



ATD Document

Acceptance Test Deliverable Document

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1 Introduction

1.1 Purpose

This document is the Acceptance Test Deliverable (ATD) for the Dream project. Its purpose is to analyse and test the project developed by another group, to point out any eventual bug of the system and inconsistencies with the requirements described in the RASD and DD documents.

1.2 Project analysed

The project analysed is the one developed by **Chiara Magri**, **Filippo Lazzati** and **Christian Grasso**. The source code, as well as the RASD, DD, ITD and every other document concerning the project, can be found on their GitHub repository: <https://github.com/Chiara-Magri/GrassoLazzatiMagri>

2 Installation Instruction

We followed all the instructions given in the ITD. The group provided a complete set of instructions to setup the DB, populate it and to run the application. It was also defined how to setup the DB for the tests and run them.

To develop the project it was necessary to install python with different libraries and PHP along with Composer (a packet manager for PHP) and Symfony (a PHP framework), because we develop our project using a completely different set programming languages and frameworks.

3 Acceptance Test Cases

We tested the project implementation following the use cases presented in the *RASD* document and the section 2 of *IT* document. We tried to figure out if the requirements were fulfilled and tested different scenarios to see if enough controls were implemented. We also run the tests the developers implemented and all passed.

- **UC1 RegisterFarmer:** The registration process is clear and well implemented. We did not notice any problems during this phase. We registered different farmers using different email addresses and the process was always successful. We also tried to register a farmer with an email address already present in the database, but an error message appeared and the operation was refused as expected.
- **UC2 RegisterAgronomist:** The function was not implemented as stated in *IT* document. We managed to access the Agronomist area following the instruction presented in the "*Installation instructions*" section of *IT* document.
- **UC3 LogIn:** We did not have any problems during the login process.
- **UC4 ViewProductionData:** The section shows correctly the data inserted by the farmers. We found out some bugs that will be presented in the following section.
- **UC5 InsertProductionData:** The platform consents to select the action from a drop-down menu and insert the data related. We noticed that we could insert areas bigger than the one available: for instance, for an area of 1000 m^2 of planted potatoes, we could harvest a 20000 m^2 area. We suggest to implement some controls on the area values.
- **UC6 InsertProblems:** The platform consents to insert the description of the problem the farmers face, but they can not request a visit because the function was not implemented, so obviously it could not be added to the agronomist's daily plan.
- **UC7 AcceptDailyPlan:** The function in the Agronomist area works well. We managed to insert, remove and modify different appointments. We created also another Agronomist for the same area to check if was possible to assign more than twice of the visits than an agronomist of the same area. We noticed that this requirement was not fulfilled as you can assign four visit to an Agronomist while the other one has just one scheduled visit. The farmers did not received any notifications for the incoming visit.
- **UC8 ViewDetailsOffFarmToVisit:** The function presented a bug: when we tried to call it, a not managed error appeared. A better explanation of the wrong behaviour is provided in the following section.

- **UC9 MoveVisitToDailyPlan:** Same as in UC7.
- **UC10 DeleteVisitFromDailyPlan:** Same as in UC7.
- **UC11 AddVisitToDailyPlan:** Same as in UC7.
- **UC12 ConfirmDailyPlan:** Same as in UC7.
- **UC13 GetSoilSensorsData:** The function was not implemented as stated in section 2.2 of *IT* document.
- **UC14 GetWaterIrrigationSystemData:** The function was not implemented as stated in section 2.2 of *IT* document.
- **UC15 VisualizeBestAndWorstFarmers:** The function was not implemented as stated in section 2.2 of *IT* document.
- **UC16 MarkBestPerformingFarmer:** The function was not implemented as stated in section 2.2 of *IT* document. No requirements were associated in *RASD* document.
- **UC17 UnmarkBestPerformingFarmer:** The function was not implemented as stated in section 2.2 of *IT* document. No requirements were associated in *RASD* document.
- **UC18 AnalyzeImpactOfInitiative:** The function was not implemented as stated in section 2.2 of *IT* document. No requirements were associated in *RASD* document.
- **UC19 VisualizeWeatherForecasts:** In the Weather section we were able to select the city we wanted to know the weather forecast and the function retrieved the information related to the next five days.
- **UC20 VisualizeFarmerSuggestions:** The system was able to retrieve the information related to the searched suggestions. The platform consents to select if you are interested in suggestions about the crop to plant or the fertilize to utilize.
- **UC21 GetWeatherForecasts:** Same as in UC19.
- **UC22 RequestToExpert:** There is no ranking on the farmers so you can not ask to best performing farmers. However it is possible to write directly to the Agronomist about issues encountered.
- **UC23 ExpertResponse:** The function works perfectly as described only for the agronomist, because the best performing farmer has not been implemented.
- **UC24 VisualiseResponse:** The function works perfectly as described.

- **UC25 CreateFarmersForumThread:** The function works perfectly as described. You can insert the title of the thread and the description.
- **UC26 WritePostOnFarmersForum:** The function works perfectly as described. It is possible to write under a thread and add replies to other farmer's post.

4 Additional Notes

4.1 Source code

The source code is overall well developed and the general structure of the code follows the MVC pattern as stated in the DD.

We also noted that parts of the PHP code doesn't have documentation, while Python is well documented.

4.2 Logic concerns

During the testing of the application we encountered some bad behaviours. The example found by us were:

- When a Farmer, while inserting two New Production Data, try to completely harvest one of the crop of its plantation in two different times (the second value exceed the remaining area to be harvested), in the "Production Data" the page remains bugged with the crop, that the farmer try to completely harvest, and an area value that we didn't understand how it was produced.

DREAM

Home

Production Data

Forum

Suggestions

My Requests

Weather Forecasts

AA

New Production Data

Production Data

Planted Crops

Crop	Area
tomatoes	2m ²

Entries

Date/Time	Comment	Entries
11/02/2022 17:55	-	Harvesting 9m ² tomatoes
11/02/2022 17:55	-	Harvesting 9m ² tomatoes
11/02/2022 17:43	-	Planting / Seeding 10m ² tomatoes
09/02/2022 18:16	-	Harvesting 123m ² onions
09/02/2022 18:16	-	Planting / Seeding 1m ² onions

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Figure 1: Double harvesting in production data

Whenever this bug happens other bad behaviours will occur if the Farmer tries to insert another crop in a New Production Data.

DREAM

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[Production Data](#)

[Forum](#)

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Figure 2: Crop not inserted from production data

- When a Farmer tries to insert a New Production Data concerning Fertilizing, Watering or Harvesting, if the User select "Select an entry" instead of selecting a real crop, the system display a server related error.
Screen before the error:

DREAM Home Production Data Forum Suggestions My Requests Weather Forecasts			A2
New Production Data			← Back to production data list
Date	08/02/2022 22:26:21		
Comment			
Entries			
Fertilizing	Related entry Select an entry	Area 0	
Watering	Related entry Select an entry	Area 0	
Harvesting	Related entry Select an entry	Area 0	
+ Add new entry			
Save			
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Figure 3: Example of selection that retrieves an error

Error screen:

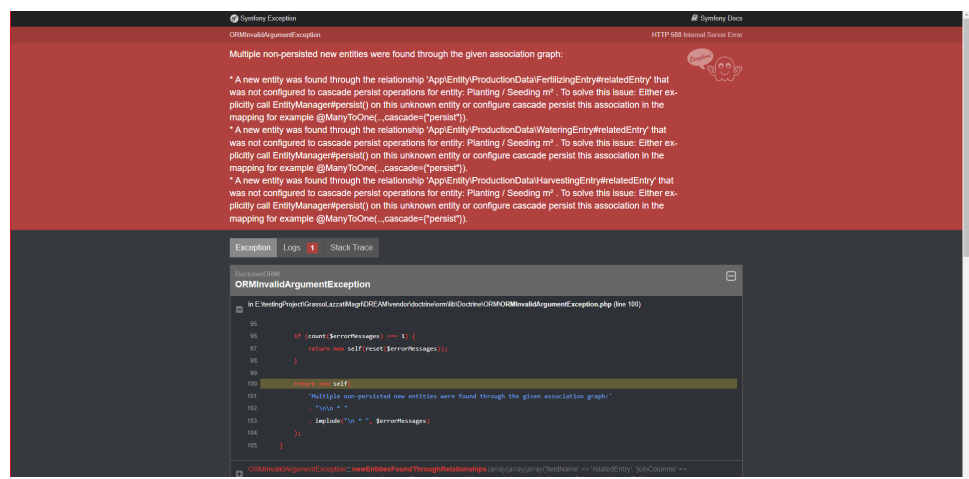


Figure 4: Error retired

- When an Agronomist tries to see the details of a farm to visit that he has inserted in the Daily Plan, the system display a server related error.
Screen before the error:

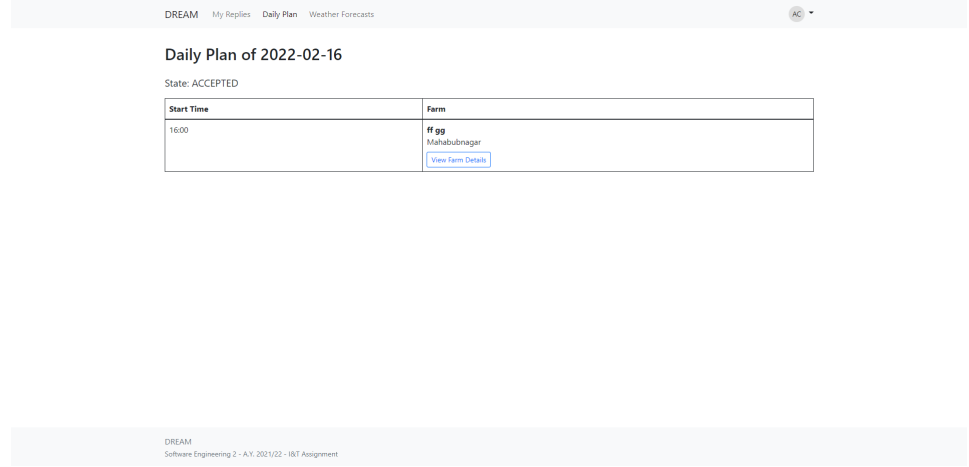


Figure 5: Daily Plan section screen

Error screen:

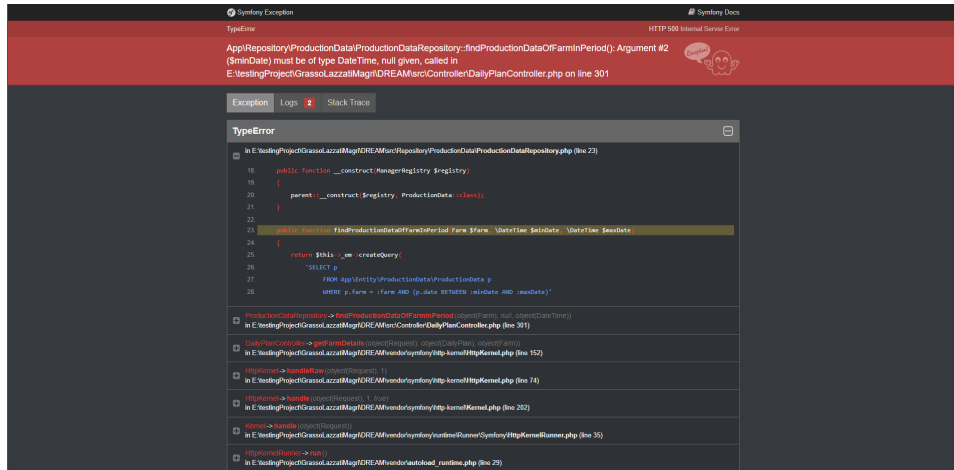


Figure 6: Error retrieved when clicking on View Farm Details

4.3 User experience concerns

While testing the application we encountered some terms that were not so clear at first impression.

- It's not clear the term "Area" when try to insert a New Production Data. We did not know if we had to indicate an extension or if we had to insert a maybe the addition of the unit of measure could help understand better.
For instance: Area (m^2).
- It's not clear the relation between "Farm Area" and "Farm City" for a User. For instance the User, in the registration phase, could select "Adilabad" as Farm Area and "Hyderabad" as Farm City even if "Hyderabad" is the name of another Farm Area.

5 Effort Spent

	Alessandro Cecchetto	Mattia Siriani	Matteo Visotto
Time for testing	2h	2h	2h
Time for writing the document	2h	2h	2h