

# WASTE FOOD MANAGEMENT AND DONATION APP

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## ABSTRACT

*In this project we have tried to provide a solution for food waste through our app. Our android app contains two modules first one is the donation module and another one contains volunteer module. In donor module the person can donate his good quality food he can do this through providing food information to the opp. In Volunteer module the person or any organization who is in need of food can put up his requirements on the app .*

**Keyword: Donor , Volunteer, Food Donation, Waste Food, Android app , Annadaata. Firebase**

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## 1. INTRODUCTION

As per the knowledge the technology is going advanced and growing day by day. Over main motto is to help needy people. The idea behind over project can be use by many people who wish to donate things to needy organizations Also, many organizations like to ask for various things required by them such as clothes, food grains, books utensils. In this mobile app, we have tried to reduce food wastage by giving waste food to people or organization who need it. The needy will add to a request, in case of any leftover food donor have. This request is sent to the list of donors. The Available Donor then accept the request. We are going to manage the delivery system by appointing delivery person who will collect the food from the donor and distribute among the needy people. Second option for delivery system is that volunteers who wish to help to donate food can join us for distribution in near by areas. For eg: they can distribute food in government school, government hospital, orphanage, old age homes. And the third option is the Food Bank if we receive food in odd times we can give it to food bank where the care of food is taken. Safety and Hygiene are maintained in food banks. So. food wastage or food spoilage cannot occur.

## 2. IDEA BEHIND THE PROJECT

As per the knowledge the technology is going advanced and growing day by day. Over main motto is to help needy people. The idea behind over project can be use by many people who wish to donate things to needy organizations Also, many organizations like to ask for various things required by them such as clothes, food grains, books utensils. In this mobile app, we have tried to reduce food wastage by giving waste food to people or organization who need it. The needy will add to a request, in case of any leftover food donor have. This request is sent to the list of donors. The Available Donor then accept the request. We are going to manage the delivery system by appointing delivery person who will collect the food from the donor and distribute among the needy people. Second option for delivery system is that volunteers who wish to help to donate food can join us for distribution in near by areas. For eg: they can distribute food in government school, government hospital, orphanage, old age homes. And the third option is the Food Bank if we receive food in odd times we can give it to food bank where the care of food is taken. Safety and Hygiene are maintained in food banks. So. food wastage or food spoilage cannot occur.

## 3. LITERATURE SURVEY

Food waste” pertains to the edible and inedible parts of food removed from the food chain, which need to be managed through recycling or disposal (Östergren et al., 2014). Food waste may also be interpreted as the loss of edible food at different stages of the food chain, including harvest, production, processing, distribution and consumption (Ivert et al., 2015; Segrè et al., 2014). Food waste comprises two types based on the kind of waste: Unavoidable food waste: expired or spoiled ingredients, food scraps such as meat scraps (e.g. end pieces of baked ham after slicing, meat pieces after trimming) and vegetable scraps (e.g. tomato ends, outer leaves of lettuce, potato peels, vegetable stems); and

Avoidable food waste: meal scraps such as peeling or trimming waste arising from the less proficient handling of food items; overproduction for banquets, events and catering; poor ordering procedures; poor food rotation practices, causing food spoilage; and poor inventory systems, leading to food and plate waste such as unconsumed pasta (Derqui and Fernandez, 2017).

Academics categorize food waste based on the stages of waste generation, such as pre- and post-consumer food waste (Prescott et al., 2019b). Pre-consumer waste occurs at the production level, and postconsumption waste occurs at the consumer level. Scholars argue they associate different factors with food waste generation at these stages. Accordingly, various mitigation approaches perhaps can reduce such waste (Papargyropoulou et al., 2016). Furthermore, thorough diagnoses of food waste generated at various stages are crucial for ensuring the effective management of waste (Dhir et al., 2020). Food waste is an important concern because it threatens the environment and sustainability. In fact, it is a serious concern in the hospitality and tourism domain (Okumus et al., 2020). Close to 1.3 billion tonnes of edible food is wasted annually, leading to severe financial, environmental and health outcomes (Gustavsson, 2011). Past research has identified several adverse outcomes of food waste, such as threats to food security (Wang et al., 2018), climate change and greenhouse gas emissions (Kallbekken and Sælen, 2013; Katajajuuri et al., 2014) and monetary loss (Hennchen, 2019). For instance, the annual emissions because of food waste in Finland constitute more than 1% of the country’s yearly greenhouse gas emissions (Katajajuuri et al., 2014). Similarly, scientists found the ecological impact of food waste in hotels, cafés and restaurants nearly twice the size of the arable land in Lhasa (Wang et al., 2018). Notably, sustainability has come under intense focus in the hospitality industry in the wake of the COVID-19 pandemic (Jones and Comfort, 2020). In addition, studies have underscored the nutritional loss associated with food waste. For instance, Blondin et al. (2017) revealed that, in the USA, fluid milk waste results in 27% and 41% losses, respectively, of the vitamin D and calcium required under school breakfast programme meals. Consequently, scholars argue that reducing food waste is critical from financial (e.g. food cost) and non-financial (e.g. sustainability) standpoints (Okumus, 2019). In fact, research reports suggest that, by saving one-fourth of the food being wasted, we can feed 870 million hungry people (Khadka, 2017). Similarly, the sustainable development goals of the United Nations (UN) have also emphasized responsible production and consumption, underscoring the importance of mitigating food waste (Gustavsson, 2011).

#### **4. ANALYSIS OF EXISTING SYSTEM**

In present , a current system for the food waste reduction app is the proposed system which only consists of NGO and Restaurants and User and Donor respectively. But in our app any person who has good quality food can donate food and any needy who can be any person or organization can request for food.

#### **5. ALGORITHM**

STEP 1 : Start the application

STEP 2 : Register by filling the necessary details.

STEP 3 :Select the Option of donor or volunteer accordingly.

STEP 4 : If you wish to donate go to donation page by clicking on Donor button.

STEP 5: Then click on create donation.

STEP 6: Fill up the necessary details and click Submit.

STEP 7: If you wish to see donation request then click on Request for Food option.

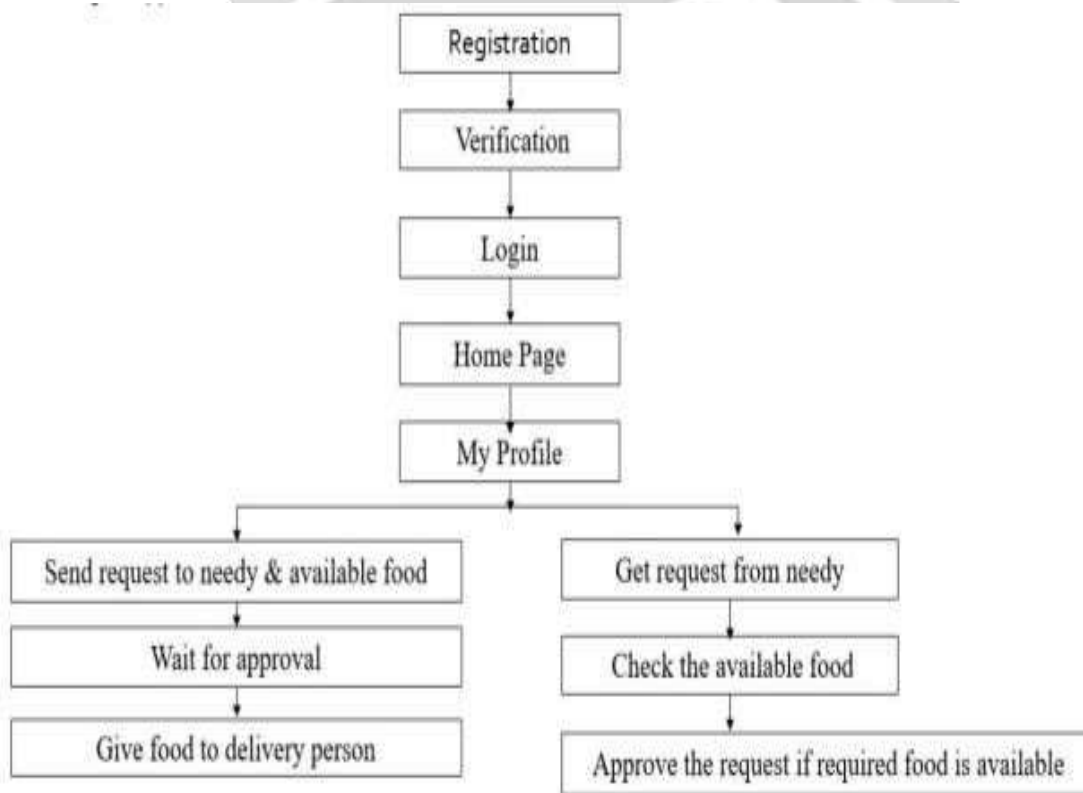
STEP 8 : If you are in need of food then go to request food option which is on volunteer page.

STEP 9: Fill up your requirement and click on Request button.

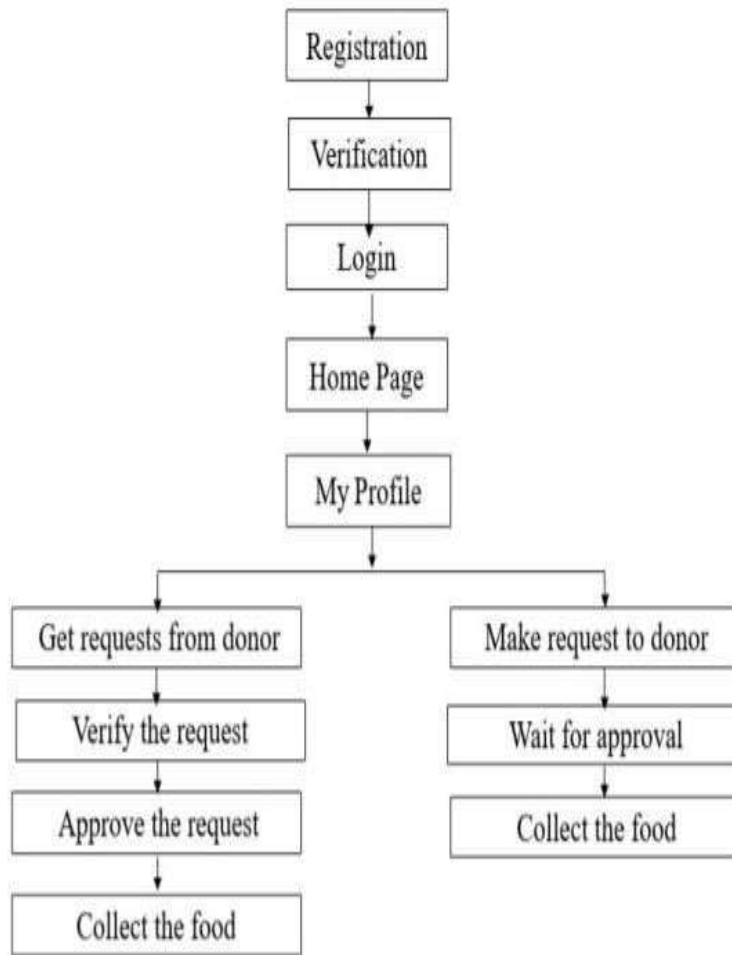
STEP 10 : If you wish to see available food list by donors click on Available Food Button.

## 6. WORKING OF APPLICATION

a) If user is donor:



b) If user is volunteer:



## 7. RESOURCES REQUIRED

### Computer/Laptop :

- Microsoft Windows 7/8/10 (32-bit or 64-bit)
- 3 GB RAM minimum, 8 GB RAM recommended (plus 1 GB for the Android Emulator)
- 2 GB of available disk space minimum, 4 GB recommended
- Java Language

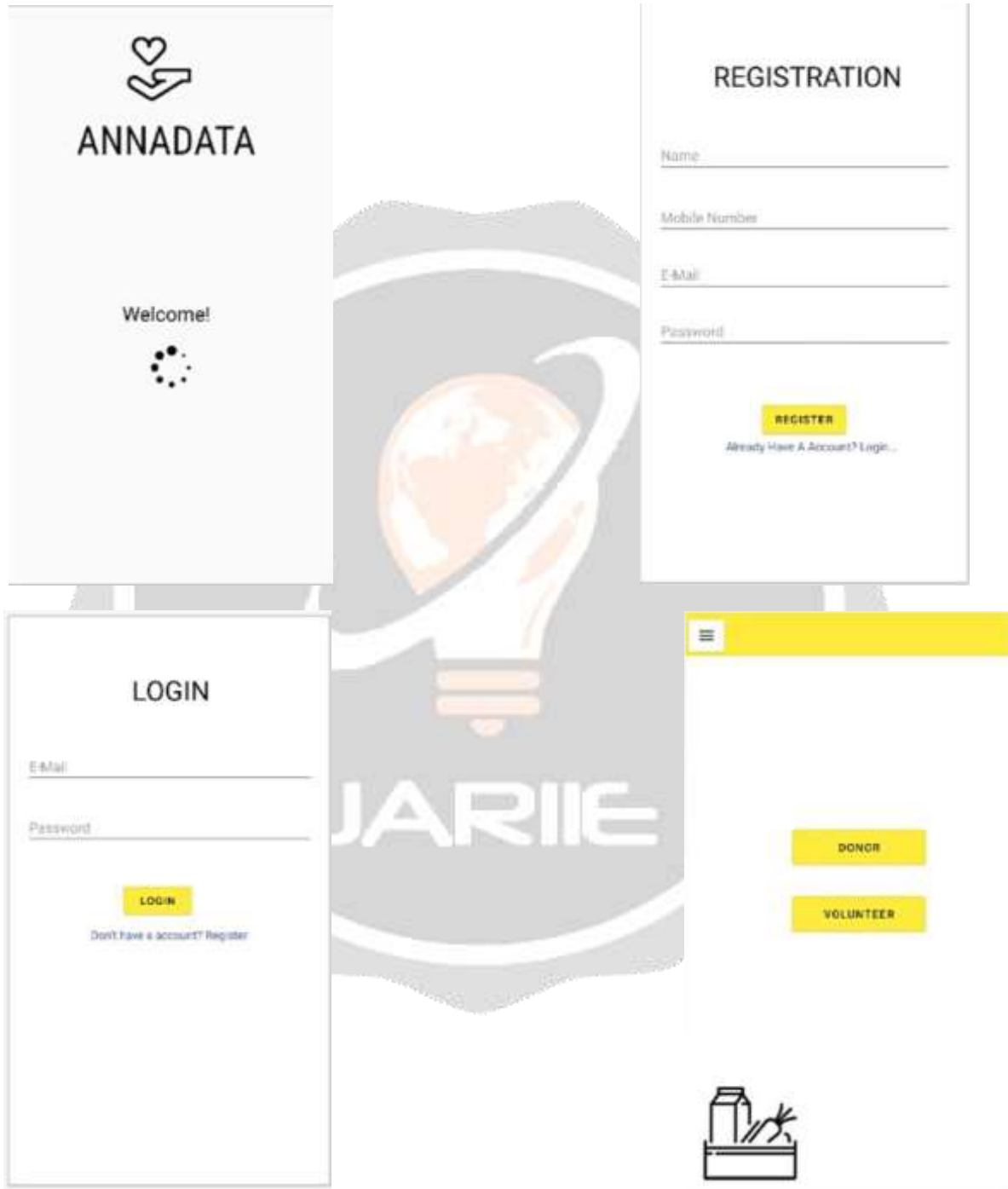
### Software Requirement :

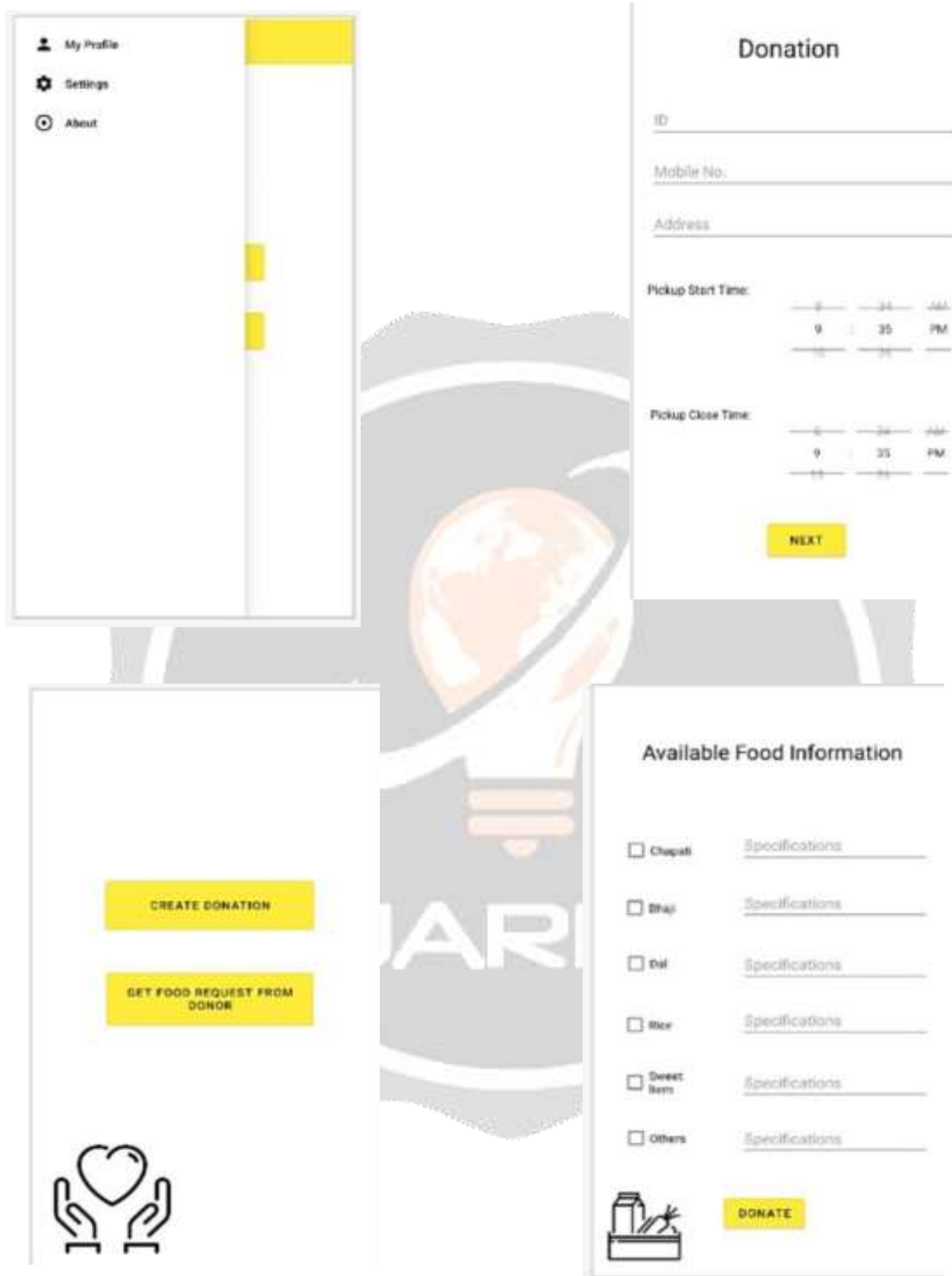
- Windows 7 or higher (used windows 10)
- SDK Tools
- Android Studio
- Firebase Database

### Requirements for Mobile Device

- Android OS based mobile with version 4.0 Android (Ice Cream Sandwich)
- Basic sound functionality
- Internet Connectivity
- Camera

### 8. GUI of Application





### 9. Future Scope

The future scope of the project can be that it is a app which will reduce food wastage . So it can be a medium through which we can stop food wastage little by little. This app is also useful in providing good quality food to needy people and organizations.

## 10. Acknowledgement

Perseverance, Inspiration & Motivation have always played a key role in the success of any venture. At this level of understanding it is difficult to understand the wide spectrum of knowledge without proper guidance and advice, Hence we take this o to express our sincere gratitude to our respected Project Guide Mrs. Arati Deshmukh who as a guide evolved an interest in us to work and select an entirely new idea for project work. He have been keenly co-operative and helpful to us in sorting out all the difficulties. We would also like to thank our Principal Mrs. Geeta Joshi, for their continuous advice and support. My deep sense of gratitude to Matrathwada MitraMandal's Polytechnic for their timely advice and encouragement in our project development.I would also thank my Institution and my faculty members without whom this project would have been a distant reality.

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