C.I.4.02 Software Engineering

Planning Report

Submitted to:

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Submitted by: Group 13

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INTRODUCTION

This Project has been developed to cater the individual needs of an enthusiastic Gardner for better growth of plants based on the different requirements. This informative application will have potential to replace the manual efforts done by planters not only to search or learn the different growth patterns but also provide all relevant information that the user needs to know about a given cultivated plant.

This is an initial project base document which provides a wide view of how a system, and its actors will achieve a predefined goal of design of super-productive gardens. An effective Plantsymbiosis Application should provide a detailed step-by-step description of how this ecosystem will be used with different processes interleaved in order to have the best growth in a given period of times

By the means of report, we would also like to tie the business needs of the user to the design parameters of the system, to ensure that the complete system achieves the goals established by the user. This very new Plantation based application system will emerge as a boon to describe the relationship between one plant with others and different biological organisms.

^{*}The level of detail in Document may vary greatly depending on the size and complexity of the system being designed.

SCRUM TEAM

Name	Role
Keshav Shrestha	Developer/Tester/Scrum master
Gerald ehidom	Developer/Tester
Pranay Bhatia	Developer/Tester/designing
Oguzhan kaygusuz	Developer/Tester/Product owner

PRODUCT VISION

To deliver a core android application that tries to accomplish high cultivation based on different biological and symbiotic interrelationships. The application will elaborate a dynamic atmosphere to document and search among symbiotic relationships between plants and other biological organisms. This anytime and anywhere application will make sure the app will fit best in fields and other open environments.

USAGE

- A Central source of all relevant information suited for individual needs.
- Useful for plantation enthusiasts to cultivate a super productive home garden.
- Store information about different plants in a depictive manner.
- Record own set of symbiotic information.
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USER STORIES

#Epic1:// As a user, I want to record and insert the information by myself about any plant to maximize product quality

- Feature 1: Ability to add a name
- Feature 2: Ability to add a description
- Feature 3: Ability to add the favorable light
- Feature 4: Ability to add the soil and watering conditions
- Feature 5: Ability to add maximum production per plant(grams).
- Feature 6: Ability to add a picture of the plant

#Epic2:// As a user, I want to be able to record relationships between plants to record which plants benefit from being near each other and which plants should not be together.

- Feature 1: Ability to make the distinction between different symbioses, such as mutualistic, parasitic, competition and commensalistic (or neutral let's say).
- Feature 2: Ability to add advantages/disadvantages.
- Feature 3: Ability to add a description or comments

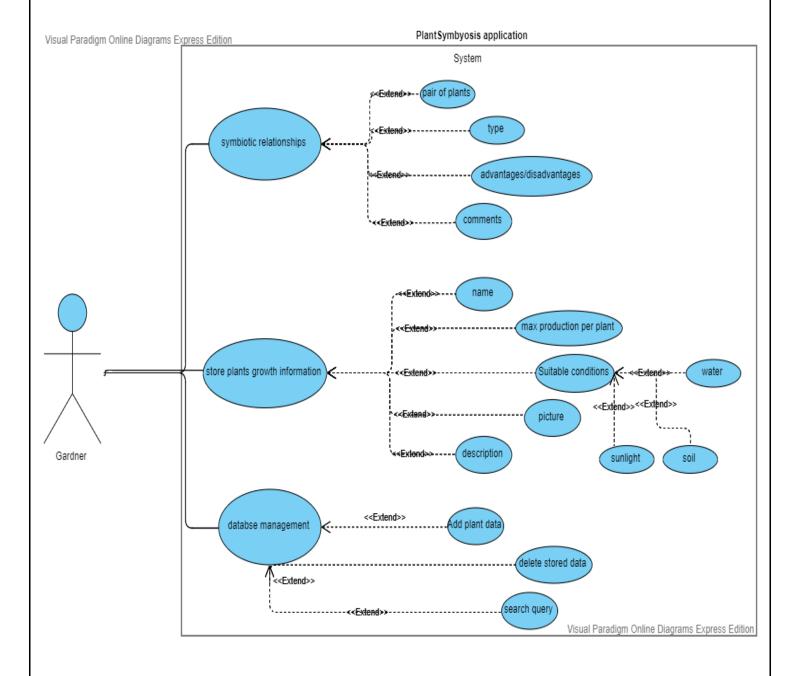
#Epic3:// As a user, I want to use this android app whenever and wherever I need, to record the relationships between plants or to consult these relationships.

#Epics4:// As a user, I want an environment (User Interface) to record, edit, read or delete plants and the same for symbiosis.

- Feature1: Ability to have an easy interface with a text input to search.
- Feature 2: Ability to have is an environment that is capable of suggesting designs based on a set of plants.

For example, imagine that I want to have tomatoes and leeks, so I insert this info, and the app suggests to create alternative lines of tomatoes and leeks. Or if I want to have tomatoes and leeks, but I have insect problems, the app suggests to create alternative lines of Tomatoes, Basil, Leeks, Basil

USE CASE VIEW



USE CASE 1

Name of Use Case:	Symbiotic relationships	
Description:	All the details about necessary symbiosis will be provided	
Actors:	Gardeners	
flow	 search for a suitable couple of plant Make a simple GUI click to have information 	
	3. An informative page is opened	
Remarks:	All the sufficient knowledge will be provided for a given plant pair	

USE CASE 2

Name of Use Case:	plant growth information	
Description:	Display all the data about plant requirement	
Actors:	Gardeners	
flow	 The tab is opened by a simple click on plant growth information tab A list of plants is displayed Choose 1 plant Details about that plant will be shown 	
Preconditions:	At least data of one plant should be stored before handed.	

USE CASE 3

Name of Use Case:	Database management	
Description:	To enter necessary plant details	
Actors:	Gardeners	
flow	 Gardner opens add data tab Gardner choose to add data of a plant 	
	3. Gardner enter name of plant and choose image(optional)	
	4. The following data will be stored under plant growth information tab	
	as soon as he presses save button	
Alternate flow	1. Gardner opens add data tab	
Alternate now	2. Gardner choose to add data symbiotic data	
	3. Gardner enter the plant pair and relevant data	
	4. The following data will be stored under symbiotic information tab as	
	soon as he presses save button	

PRODUCT BACKLOG

case	Task	priority
Must have	Android Studio and Java Language along with research	1
	Add plant name and description.	2
	Record relationship and type of relationship between plants.	4
	User interface to record edit read or delete plant data	3
Should have	Add suitable soil, light and water condition	7
	Add advantages and disadvantages of different plant symbiosis combination	5
	Suggesting a suitable planting pattern for a given set of plants.	4
Could have	Max production per plant	9
	Picture depiction of a plant	10
	Add description and comments	8
Won't have	Complex user Interface	

SCRUM 1 BACKLOG

Task	priority
Gather information and search for resources	
Design and create basic user interface	2
User interface to Add plant names and description. Record, edit, read or delete plant data	4
Record relationship and type of relationship between plants.	
Add suitable soil, light and water condition	
Add advantages and disadvantages of different plant symbiosis combination	5
Suggesting a suitable planting pattern for given sets of plants.	6
Add text input search button	8
Design suggestion for plants	9

INITIATE/PLANNING REPORT

For the development of application PlantSymbiosis, we will be using android studio platform with Java as programming language. We will be using GitLab, source tree etc to share our work among ourselves. Also, at the end of every week, scrum team meetings for the current sprint will take place to solve the problems and issues encountered.

First of all, we will develop the main activity which will be the homepage of our app. This page will have various text buttons including: -

- A text-input search button to search for the plants that have been recorded.
- List button which will allow user to access all the plants in app database.
- List button which will allow user to go to the second activity page that contains a list of all the recorded plants and their ecological information such as plant relationships, growth rate, types of soil needed, etc. The user can edit or delete items to this list according to their need.
- The add button will access the phone gallery, so that we can add photos of new plants. Also, in
 this page users will add information of all said plants. This new record will be added to the
 Lists activity page.

To complete all these tasks, the group members will work in groups of two. The members will alternate their pairings so all members can work with each other. Our target is to present our product owner with a version 1 of PlantSymbiosis app by 24th June,2020. Each step will be documented using suitable tools and a retrospective will be created at the end of our first sprint. Also, at the end of the first sprint, we will refine our product backlog and also create a backlog for the second sprint. For this, another meeting between project product owner and team members along with scrum master will be conducted. Further app development for this project will be discussed during this meeting.