

# Online Urban Farming: Introducing online platform for garden lovers

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## Motivation and Objectives

Urban agriculture is the one of the most relevant environmental innovation of the modern era. Sustaining green habitation in city areas has a great social, environmental and commercial effect among the city dwellers. In fact, the decision of urban plantation and rooftop gardening in city can make overpopulated city area more suitable for living with greener environment. Implementation of innovative ideas in this domain can increase the chance of a healthy environment. IT products can certainly be a sustainable solution to network people in the noble cause to make their populated cities with more green habitation. In this project, we aim to design, implement and test a software based solution for buying, selling, networking and giving knowledge about urban agricultural products among the online users.

**Summery of the problems:** Dhaka City sufferers a lo due to air pollution. For this we need to best utilize the urban spaces by setting up green habitation more and more. To pace the growth f urban agriculture. We need IT solutions.

**Aim of the research:** Solving Urban Agriculture equipment shortage by offering a online platform for all.

**Approached methods:** We Implemented A web Platform and Mobile application for solving the lack of communication of users who wants to grow their garden but have not enough information and material support for gardening.

## Urban farming Solutions

### Urban Farming Web-APP VS existing Apps

Website/Technology	Main Features of the existing system	Available Features in UrbanFamingApp compared to the product
Nagarkrishi	\$Shopping of garden kits. \$Online Community	\$Yes, Here also this feature is available. \$Here, In our app we can also build online blogs. \$Extra feature: Selling platform for the nursery owners.
PrakrityFarming	\$Membership based service for garden management	\$We also care for membership based garden management via online
Ugao	\$Garden services, \$Online shopping of garden kits \$Online Payment is possible	\$All the services that Ugao offers, right now all of them are not available. \$Payment options also not available
SmartGardener	\$3D garden designing	\$3D design of garden space is not possible in the application
SmartCultivaApp	\$Sale of IOT devices for urban farming \$Smart sensors connections of urban farming	\$Smart sensors of urban farming is not connected in the application

### List of android apps on online Rooftop farming

- Rooftop Garden Ideas : In the apps, lots of picture are available .
- How to make a Garden : Details of the basic gardening like what types of trees ,flowers can be planted , how to take care ,scientific way etc.
- Roof Gardening Bangla : How to create a roof garden ,What to do, vegetables growing , various tips about gardening etc.
- Chad krishi : Rooftop gardening , what can be done , what are the process ,Fruits & Flowers growing process .

## Key Features of Urban Farm

### OUR MOTO

“বেশী করে গাছ লাগান, ভালো থাকুন”

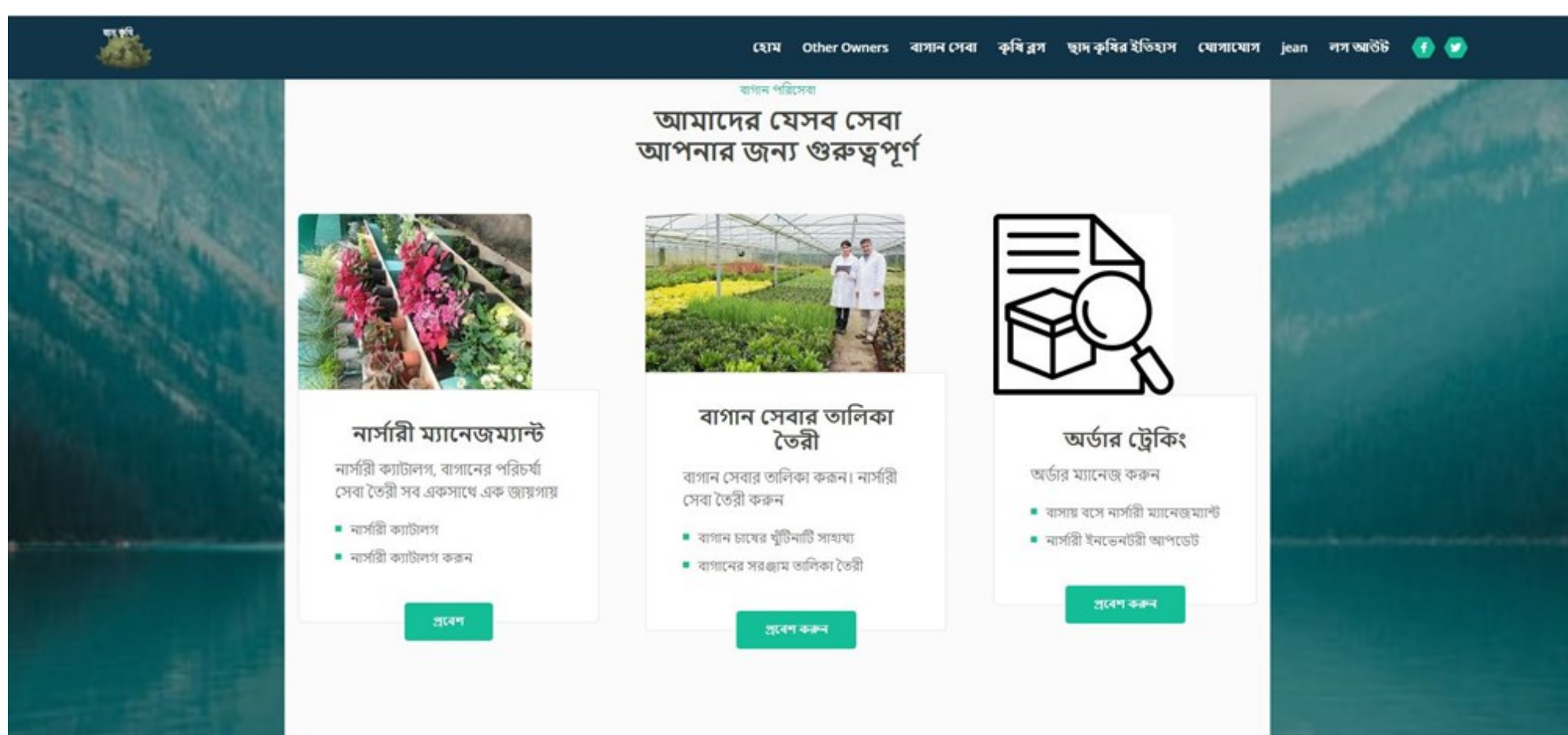
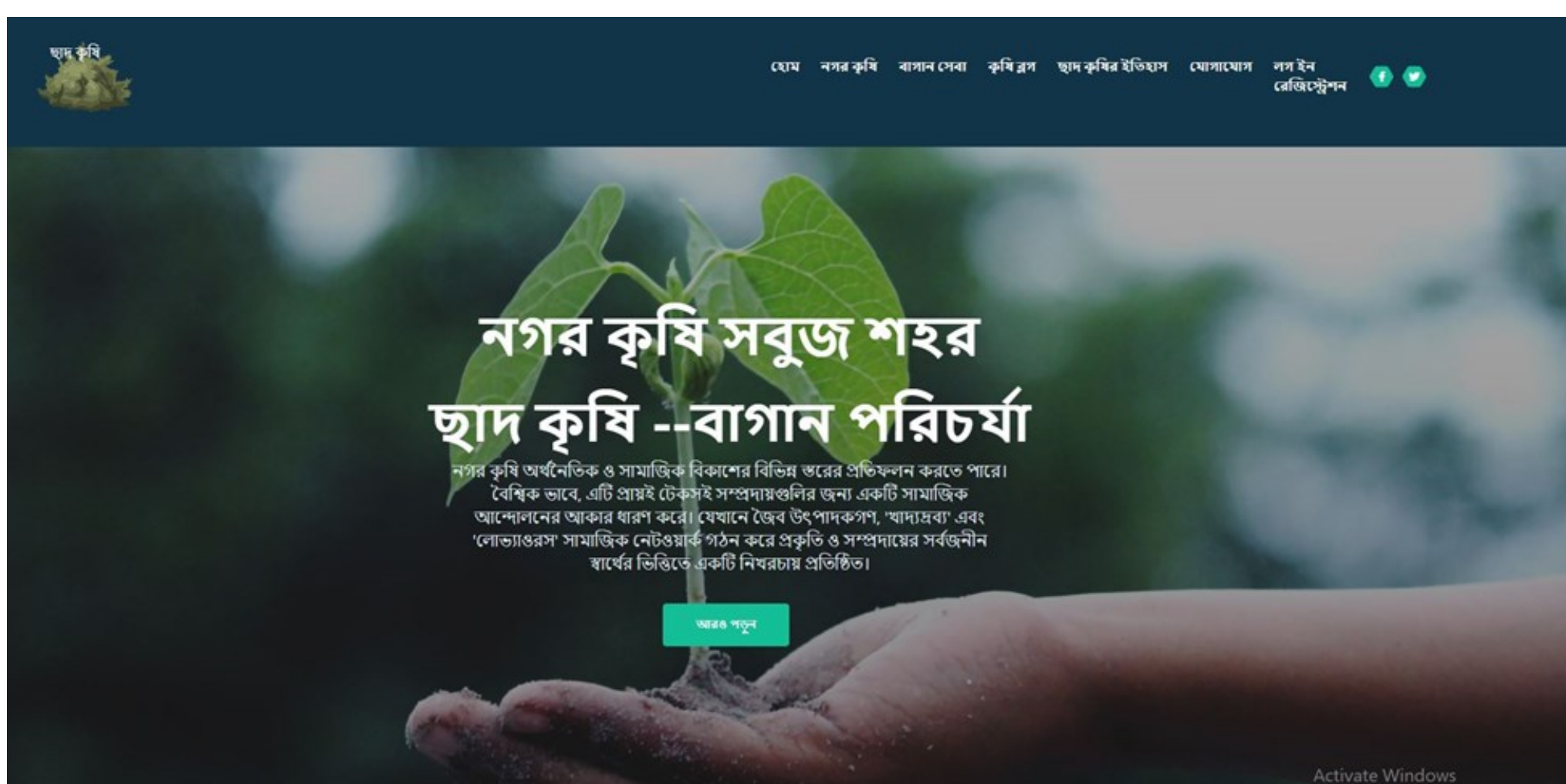
#### For Home dwellers::

**Online Buying at your home:** Now can you buy your Garden materials from home. Just order and call nurseries.

**Plant doctor:** Now can get help from experts. Now garden owners under one roof. Using the online blog of expert advices you can get advices to cure the diseases of your plant.

**Track your order:** Now get tracking your parcel yet to come and use the garden items

**Write your Blog and be an expert:** Now user can also share with other garden lovers about the topics on urban farming.

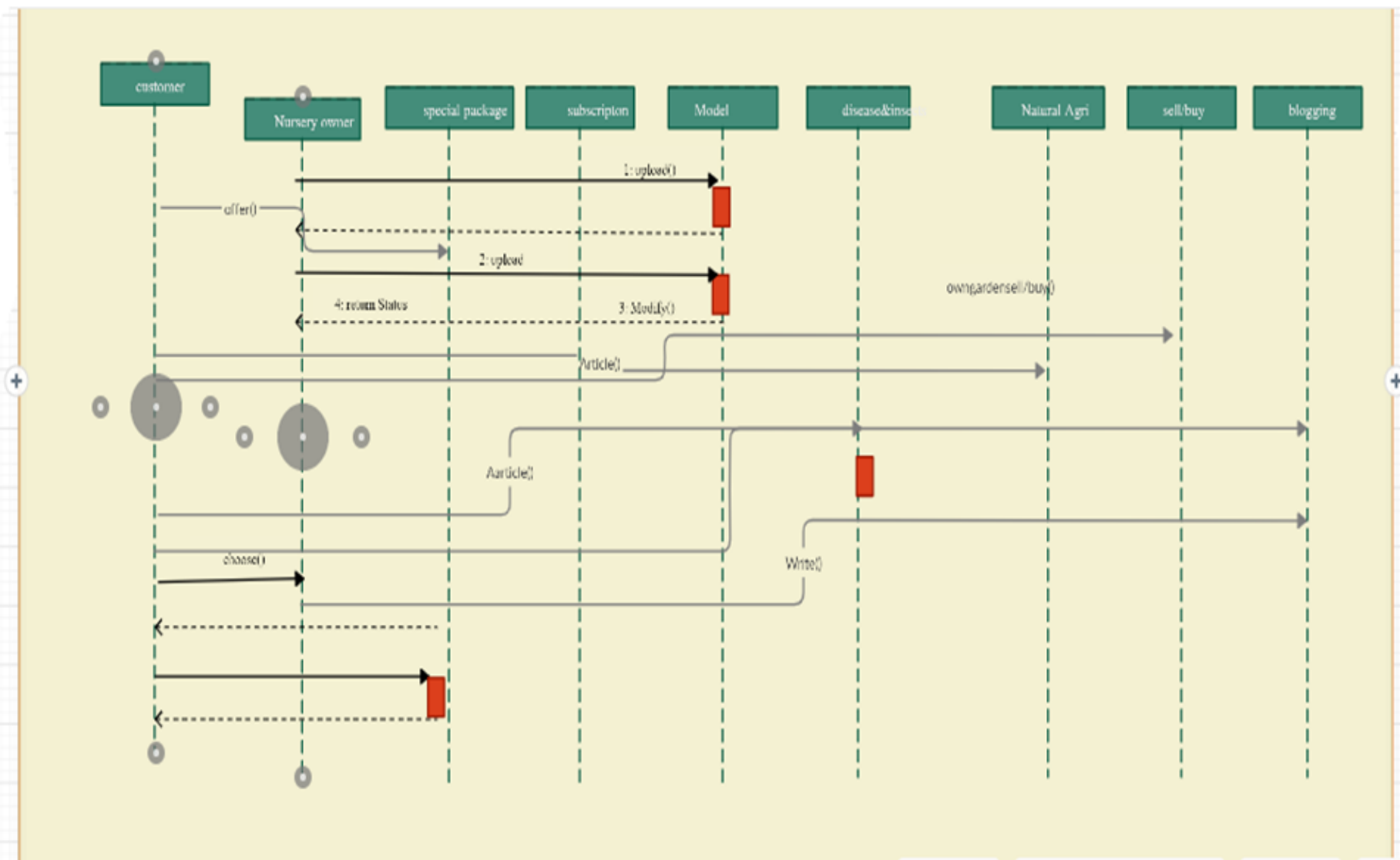


**For Nursery owners:**  
**Nursery Inventory:** Using this feature a provider creates list of inventories of different types of plant or garden materials.

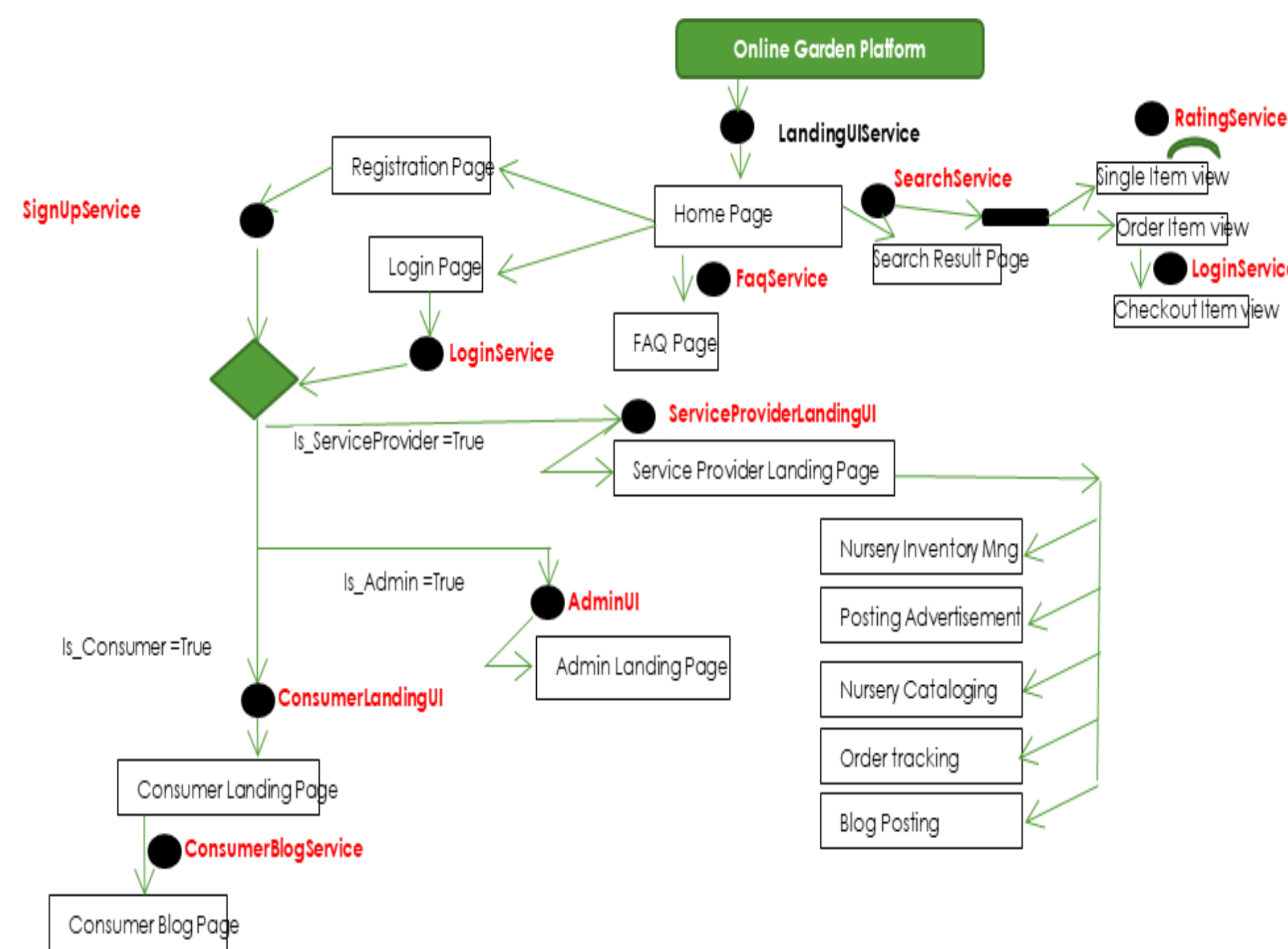
**Plant Management:** Using this feature Nursery Owner can put new information in the inventory list.

**Service Creator:** Using this feature a provider creates list of packages where each package has list of services. Provider can also set the package cost using a form.

## The Software Design Methods



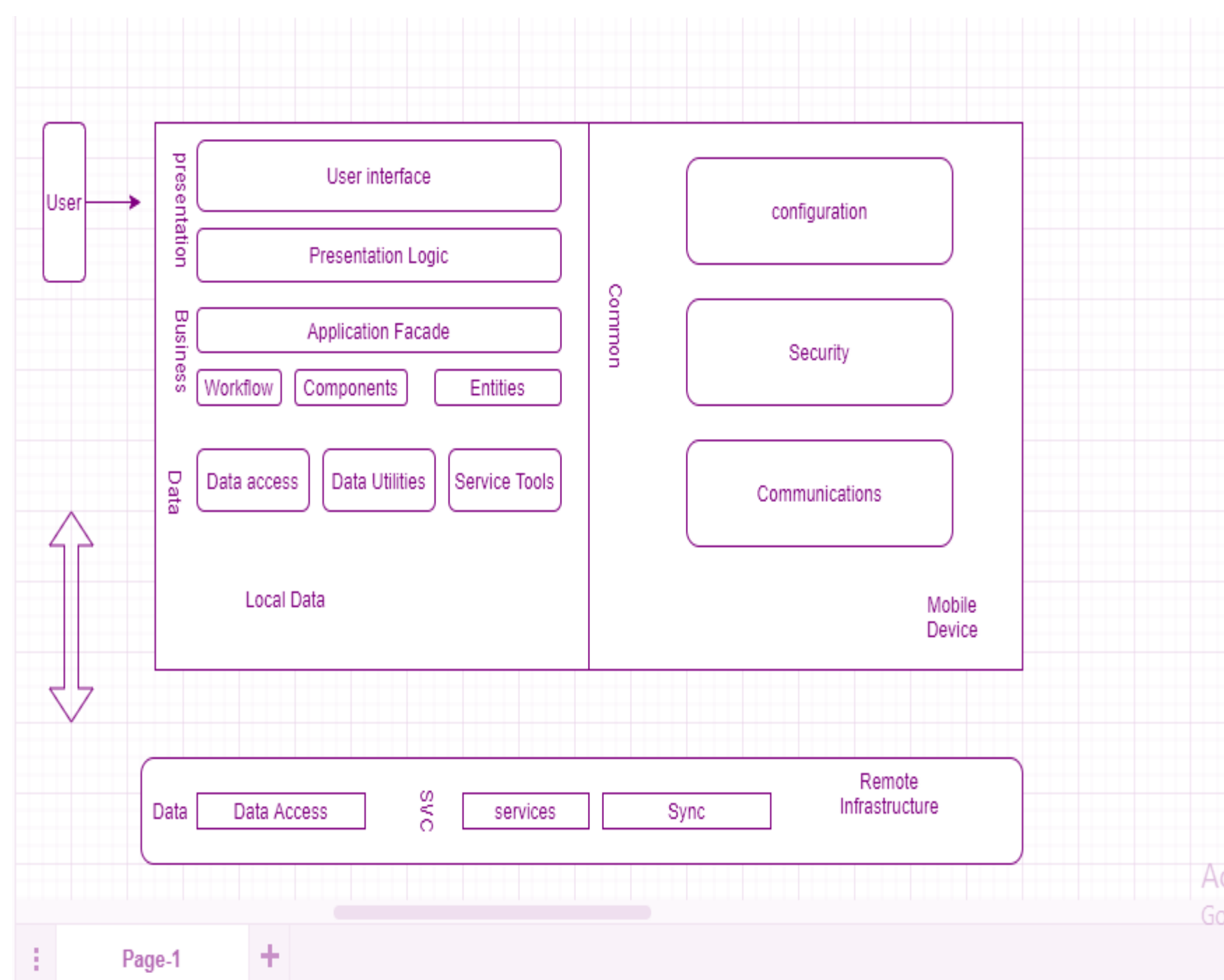
### The Software Development Milestones of the Platform



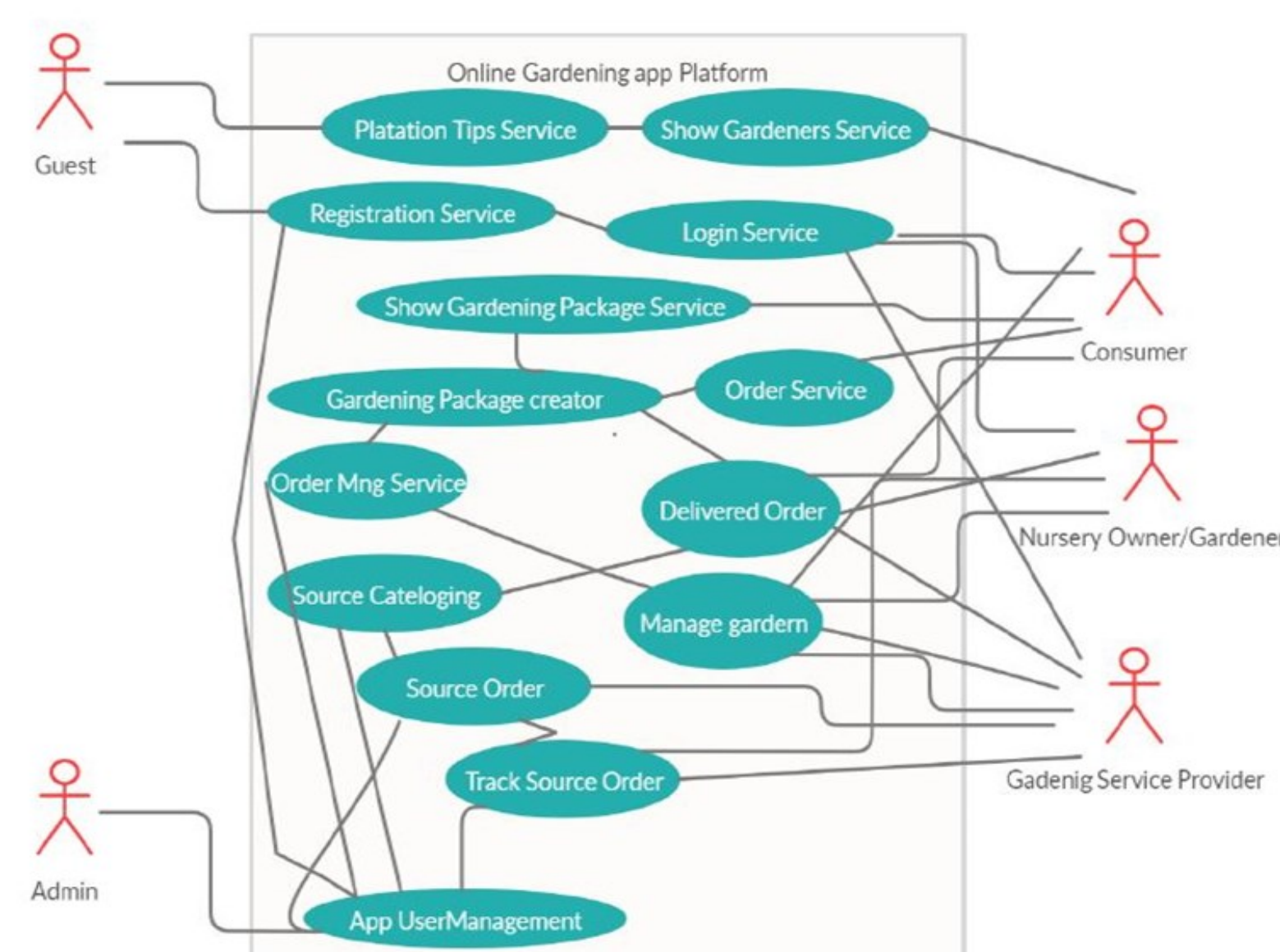
### The Interaction Diagram of the web application

## Module Architecture

### The System Level Design



### The UML Design of the web application

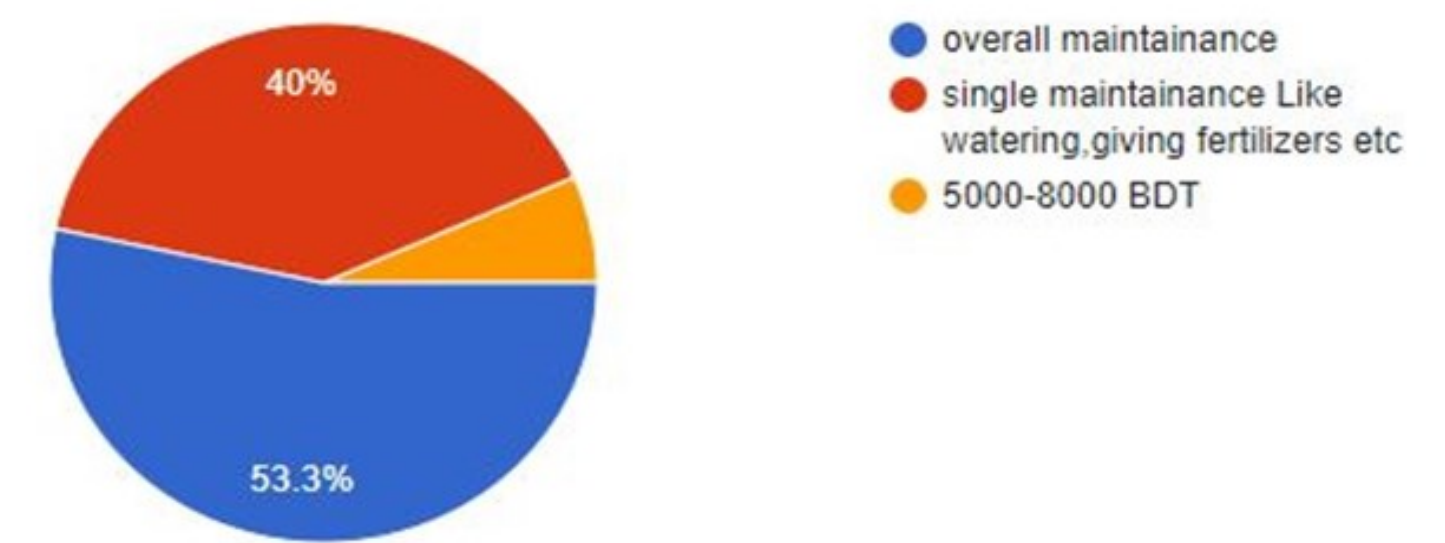


## Impacts of the application

After the development and the deployment of the application we physically visited to the nurseries to show the nursery owners and the basic users who want to grow their plants. We got the following responses for the survey presented in the following Figures :

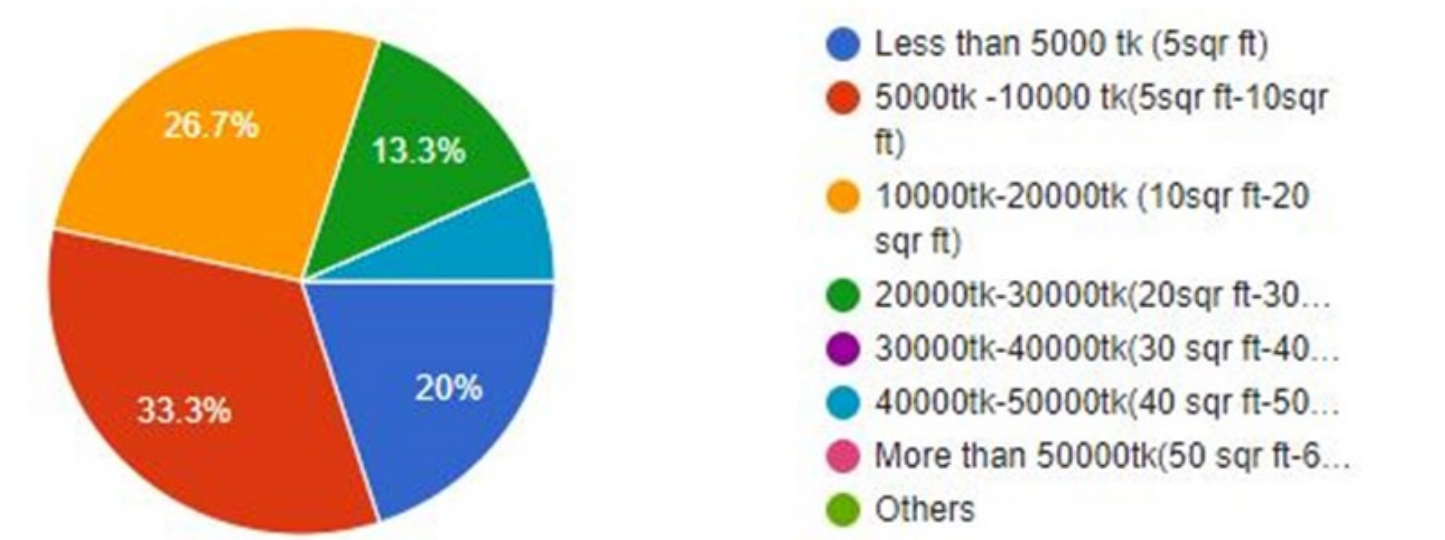
6.If you are offered a service where service provider will do the daily maintenance(watering plants,spreading fertilizers and pesticides,overall maintenance) for your garden,how much would you like to pay monthly for that service?

15 responses



5.If you are offered a service provider will setup the garden(provide seeds,soil,fertilizer,initial maintenance) for you,how much would you like to pay for that service?

15 responses



At last we had a understanding the application should be build in terms of the flexibility of the Nursery Owners. Because Many of them have no mobile phone.

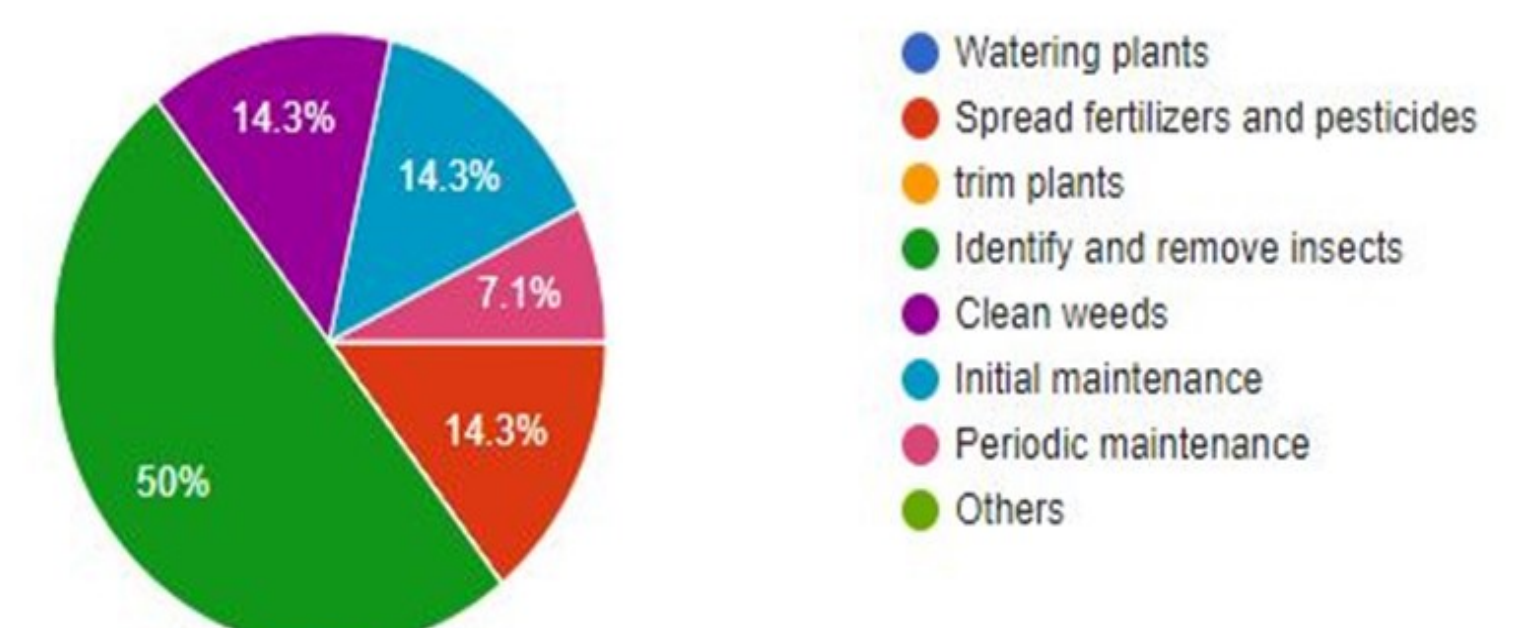
## After math of the final Prototype

After building and the deployment of the final protype we came up with following scenarios:

1.We need to build our application by considering our application

4.Which service you want to get?

14 responses



more focused on diseases of plants. 50% of the respondent of the application wants the service for getting tips regarding the diseases of the plants. Our Mobile App can give advices in this

### Implemented Feature for this:

ছাদ বাগান তৈরি	VIEW
ছাদ বাগান মডেল	VIEW
রোপ ও পোকা মাকড় দমন	VIEW
নার্সারী মালিক	VIEW
কল	VIEW
জৈব কৃষি	VIEW
ক্রয়	VIEW
বিক্রয়	VIEW
এপ ইন্সটলেশন এবং ডেভেলপার	VIEW

## Conclusion

Although we tried to implement the most favorable features for the urban rooftop farming, some important updates still need to be developed in future. A online platform can easily grow a lot via the online communication and people can really get help by getting information via the application.