



OUR INDIAN SHOP – E-Commerce Website Interconnecting the Farmers, Shopkeepers, Delivery Personnel and Consumers

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ABSTRACT

A system named 'Our Indian Shop' has been developed and presented in this paper. This system involves an android application, a website and an IVR system for online selling and delivery of agricultural products from farmers to the consumers directly at the market price without the involvement of any middleman. It provides facilities of online shopping of essentials from consumers' nearby shops as the delivery options will be localized according to pin code to lower the risks of spreading of Covid-19. It also supports selling of groceries, vegetables, and medicines by relevant shop owners directly to the consumers. It enhances the employment as delivery personnel for economically backward people or daily wagers who have lost their livelihood due to the pandemic. The IVR system is to be provided to make all the above facilities available in the offline mode for technologically backward classes, for efficient working of the system in a digital divide environment. The prime objective of this development is to promote social distancing and provide efficient technical solutions for sustainability in the post pandemic world. Our Indian Shop is an all in one platform which provides the online facilities of shopping and selling as well as it will help to enhance the employment and prevent the brokerage charges.

KEYWORDS: Android Application, E-commerce website, IVR, Online Shopping, Farmer's Assistant.

I. INTRODUCTION

In the new normal world, many innovative concepts are being developed with the help of latest technologies to make our life easier and comfortable. We all have to meet the challenges like lockdown and social distancing, which have occurred due to the pandemic situation. Social distancing has become the priority to survive in the present scenario. Because of the present

situation, many sellers and producers are facing major issues to sell and deliver the goods to the customers. In this regard, a platform named "Our Indian Shop" has been developed based on an android application, a website and an IVR system.

"Our Indian Shop" is an all in one platform which provides the online facilities of shopping and selling as well as it will help to enhance the employment and

prevent the involvement of middleman. This system has been developed for the farmers, sellers, and buyers. A new user needs to register either through website or application or IVR. The consumers need to sign up at first and then log in with their credentials to purchase essentials using the portal (Website/application); or can simply dial their registered numbers at the verification step to purchase using the IVR system.

The farmers need to register themselves through the IVR system following the voice instructions if they don't have the smart phones. After registration, they can sell their products in bulk to the management team directly at market prices. Their agricultural products will be updated to the website / application by the management team, for the consumers to purchase.

Similarly, the shop owners of essential items (groceries, vegetables and medicines) of various localities (categorized according to pin codes), can register themselves through website, application or IVR to sell their products through the portal. This prevents crowds in the markets and shops, thereby reducing the risks of spreading of the disease. Moreover, delivery of essential items will be from consumer's nearby marketplaces to add to the cause of social distancing.

Many financially backward classes have no work post lockdown. In such a scenario, "Our Indian Shop" comes forward with jobs of delivery personnel. The interested ones can register using the website, application or the IVR for the job with proper identification proof. Once the management team has verified their registration, they can get employed to make deliveries in and near their location, as the deliveries will be localized.

The IVR system enables people with no access to smartphones or internet connection to use all the services, comfortably.

This platform not only reduces unnecessary gatherings but also provides the online facilities of shopping and selling as well as it will help to enhance the employment and prevent the middleman charges.

II. METHODOLOGY

PORTAL FOR CONSUMERS

The customers can log in or sign up on to the website or mobile application through e-mail or phone number. For signing up, they must provide their name, location, phone number and email address. Those who

don't have a proper internet connection or devices can register or sign in through IVR.

For buying products from the proposed portal, the customers can easily select the products and the quantity of the products which are required. The products are added to the cart and the payment can be done through cash, UPI, PayPal, or credit/debit cards. By filling in the correct address, the order will be placed, and the customer will receive a confirmation message in their registered number and email ID.

For placing an order through IVR customer must call on a number provided by the app developer. After that, according to their location, the call will deviate to the nearest shop and then they can contact the shop owner and place their order.

If a customer wants to buy a product which is unavailable in the closest shop, then the call will get deviated in the next nearby shops. Fig. 1 shows the flowchart of registration process for customer using android application or website.

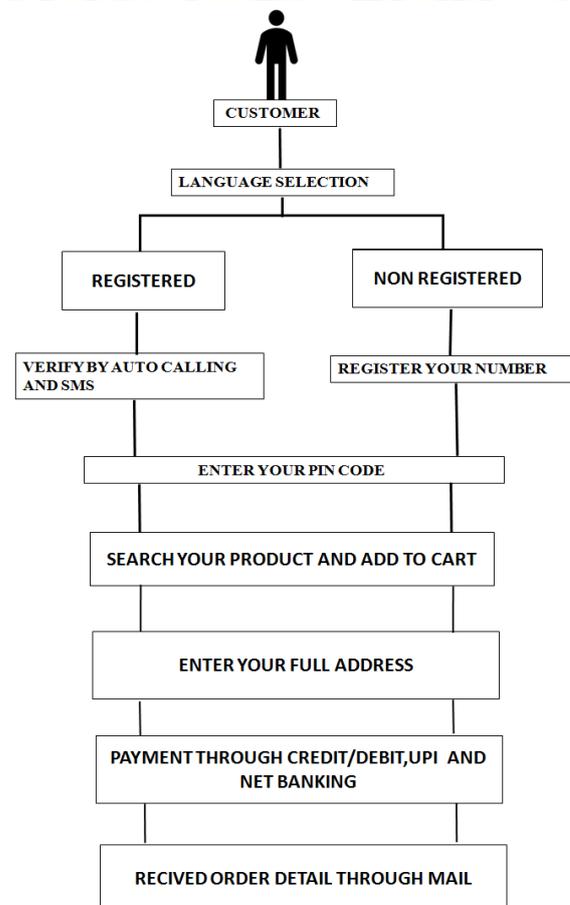


Fig. 1 Flowchart of Registration process for Customer using android application or website

REGISTRATION FOR FARMERS

The farmers need to register themselves through the IVR system following the voice instructions; they can sell their produce in bulk to the management team directly at market prices. Their agricultural products will be updated to the website / application by the management team, for the consumers to purchase. The IVR was made keeping in mind Digital Divide Environment because in some parts of India, there are still many villages where illiteracy and network problem prevails. So, keeping in mind Digital Divide Environment, IVR system is developed so that the people who can't use the application because of illiteracy can hear and get benefitted from the proposed prototype.

The farmers can also register themselves through the website and application by filling the form given in the website and uploading the required documents and ID proof. Fig. 2 shows the flowchart of registration process for farmer using android application or website or IVR.

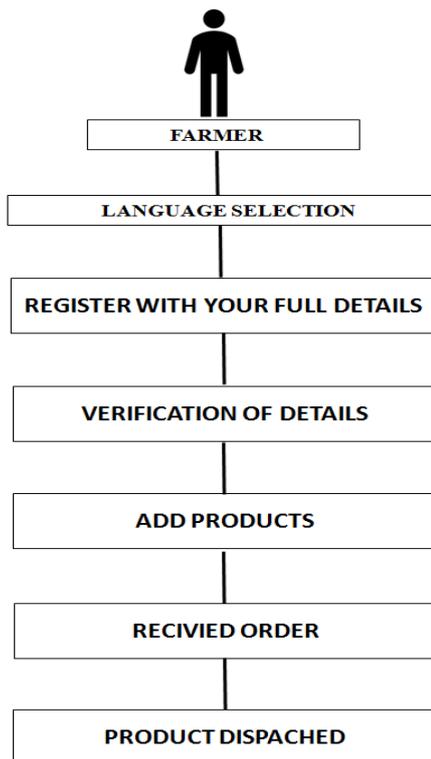


Fig. 2 Flowchart of Registration process for Famer using android application or website or IVR

REGISTRATION FOR SHOPKEEPERS

Registration of shopkeepers can also be done through the proposed mobile application, website, or IVR.

If the shopkeepers want to register themselves using 'Our Indian Shop' website or mobile application, they simply must sign up into the portal by providing their shop registration documentation and their identification documentation.

If the Shopkeeper doesn't have proper internet-connection, they can call on the IVR number and provide the required information to the executive at the helpdesk and the registration process will be done.

After registration, they can easily access the products that are available in their shops and update them on daily basis.

If a shopkeeper will receive an order they will be informed through the mobile/web application or registered mobile number or email id. Fig. 3 shows the flowchart of registration process for shopkeeper using android application or website or IVR.

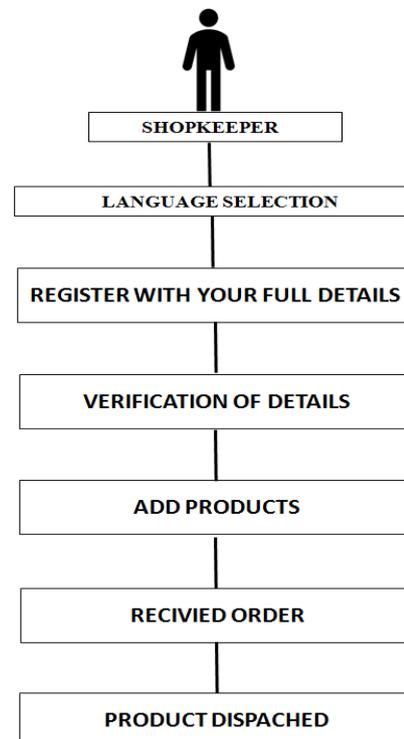


Fig. 3 Flowchart of Registration process for Shopkeeper using android application or website or IVR

REGISTRATION OF DAILY WAGERS

Similarly following the registration process of the farmers, daily wagers can also register themselves using the mobile or web application or through the IVR.

For registering through the application, they must provide their identification proof, driving license, and other required documents.

As per the registration through IVR, they just have to call on the number provided, and our executive team from the helpdesk will help them.

If they will be assigned to deliver any order, they will receive a call on their registered number by the shopkeeper and also a message on their registered number or email id. The mobile application will have access to GPS and the location where they have to deliver will be shown. Fig. 4 shows the flowchart of registration process for daily wagers using android application or website or IVR.

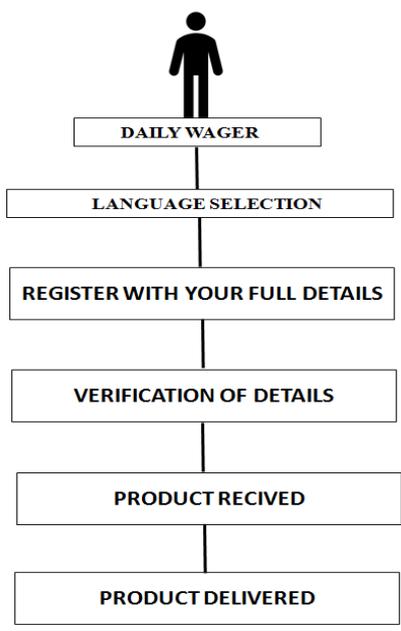


Fig. 4 Flowchart of Registration process for Daily Wagers using android application or website or IVR

MANAGEMENT OF APPLICATION

The executive members of the proposed backend team will take care of every detail in 'Our Indian Shop' website and mobile application.

Registration of farmers, shop owners (vegetables, grocery, medicine), and daily wagers will be first verified and then approved only if the documents are valid. Executive team members will

check every identification document submitted and will approve it accordingly.

The executive members will look after the price set by the shop owners and farmers by comparing them with the current market scenario. This will make sure that they are not selling their products at higher prices. This will also help the farmers from loss as there will not be any mediators. Fig. 5 shows the flowchart for management.

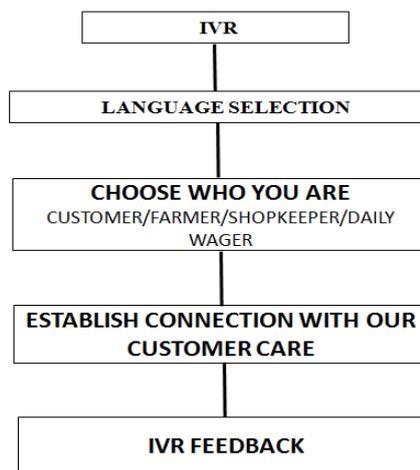


Fig. 5 Flowchart for Management

III. CONCLUSION

This proposed work can be helpful in a difficult situation like the COVID-19 pandemic where social distancing is a must to follow. People can easily order things from their nearest store and get the delivery at their doorsteps in a short time unlike other e-commerce websites which takes up a lot of time and usually deliver essentials from shops far away from our locality. Even the things which we need on a daily basis can be ordered online from trustworthy nearby shopkeepers. This will help to decrease the spread of covid-19 which is required right now in our country. This will provide jobs to the daily wagers who have lost their income sources due to the lockdown during this pandemic. Fig 6(a) and (b) shows the home page of the portal.

Apart from this, it will provide the facility for farmers to sell their produce at a better rate. As the farmers will register themselves in our portal directly, they can sell their agricultural products at a reasonable price without worrying about mediators. This will increase the income of farmers and boost up their production. The farmers will be able to sell their produce in the market as well without involving the middleman.

An IVR system is provided especially for the registration of farmers, which will also have all other features of the website and application. The farmers and users belonging to remote areas, or having no access to smart phones or internet connection, can comfortably use all the provided services through the IVR facility. Fig 7 shows the registration page for farmers and delivery personal. Fig 8 shows the product registration page.

The overall system has been seen to function efficiently and is supposedly beneficial to users for the current pandemic situation. Home delivery system of daily essentials, especially from their nearest stores will keep the spread of covid-19 in check. The daily wagers who lost their job during this lockdown can register themselves as delivery persons and can work again. They just must fill the form and upload required documents and the registration will be done. Fig. 9 shows the login page. Fig. 10 shows the need a job page for daily wagers.

The registration for customers, farmers and delivery persons is free of cost. So, they can use this application without any charges. The farmers can register themselves free of cost and can directly sell their produce at a reasonable price too and earn a marginal profit. They can update their products, add new products, and delete the existing products if they are out of stock. Fig. 11 shows where to buy page. Fig. 12 shows the order history page.

An IVR system is created keeping in mind the digital divide environment. This ensures that users without high end devices like computers and smart phones are also be able to use all the services easily and comfortably.

This application will be helpful to sustain life in the new normal world as it will be beneficial to maintain social distancing at marketplaces and stores. The delivery of commodities will become faster because of the localization of delivery options according to the pin code. The development aims at helping the farmers to sell their produce at a better rate without the involvement of any middleman viz. wholesaler and retailer.

The future market for farmers will develop in a better way as the agricultural product will be sold directly from the farmers to the consumers leading to the growth of the agricultural industry. Employment

provided to the financially backward classes aims at contributing to the economic development of such classes. In the near future, with the increasing usage of the system, the digitalization of Indian market is expected to be enhanced.

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