

An Application Design for Service for Unorganised Labours

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Abstract— In the current social scenario all life is dependent on brokers. It is a very much time consuming and a costly process. The unorganised sector, constituting more than 90% of the workforce of India is a pivotal part of the Indian economy which suffers from cycles of excessive seasonality of employment, lack of formal employer-employee relationship and absence of social security protection. The “Service For Unorganised Labours” is an android application replaces the bulky and time consuming process and is also helpful for uneducated, illiterate people as well as organizations. In our proposed system, labour and service utilizers can log into our app to hire or to get hired. The data will be stored in the database. The labours or service utilizers can log into their account through the application and update information or book their requirement respectively. This application is built using a programming language such as Java widely used for making android applications, SQLite is used for database and the platform on which the application is developed is Android Studio. Thus, an attempt is made to explore the problems and challenges the workers in the unorganised sector face to eliminate barriers in the unorganized sector to provide employees with minimum social security and build a network for all the unorganised workers by introducing "Service for Unorganised Labours" Application. The main part of this project is to develop an automated system which build a communication path and strengthen the customer-worker relationship. This system also helps to reduce the time and effort in searching workers efficiently.

Indexed Terms— Labour, Customer, Android studio, Java, sqlite.

I. INTRODUCTION

In today's world mobile and mobile application plays an important in our life. All our daily works done by mobile phones, considering this we have created a mobile application to hire labour who work on daily work and wages. As we know this people is an important role in the suburb area. Basically using our application user can hire labour from nearby area, For this user and labour, both need to register themselves

itself on thapplication using their basic details such as name, number, address, gender etc further labour need to fill his charges also. If any user doesn't have an android phone he/she can register themselves from their normal phone using provided toll-free number. When any labour register, their individual work profile should get created. The labour should not need to go so far for work, in short, it should be on real-time location. Contractor adds all the requirements and hire employees on the basis of these aspects. Labour should also find their choice of work. Each worker should pay through this application.

II. EXISTING SYSTEM

It is found that in this totally Unorganized sector the worker is hired through the broker, there is no direct contact between service utilizer and worker. The worker decides all details with the broker, so there is a lack of communication between worker and service utilizer. There is potential exploitation on both the sides and also the workers do not get proper service opportunity. Due to that both worker and service utilizer face many problems. In the existing system the individual profile of the labour is not maintained. If we maintain the profile for each labour it should contain all records and his ratings as per his work. Existing system is not much user friendly and has some drawbacks. There is no proper platform for the labours to showcase their expertise in their respected field. There is no network between the labours and the service utilizers. Lack of trust between them has also sometimes lead to no opportunities for them to work. The service utilizers do not have a reliable platform in which they can trust the skills of the labour. Due to the prevailing condition they are not able to hire a efficient worker when needed.

III. PROPOSED SYSTEM

In order to overcome inefficient traditional way of labours hiring and its management, we developed an efficient platform to maintain and make it digital way. To hire and manage labours manually in the traditional way is very difficult and time consuming process. The system architecture has smartphones with Android OS. The android smartphones or Tablet must use 4G or Wi-Fi network for internet connectivity to ensure better performance. The labour as well as contractor or capitalist will log in to the our system through Android smartphones. Customer can see all the details of the particular labour through this application. Multiple registrations can be done in-app. According to detail the constructor, organization or a common people will approach labour via SMS with all details in it. This application help labour to get the job on click as well as all other people get the labour on one click. When the worker starts his allocated work, he has to enter the details like he has started the work on the app, so the contractor will receive notification about the work of labour. After completion of work, labour has to press the finish button so the contractor will get the correct information about time and work. This will bring fluency between labour and contractor.

IV. SYSTEM ARCHITECTURE

The Fig.1 shows the system design where service utilizers/users and labours are from the front-end part of the application. Here we can get all the details about the customer and worker through the internet. Admin will be from the web part of the android application. All the details of the customer and the worker will be stored in the SQLite database. Customer can then can select any labours (worker) for which an intimation will be sent to the admin of the system. The admin then sends a notification to the labour through SMS and then confirms if the selected labour is ready to work in the specified location and time. The labour then sends an confirmation and thus the labours gets hired for the particular date and time. Thus the hiring process gets completed.

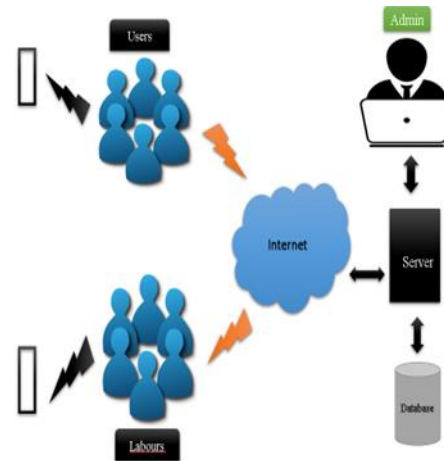


Fig 1. System design.

The following flow chart depicts the system developed. Fig 2.(a) describes the activity of the labour login in the android application. Initially the labour launches the application and then will sign in/sign up. If the user account already exists he will directly enter his Username and Password and complete his further process in the application. If the user is new to the application , he has to create an account of his own by entering the required credentials like Full name, Contact no, Adhaar no, Experience, Skills, Payment details in the registration form.

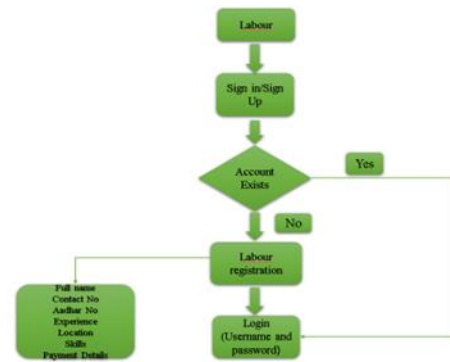


Fig 2(a) Labour Login

Fig 2(b) describes the activity of the user login in the android application. Initially the user launches the application and then will sign in/sign up. If the user account already exists he will directly enter his Username and Password and complete his further process in the application. If the user is new to the application , he has to create an account of his own by entering the required credentials like Full name, Contact no, Email in the registration form.



Fig 2(b) User Login

Once you download the application in the system, launch the application. You will be presented with a home screen with the title "Service for Unorganised labours", Click the button to start the process in the application and select the preferred language (English/Hindi). After selecting the preferred language click on the "continue" button. Then you will be presented with Two broad categories i.e User and labours. These categories of buttons are mainly concerned with the registration process. If a user opts the button "User" then he/she has to register themselves by clicking the button. Then the user will be redirected to the registration page where they need to put all the necessary credentials like Fullname, Contact, Email, Locaton, and a Username and Password to log into the application once the account is being created by the user. Once everything is correctly filled by the user than the message gets popped up i.e User registered successfully where the user gets confirmation that his/her account has been created successfully. This stated procedure is applicable for the user if they are new to the application, if they are already a registered user than simply they need to put the Username and password which they had put during the registration process and simply log into the application by entering them in the fields provided, Similarly as the User registration goes, Labour registration is also same for the labours who want to get benefits by getting hired by the user. So the labour registration goes like if a labour opts the button "Labour" from one of the broad category presented before. Then he/she will be presented with a register button were he/she has to register themselves by clicking the button. Then the labour will be presented/redirected to the registration page where they need to put all the necessary credentials, Full name, Contact Aadhar No, Skills, Payment, Recent work, Location, Experience and a Username and

password to log into the application once the account is being created by the labour. As of the user there are some additional credentials asked for the labours such as Skills in which skill they have their expertise, and in addition to that their recent work by which user can understand their Skills, their expertise even better. The main advantage of the application is that labour, who want to get hired by the users/service providers need not to compromise for the amount they get by the users for their work, because there is a option in the registration process itself were the labour can set their payment like how much is there rate for that work, in which they have expertise in. By this the labours get value to their work which is very important and their wont be any compromise between the user and the labour because if the user wants to get a labour i.e skilled labour and make sure his/her work is done in a proper way. Then he has to pay the labour the amount which they have set for their work. So by this there won't be any exploitation to the labour for their work, which was the main reason for the labours for getting correct amount of payment for their skilled work. So this is also one of the reason to bring harmony and stop the exploitation that was going in the traditional way of hiring the labours in the society. Once everything is filled correctly by the labours than the message gets popped up i.e Labour registration successful. where the labour gets confirmation that his/her account has been successfully created. This stated procedure is applicable for the labour if they are new to the application if they are already a registered labour than simply they need to put the Username and password which they had put during the registration process and simply log into the application by entering them in the fields provided. After the registration is done from both the sides the user than logs into his/her account to book a labour who is having all the necessary skills and is suitable for his/her work. The user needs to click a button after logging into the application, their are series of button were the user is redirected, after seeing all the buttons the user selects the "View category" button in order to book a labour for hi/her work. In the view category button there are several categories of works, related to all types of the fields as of now mainly the application is built for the civil labours. As it is mainly focusing on this field of labour the different categories of labours that come under this are painter, electrician, carpenter, daily labours, tiles, marbles, plumber etc. All these categories have their own

skilled labours in their field who can do their work with utmost expertism. After viewing all the categories of work the user can select any category of work which he has necessity for his/her work. After clicking the category as of his wish he is then redirected to list of the labourers who has skills/expertise in that category of work. Where the list contains labours name, Contact, Aadhar No, payment, experience of their field, their recent work accomplished where and how and for which kind of user, almost everything about the labours. After seeing the list,i.e presented to the user the us based on their analysis, location, preference, payment, experience and their recent work they decide which labour to book and who possess all the required skillset to complete their work. Once the user finalize the labour from the list presented to them they send a message to the concerned labour whom they want to book for their work completion by clicking on the "Send message" button available right above the view category button. Once clicking on the send message button the field they are required to fill is about their name, location, duration of work and asking confirmation for the labour whether they are willing to work for their project (or) No. And after sending the message to the labour about his approval for the work, until then the user can update (or) check their profile by clicking the view profile button which is just below the category button. If he/her wish to they can update about their personal information (or) they can just view their profile and leave as it is. And can logout of the application by clicking the Back button (or) logout button in the application. Once the labour who has booking from the user(who wants to gets his work done) the labour receives a popup notification regarding so and so user were all the details of the user including his message regarding booking about the work is also displayed. This notification can be viewed by the labour once the labour logs into the application, once he/she does that they will be directl redirected to a series of button where one of the button is regarding the notification. After receiving the notification and seeing the message in it if the labour is ready to work for so and so user mentioned in that message and is also comfortable with that location that is being mentiones in that message than the labour can send his approval through that notification itself where the user receives about the confirmation approval from the labours. Once after confirming about the work the uset

and labour can contact each other for their work and carry out their work as efficiently as possible. After getting hired from the user the labour can upload the picture of his/her work by clicking on the "Upload picture" button which is just below the view profile button. By doing this not only the labour gets benefits and increase their chances of getting hired from the users/service utilizers and inturn the users can also view about the labours work, their skills which can bring harmony between the users and labours and in turn contribute to the efficient work completion between the two. After uploading the pictures of their recent work if the labour still wants to update their profile (or) enter any new skill they have learnt they can still do that by clicking on the view profile button available in the page. where they can add an new skill, delete the data which they think is not necessary and add a new one. So this type of flexibility is being provided by the application.

V. SOFTWARE REQUIREMENTS.

1)Android Studio: Android Studio is the commonly used Integrated Development Environment (IDE) for android application development. Android Studio provides more features that enhance our productivity while building Android apps, some of the common features are, It has a flexible Gradle-based build system, It has a fast and feature-rich emulator for app testing, Android Studio has a consolidated environment where we can develop for all Android devices, Apply changes to the resource code of our running app without restarting the app, Android Studio provides extensive testing tools and frameworks. ,It provides build-in supports for Google Cloud Platform. It makes it easy to integrate Google Cloud Messaging and App Engine. etc.

2)Operating System: Windows is a graphical operating system developed by Microsoft. It allows usersto view and store files, run the software, play games, watch videos, and provides a way to connect to the internet. It was released for both home computing and professional works. Microsoft has produced several editions of Windows, starting with Windows XP. Theseversions have the same core operating system, but some versions included advance features, Control Panel, Cortana, File Explorer, Internet browser,Task Manager.

VI. PROGRAMMING LANGUAGE USED FOR FRONT-END.

1)Android Java:Java was developed by Sun Microsystems (which is now the subsidiary of Oracle) in theyear 1995. James Gosling is known as the father of Java. Before Java, its name was Oak.Since Oak was already a registered company, so James Gosling and his team changed thename from Oak to Java. Java is a programming language and a platform. Java is a high level, robust, object-oriented and secure programming language Platform: Any hardware or software environment in which a program runs, is known as aplatform. Since Java has a runtime environment (JRE) and API, it is called a platform.Some of the Java’s important core features are,It’s easy to learn and understand,It’s designed to be platform-independent and secure, using,virtual machines,It’s object-oriented,Android relies heavily on these Java fundamentals. The Android SDK includes manystandard Java libraries (data structure libraries, math libraries, graphics libraries,networking libraries and everything else you could want) as well as special Android libraries that will help you develop awesome Android applications.

VII. DATABASE USED FOR DASHBOARD

SQLite: In Android, there are several ways to store persistent data. SQLite is one way of storing app data. It is very lightweight database that comes with Android OS. SQLite is a software library that provides a relational database management system. The lite in SQLite means lightweight in terms of setup, database administration, and required resources.SQLite has the following noticeable features: self-contained, serverless, zero-configuration, transactional.

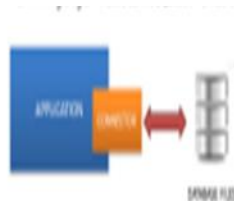


Fig 3. SQLite server-less architecture

VIII. HARDWARE REQUIREMENTS

Following are the hardware requirements for the proposed work

- Laptop or computer set with reasonable and sizeable hard disk space of atleast 8GB RAM
- A networked environment to ensure the collection of data and records to central database storage device.

IX. RESULTS AND DISSCUSSION

Application is user-friendly.Following are the few snapshots of the application developed.

(a)Home Screen: After launching the android application the user is presented with this screen which says “Service for Unorganised Labours”, the user needs to click that button.



Fig 4 a) Home Screen

(b)User Registration: After the user clicks the Register button then he will be redirected to this screen where he/she has to register in the application to avail the services. The user has to enter the details like Full name, Contact No, Email, Location. The user has to set a Username and Password and these credentials should be used by the user, the next time he wants to login in the application.

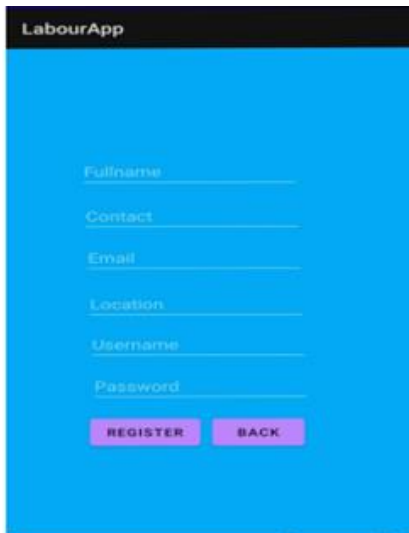


Fig 4 b) User Registration

(f)Labour Registration: After the labour clicks the Register button then he/she will be redirected to this screen where he/she has to register in the application to create a profile of his own. The labour has to enter the details like Full name, Contact No, Adhaar No, Experience, Recent work, Location, Skills, Payment Details. The labour has to set a Username and Password and these credentials should be used by the labour ,the next time he wants to login in the application.



Fig 4 c) Labour Registration

(d)View Category: After the user successfully logs into the application the user views various categories of services which include Electrician, Painter,

Plumber, Carpenter, Daily labour, Flooring, etc. The user can now select the service of his choice by entering the respective service name.



Fig 4 d)View Category

X. APPLICATIONS

1. This application allows a worker to improve his financial state since he will get work throughout a month.
2. This application makes customer to find the workers easily and hence makes their work done.
3. This application makes many workers will not get works daily and they may feel difficulty to satisfy their daily needs. This causes a serious problem to the person whose work is to be done and workers.
4. This application makes a worker to obtain suitable work of his/her category throughout the year and enhance his/her financial status.

XI. CONCLUSION

Labour Hiring Application is the best replacement to bulky, time consuming manually hiring of labours those who are working on regular wages . In the current system the hiring process is mostly about the educated peoples .There is no digital system for the labours which has daily basis income and that labours

do not get easy access or information about the digital platform so we try to provide easy and safe digital hiring platform for all type of the labourers

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