



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

KAYAKA BANDHU

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ABSTRACT

The Mahatma Gandhi Public Rural Employment Guarantee Act (MGNREGA), generally called Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS) gives a genuine confirmation to 100 days of work in each financial year to grown-up people from any provincial family ready to achieve public business related unskilled manual work at the legal the lowest pay permitted by law. This demonstration was presented with appoint of further developing the buying force of the provincial individuals, basically semi or un-talented work to individuals living be neath destitution line in rustic India. It end to over come any issues between the rich and poor in the country.

Rozgar sewaks are enrolled by the Ministry of Rural Development and allotted to panchayat, to work with panchaya the with people applications for work card sand to enlist their interest for work. They additionally get ready work designs and distribute work to the individuals who request it.

INTRODUCTION

Since independence, the Mahatma Gandhi Public Rural Employment Guarantee Act (MGNREGA) has been the public authority of India's (GOI) most exhaustive and powerful work age program. The Act orders that the GOI "accommodate vocation solidness of the families in rustic pieces of the nation by presenting somewhere around 100 days of ensured wage work in each monetary year to each family whose grown-up individuals consent to lead untalented work" (source: The National Rural Employment Guarantee Act, 2005, No. 42 of 2005, fifth September, 2005). It assuredly contributes altogether to the making of occupations for Indian rustic inhabitants.

This law guarantees a specific employment and a minimum salary for everyone in the poorest rural households. In addition to providing economic opportunities, MGNREGA also fights poverty in rural India. Rural Indians have more purchasing power thanks to MGNREGA. After this program's initial phase, rural residents may now meet their basic needs for subsistence. It improves their socioeconomic situation and raises the standard of living for those who live in rural India.

- Make the task of Rozgar Sewak automated.
- Applying for the scheme by the labourer should be made easier.
- All the payments to the labourers should be handled online.

TECHNOLOGY ANALYSIS

JAVA

Java is the programming language which is used in this project. The fact which is influential which makes java the most powerful programming language is that it is easy to write and easy to run this is the foundational strength of java. java is all-round programming language of high quality which was developed by sun Microsoft system. Object oriented and dependency programming language. Java is a platform independent programming language that is the code of java can be run on any platforms without the need of recompilation. Its syntax is similar to that of C and C++. This is one of the oldest and most prominent programming languages used. Official language which is used in android development is java and also java is supported is android studio. Java is the programming language which is used in the project.

Android Operating System

Android is a versatile working framework created by Google, in view of the Linux bit and planned basically for contact screen cell phones like PDAs and tablets. Android's UI is mostly founded on direct control, utilizing contact signals that freely relate to true activities, for example, swiping, tapping and squeezing, to control on-screen objects, alongside a virtual console for text input. Notwithstanding contact screen gadgets, Google has additionally evolved Android TV for TVs, Android Auto for vehicles and Android Wear for wrist watches, each with a UI

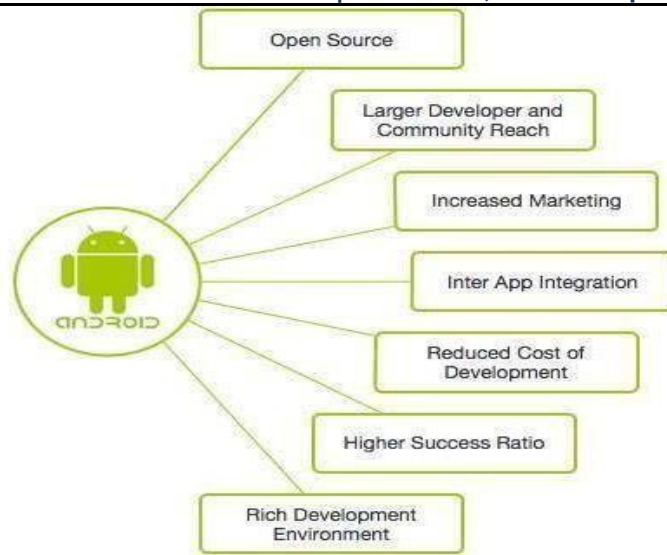


Fig Overview of the Android

ANDROID STUDIO

Android is an operating outline dependent on the Linux part. The venture answerable for fostering the Android framework is recognized as the Android Open Source Project (AOSP) and is essentially principal by Google. The Android framework supports basis creation, gives a ironic UI public library, supports 2-D and 3-D designs using the OpenGL-ES (short OpenGL) normal and awards admittance to the document framework just as an installed SQLite information base. An Android request normally includes of various graphic and non-visual shares and container recycle sections of dissimilar applications.

Google gives an IDE called Android Studio as the favored improvement climate for making Android applications. This IDE depends on the Intel IJ IDE. The Android apparatuses give particular editors to Android explicit records. The majority of Android's arrangement documents depend on XML. For this situation these editors permit you to switch between the XML portrayal of the record and an organized UI for entering the information.

Android Studio Features

- Run Instant App.
- Connects to the base of operations.
- Fast emulator.
- Visual layout editor.
- Up app for all devices.

MYSQL

MYSQL is the world's most utilized social information base administration framework (RDBMS) that innings as a worker generous multi-client admission to numerous data sets. The SQL expression signifies Organized Query Language. MYSQL is a well-known choice of data set for use in web applications, and is a focal part of the usually used LAMP exposed source web application software design stack—LAMP is an contraction for "Linux, Apache, MYSQL, Perl/PHP/Python"

System Architecture

Early stages of the system design process.

- Represents a link between the specification process and the design process.
- Often run in parallel with some spec activities.
- Includes identification of critical system components and their communication.

Simple, informal block diagrams showing entities and relationships are the most commonly used methods for documenting software architecture.

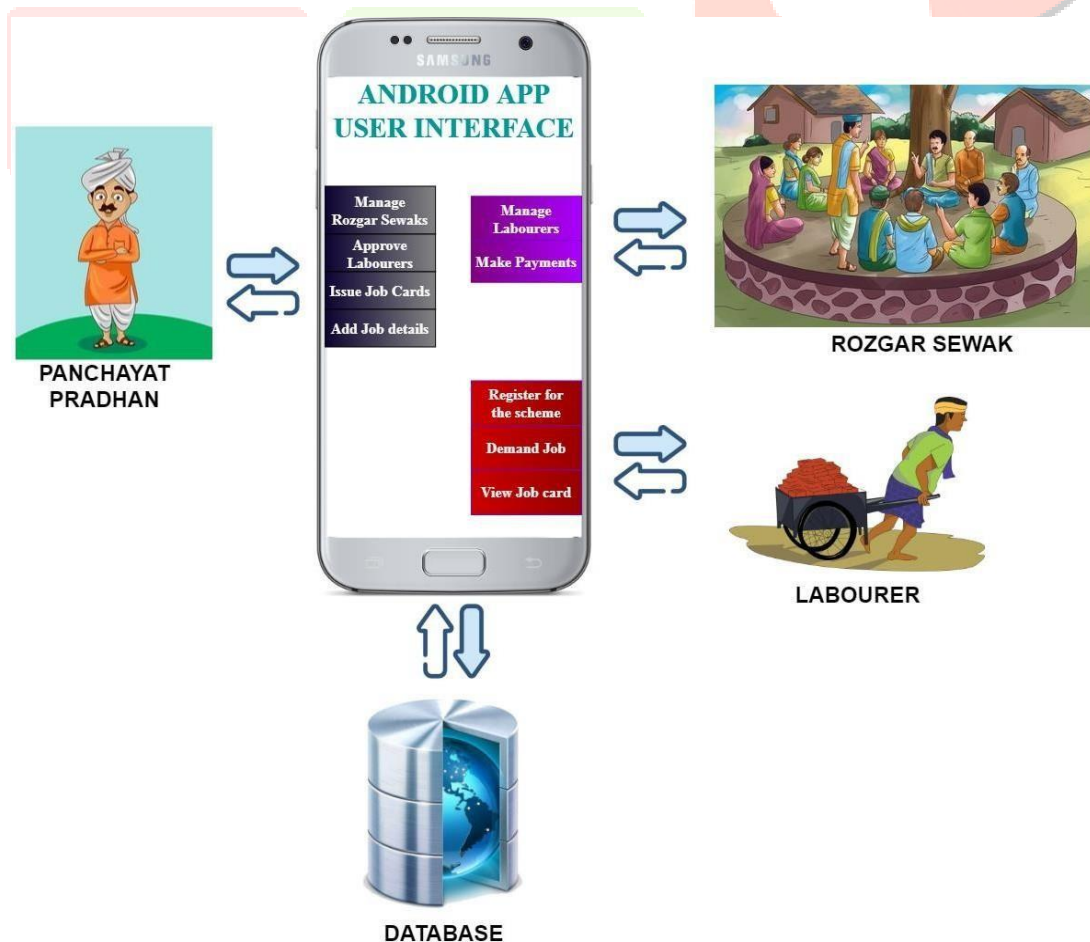


Fig system architecture

IMPLEMENTATION

Splash Screen

The splash screen is displayed for 2 seconds when we open the app and then it is moved to user selection screen. To initialize method is used to load all the UI. Here, it is used to load the activity_splashscreen.xml file onto the screen.

User Selection screen

The activity_userselectionscreen.xml file will be loaded. Based on user selection in the UI screen the select User method will handle the movement to the next login screen of Pradhan or Rozgar Sewak or labourer respectively.

1. Pradhan

Login

The activity_pradhanlogin screen.xml file is loaded. Once after Pradhan enters the login credentials the below login method will check whether the username and password are valid or not. If it is valid then the Pradhan home screen is loaded.

Pradhan Home Screen

The activity_pradhan_homescreen.xml file is loaded. Pradhan has options to select to move to the next UI screen. Based on the selection by Pradhan the next method moves to the corresponding screen with the use of intent.

Approve Labourer

If there are any labourers registered for the scheme, then the list of labourers will be displayed.

Issue Job Card

A list of approved labourers will be displayed and after selecting a particular labourer the activity_labourerdetails.xml file will be loaded and details of that labourer will be displayed.

Assign Rozgar Sewak

Pradhan has an option to assign rozgar sewak to the gram panchayath. The activity_addrozgarsewak.xml file will be rendered on the screen. The add rozgar sewak method is used to add the details entered by the Pradhan into the rozgar sewaks database table and by using sendSms method a message having username and password will be sent to the registered mobile number.

Add job details

Pradhan has an option to add the work details that needs to be done. The activity_addjobdetails.xml file will be loaded on screen. If Pradhan after entering the job details presses add button then the addjob method will be called and this method is used to add the job details into the Jobs database table.

2. RozgarSewak

Login

The activity_rozgarsewaklogin.xml file will be rendered on screen. After Pradhan has assigned rozgarsewak for gram panchayth, username and password will be sent to the registered mobile number.

Add labourer

Rozgarsewak has been given an option to register the labourer if in case the labourer doesn't use an android mobile but is interested to work and get paid. The activity_addlabourer.xml file is loaded on screen. The register method is used to add the labourer details into the labourers table in the database.

View Jobs

List of jobs that have been added by the Pradhan will be displayed. activity_viewjoblist.xml file is loaded on to the screen.

Scan job card

Rozgar sewak has an option to can scan the QR code to view the labourer details as well as their attendance details. Third party library called Zxing library is used to scan the QR code. Zxing library is a barcode image processing library that is implemented in java. We can use this library by adding its dependencies in the build.gradle file. The display data method displays the details of labourer through activity_viewqrcoodedetails.xml file.

Allot Labourers

Rozgarsewak has an option to allot the labourers to work that has been added. The activity_allotlabourers.xml file will be displayed.

Mark Attendance

The activity_markattendance.xml file is rendered on screen. Name of labourer and a Checkbox is provided to mark the attendance and update method is used to add the date, jobID and labourerID of that labourer in the Attendance database table.

Make payment

The activity_makepayment.xml file is loaded on screen. A list of labourers who were allotted with the jobs will be displayed and after selecting a particular labourer through the use of intent activity_paymentdetails.xml file is loaded. The selectDate method is used to prompt a calender dialog to set the date.

Registration

First the labourer needs to register to the app by providing the basic details like name, age, gender, contact number, gram panchayath where they belongs to and bank details. Labourer needs to give the username and password for their profile which is used in future for login. The activity_labourer_registrationscreen.xml file is loaded on screen.

Login

The activity_labourerloginscreen.xml file will be loaded. The login method will check with the labourers database table whether labourer has entered correct details or not.

3 Labourer Home Screen

The activity_labourer_homescreen.xml file is displayed on screen. Labourer has options to select to move to the next UI screen. Based on the selection by labourer the next method moves to the corresponding screen with the use of intent.

Register for scheme

After login labourer needs to register for the scheme by providing Aadhar number, BPL card number and voter id number. The activity_labourer_registration_for_scheme.xml file is loaded here and the submit method will add these details into labourers table in the database.

Demand for job

After registering for scheme labourer needs to submit demand for work and here the activity_demandforjob.xml file will be displayed on screen.

Generate QR code

ZXing library which is a third party library is used to generate the QR code image. The activity_generateqrcode.xml file is displayed on screen and the generate method is used to pass the labourer ID as text to be encoded in QR code and to display.

View job card

Labourer can view his job card details. Here the activity_viewjobcard.xml file is displayed on screen. The displayData method will fetch the details from the labourers and Jobs database table and is displayed on screen.

Upload Before and after work photos

Labourer has option to upload before and after work photos as proof of work completion so that rozgarsewak can make payment later. The activity_uploadbeforeafterphotos.xml file is rendered on screen.

Result Analysis

Test Case Id	Test Case Name	Test Case Description	Test Steps				Test Status P/F
			Steps	I/P Given	Expected O/P	Actual O/P	
TC01	Login	To check whether the user has entered valid username and password	Login with valid user name and password	Valid user name and password	Login successful	Login successful	Pass
	Login	To check whether the user has entered valid username and password	Login with invalid user name and password	Invalid user name or password	Login unsuccessful	Login unsuccessful	Pass
TC02	Approve Labourer	Pradhan will approve Labourer	Pradhan will check valid details of Labourer and then give approval	Valid Labourer	Approved successfully	Approved successfully	Pass

TC03	Add Job details	Pradhan can add the details of job	Pradhan selects Add Job option and fills in the job details.	Selection of Add Job option	Job details are added and saved successfully in the database	Job details are added and saved successfully in the database	Pass
TC04	View Job Card	Labourer can view Job Card details	Labourer selects view job card option and can view his job card details	View Job Card option is selected	Job Card details are displayed successfully	Job Card details are displayed successfully	Pass
TC05	Generate QR code	Labourer can generate the QR code By entering valid details	Labourer selects generate QR code To generate QR code image are missing	Labourer selects generate option	QR code should be generated and displayed successfully	QR code is generated and displayed successfully	Pass

TC06	Scan job card	Rozgarsewak scans the QR code to view the labourer details	Rozgarsewak scans QR code	Rozgarsewak selects scan job card option	Job card and attendance details should be displayed	Job card and attendance details are displayed	Pass
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TC07	Add Rozgar Sewak	Pradhan can add Rozgar Sewak details	Pradhan can add the Rozgar Sewak details	Add Rozgar Sewak option is selected	Rozgar Sewak details are added and saved successfully in the database	Rozgar Sewak details are added and saved successfully in the database	Pass
TC08	stration	To verify that the Labourer has registered by entering valid details	Enter all valid labourer details	Valid details	Registered successfully	Registered successfully	Pass

CONCLUSION

Kayaka Bandhu application helps during the time spent securing work for workers. It defeat severy one of the down sides of the current frame work and gives a paperless answer for every one of the issues confronted. Through this application we are giving a way to recipients of government business ensure plan to find a new line of work card, go after position and get installments and further more to have a correspond with the concerned authorities. The application will be helpful to every one of the gatherings in question - the worker, the Rozgar Sewak and the Panchayath Pradhan as it makes the assignments of these individuals easier and mechanized. Additionally, the application assists with checking defilement and eliminates the undesirable impedance of mediators.

FUTURE SCOPE

- Video upload option can be provided to the labourer for proof of job completion.
- Geo fencing can be implemented to keep track of the work allocated labourers.
- Google Maps can be integrated so that they can easily track the address of the work allotted to labourer.

TC09	Logout Menu	In case the	Select	Logout	User is taken	User is taken to	Pass
		user selects logout menu option, they should be redirected back to user selection screen	logout menu option	option is selected from the options menu	to user selection screen	user selection screen	



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