo DB database. Api will help us in accessing required database or updated or insert into database, which then will display on front end and APIs will also help in making web pages dynamic. APIs are build using JavaScript, Nodejs, and Express in backend will access to database directly. API sends data in a JSON (JavaScript Object Notation) format in a Key – Value pair.

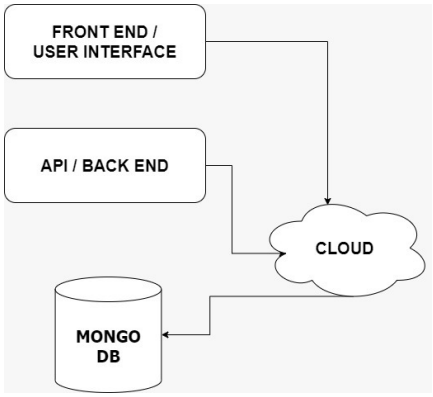


**Figure 2**: Structure overview

Front End, Back End and Database will be deployed on cloud EC2 instances on public network for user can send HTTP request and can access website from their computers using a specific domain name which they will insert on browsers URL section. Different security groups will be created for security purpose and port 80 which is HTTP port will forward in inbound rules so only http requests will be send. Nat gateway will be required for providing networks service on public server as well as on private server. Database will be stored in private network which can only be access to public network And not entire world with the help of routing table routing of network will done between public and private server.

Our web-based project is a full-stack application that is deployed on the cloud and servers. It's built on the top of a 3-tier architecture which provides the maintenance, flexibility as well as scalability to the whole system. With help of 3-tier architecture we are achieving data security and scalability this architecture will help us in high traffic as user application will not directly communicate with database to retrieve data a middleware will help in retrieve data which is business logic or APIs. **Fig 3** show the structure of 3-tier architecture which helps to understand the concept easily.

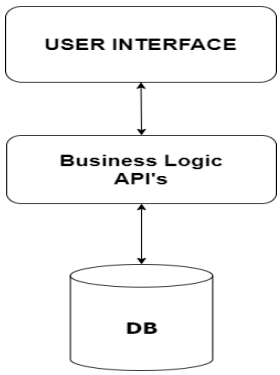


**Figure 3**: 3-tier architecture

## IV. RESULTS AND DISCUSSION

This project will be a platform for people from unorganized sector with help of React JS a response user interface will be created which store all workers details so we common user can access to detail to hire them. API will help help in making web pages dynamic. Cloud computing will help in load balancing and fault tolerance so servers will be working 24/7 under high network traffic also. And with the help of 3-tier architecture Data will be secure and will not be able to access publicly.

## V. CONCLUSION

With our research around the topic of this project, we came to a conclusion that creating an online platform to connect people from the unorganized sector will bring transparency to the system and encourage digital literacy to explore better opportunities just at their fingertips. It can act as a bridge connecting people from different fields, with different skills, and experiences for work and business with endless opportunities.

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