İZMİR UNIVERSITY OF ECONOMICS

ACCOUNTING SYSTEM FOR OLIVE OIL PRODUCER #12

SE 305 – Software Specification and Design
Term Project Design Document

Buluthan İnan 20180601022

Fatih Seha Öçal 20180601031

Alperen Ertan 20180601021

Özge Başak Laçın 20160608048

Burak Erdoğan 20170601010

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1. Introduction

An accounting program for the olive oil producer to calculate his expenditures, how many kilos of olive oil he can produce current year and how much profit will he gain considering the data on the current Aydın Exchange for olive oil.

2. Problem Definition

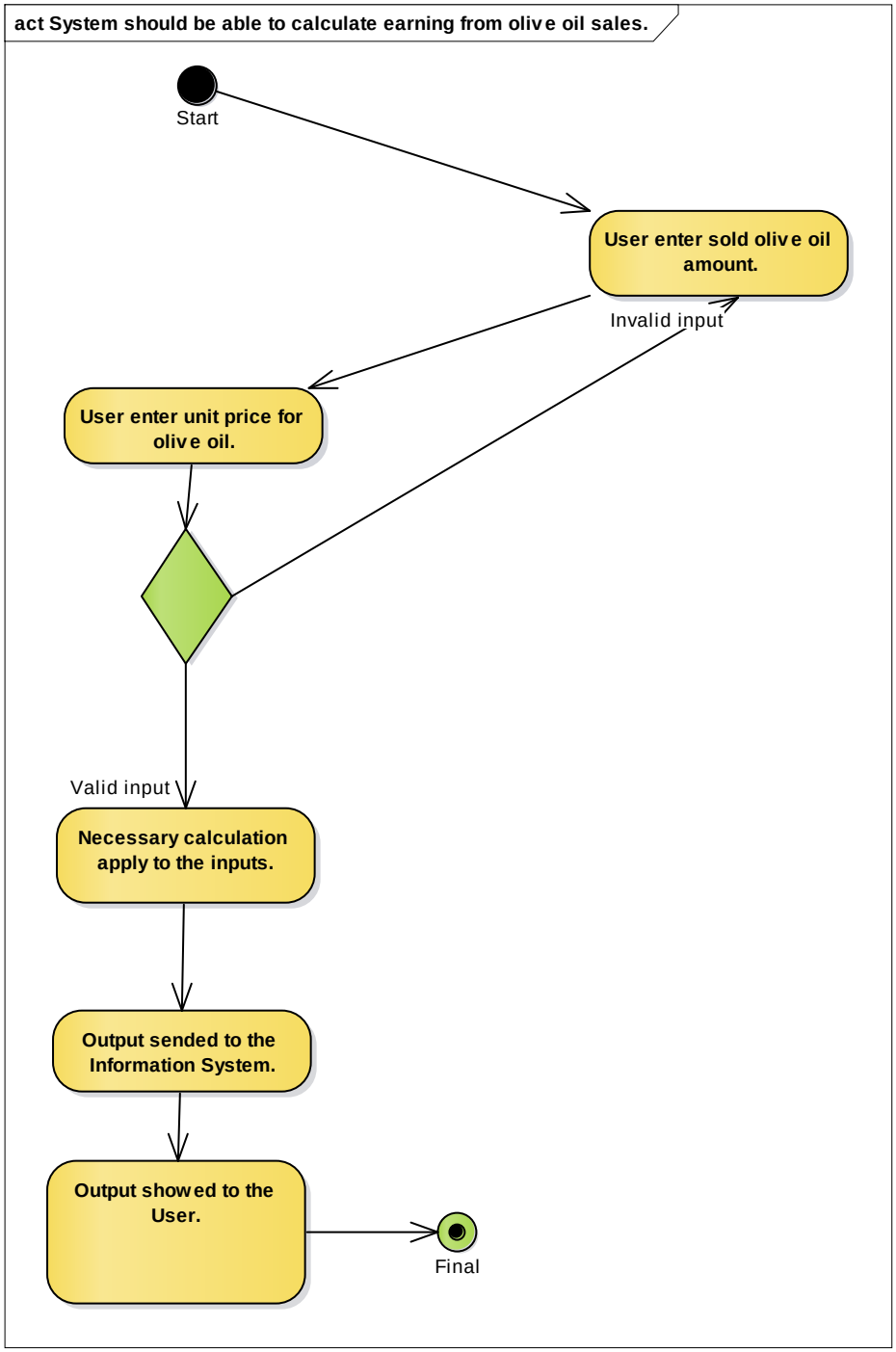
Our customer does not know how much profit he will get from his olive oil sales and he wants to have an opinion on this issue. Also our customer has problems about keeping track of workers and suppliers.

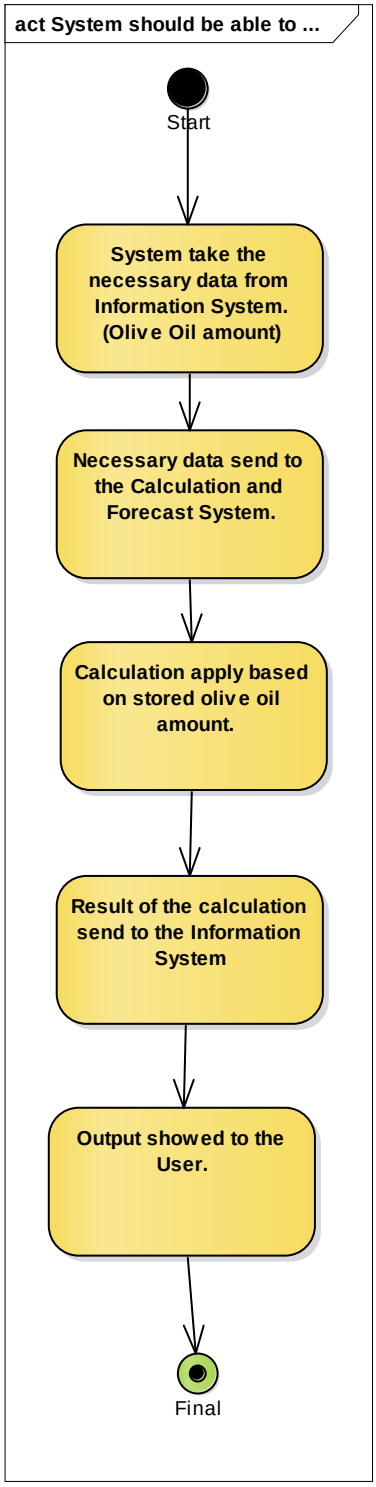
3. Proposed System Design

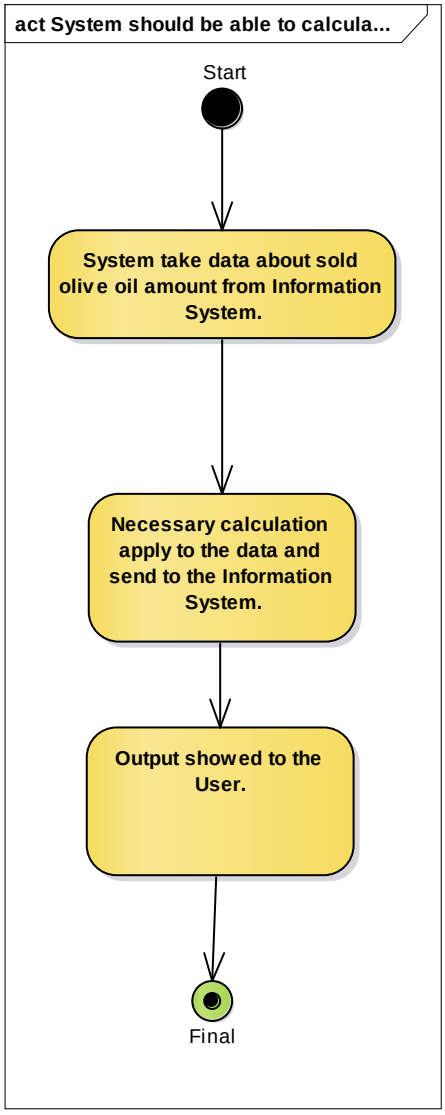
3.1. Requirements

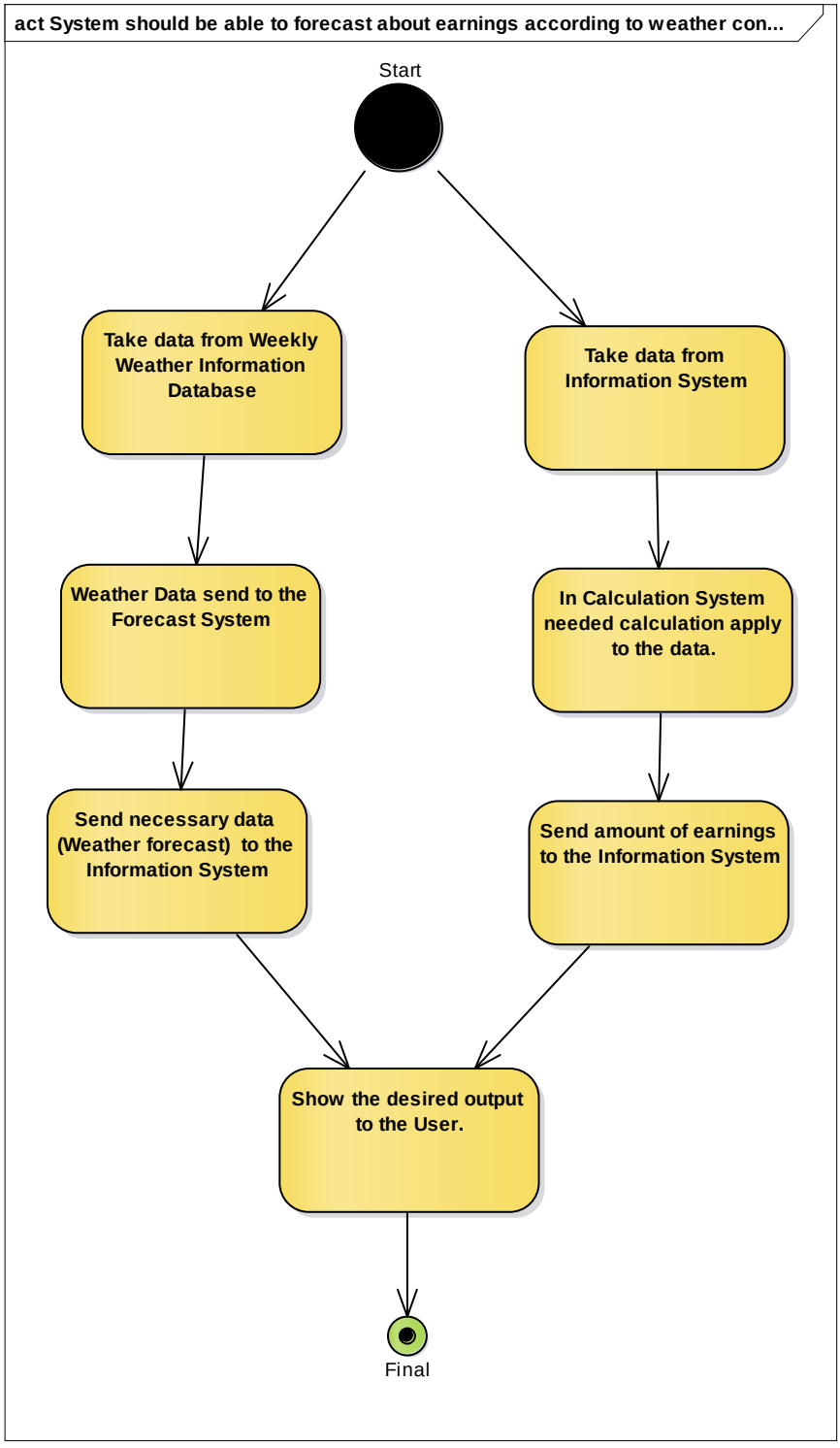
3. System Requirements
3.1. Functional Requirements: 1. System should be able to calculate earnings from olive oil sales. 2. System should be able to calculate how many barrels needed for stored olive oils 3. System should be able to calculate taxes for sold olive oil. 4. System should be able to forecast about earnings according to weather condition. 5. System should be able to get and show prices from Aydın Commodity Exchange Market Olive Oil Currency. 6. System should be able to get weather condition from internet for olive producers. 7. System should be able to store and update supplier files for barrel when it needed. 8. System should be able to store and update worker files when it needed. 3.2. Non-Functional Requirements: 1. System should be required at least 10 GB HDD space 2. System should calculate how many barrels needed for stored olive oils under 10 ms. 3. System should have a database which can be stored at least 50 worker files. 4. System should refresh the prices from Aydın Commodity Exchange Market Olive Oil Currency every day. 5. System should update weather condition data from internet every day.

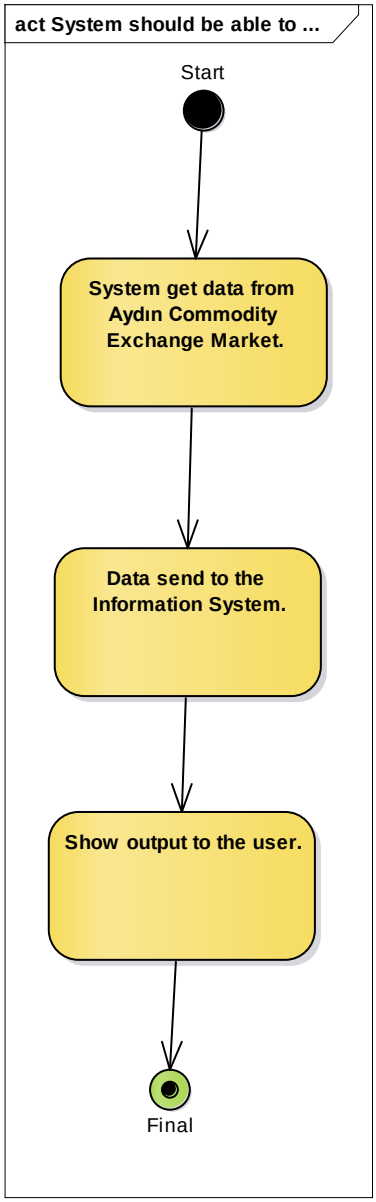
3.2. Activity Diagrams

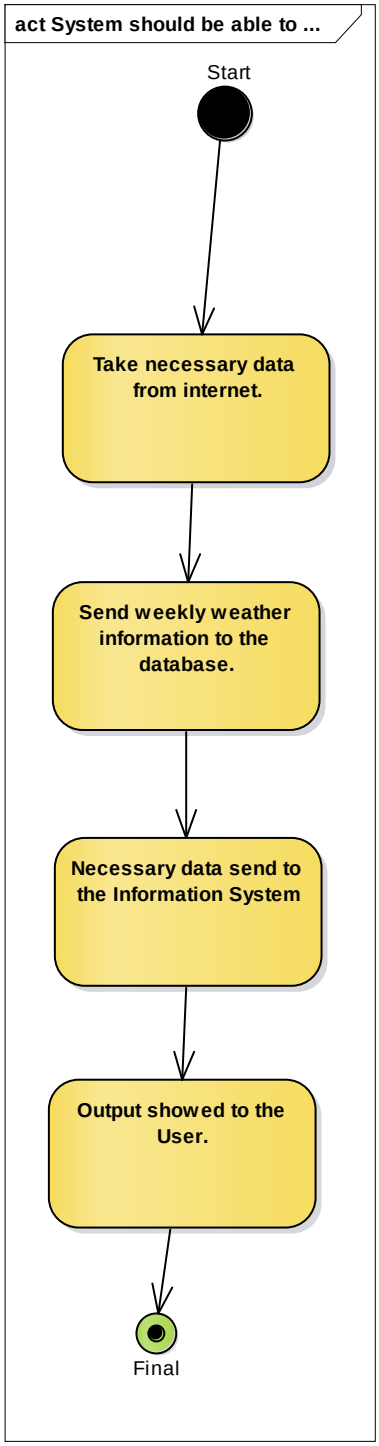


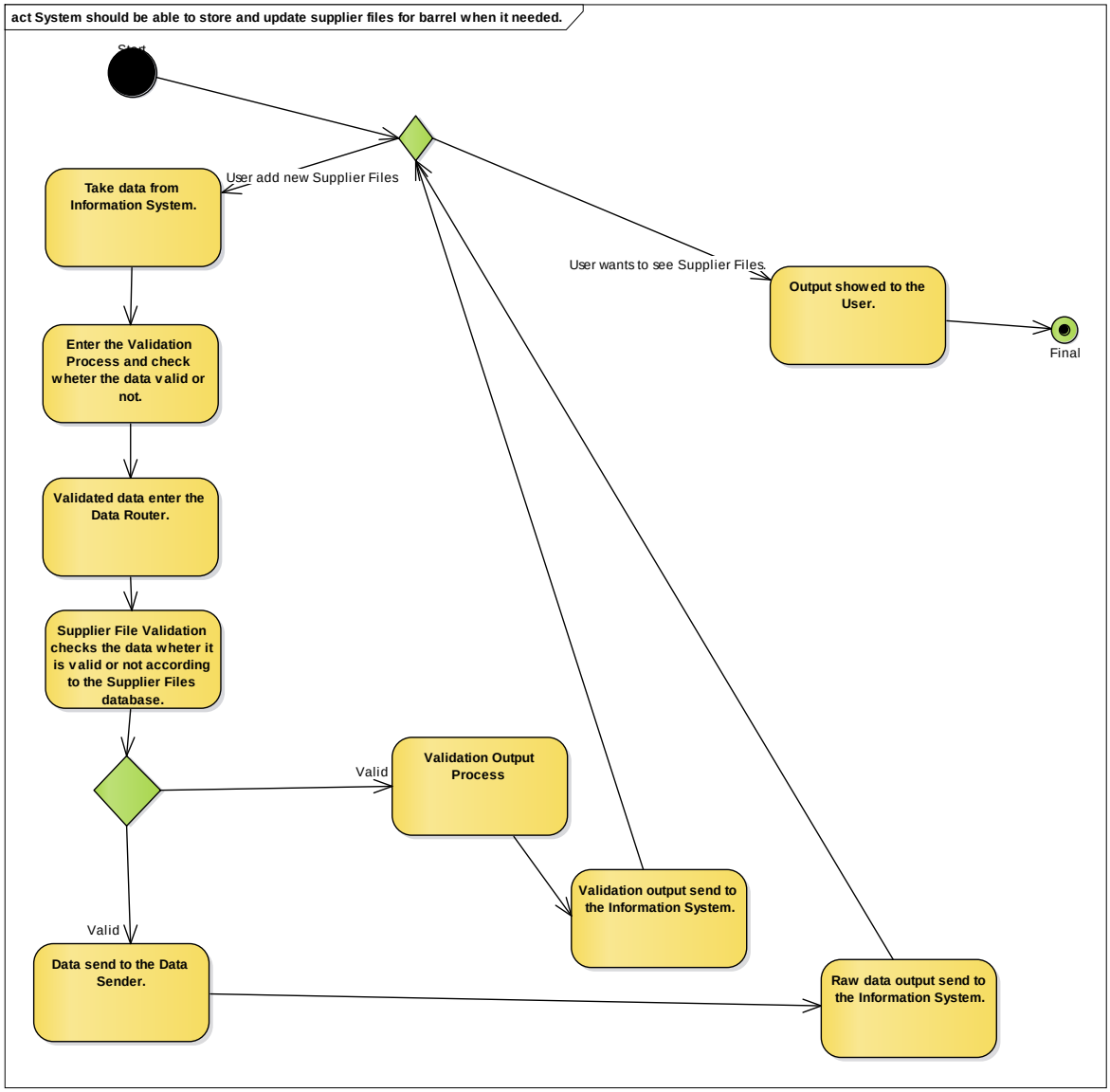

act System should be able to ...
Start
System take the necessary data from Information System. (Olive Oil amount)
Necessary data send to the Calculation and Forecast System.
Calculation apply based on stored olive oil amount.
Result of the calculation send to the Information System
Output showed to the User.
Final

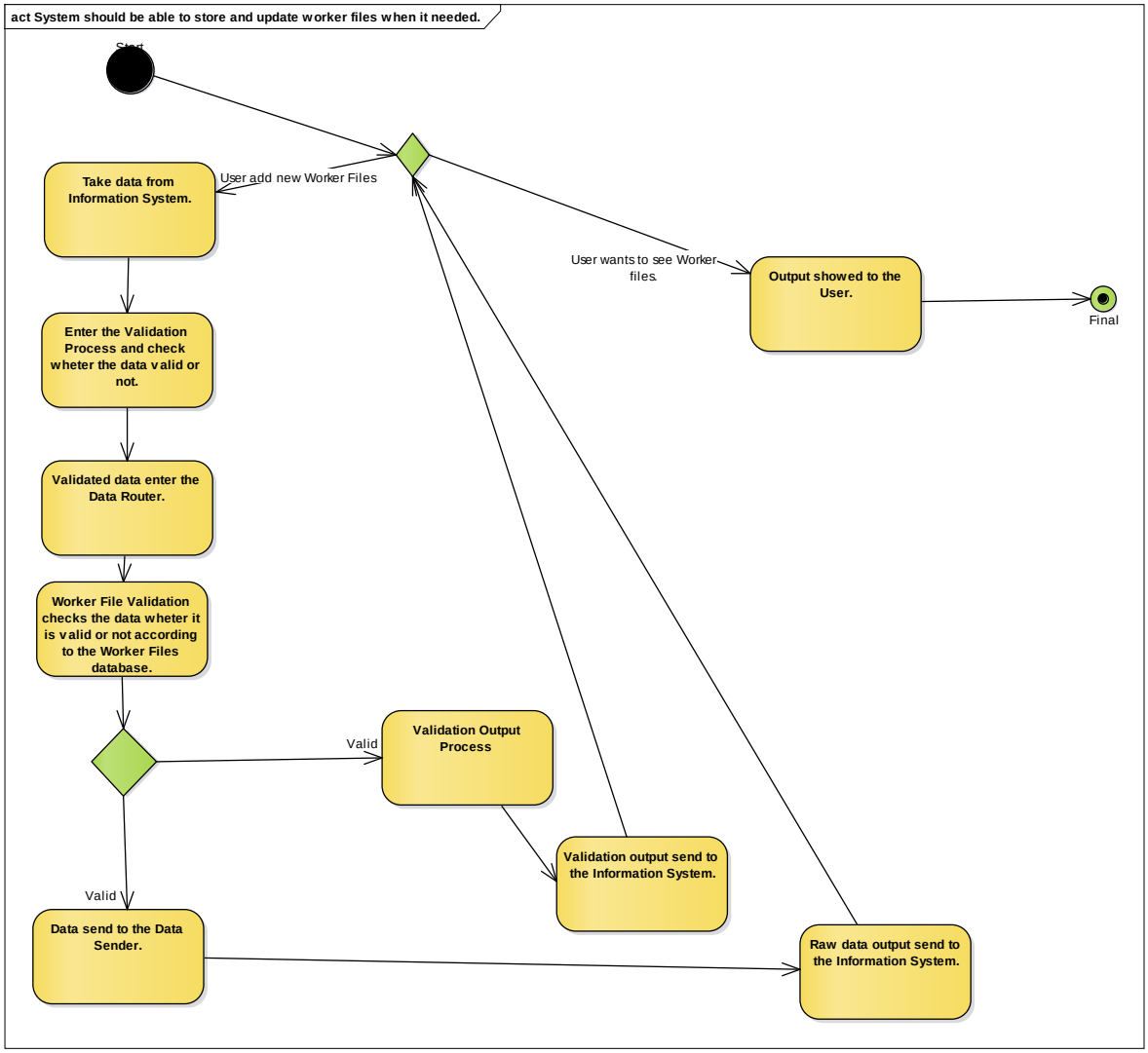

act System should be able to calcula...
Start
System take data about sold olive oil amount from Information System.
Necessary calculation apply to the data and send to the Information System.
Output showed to the User.
Final


act System should be able to forecast about earnings according to weather con...
Start
Take data from Weekly Weather Information Database
Take data from Information System
Weather Data send to the Forecast System
In Calculation System needed calculation apply to the data.
Send necessary data (Weather forecast) to the Information System
Send amount of earnings to the Information System
Show the desired output to the User.
Final

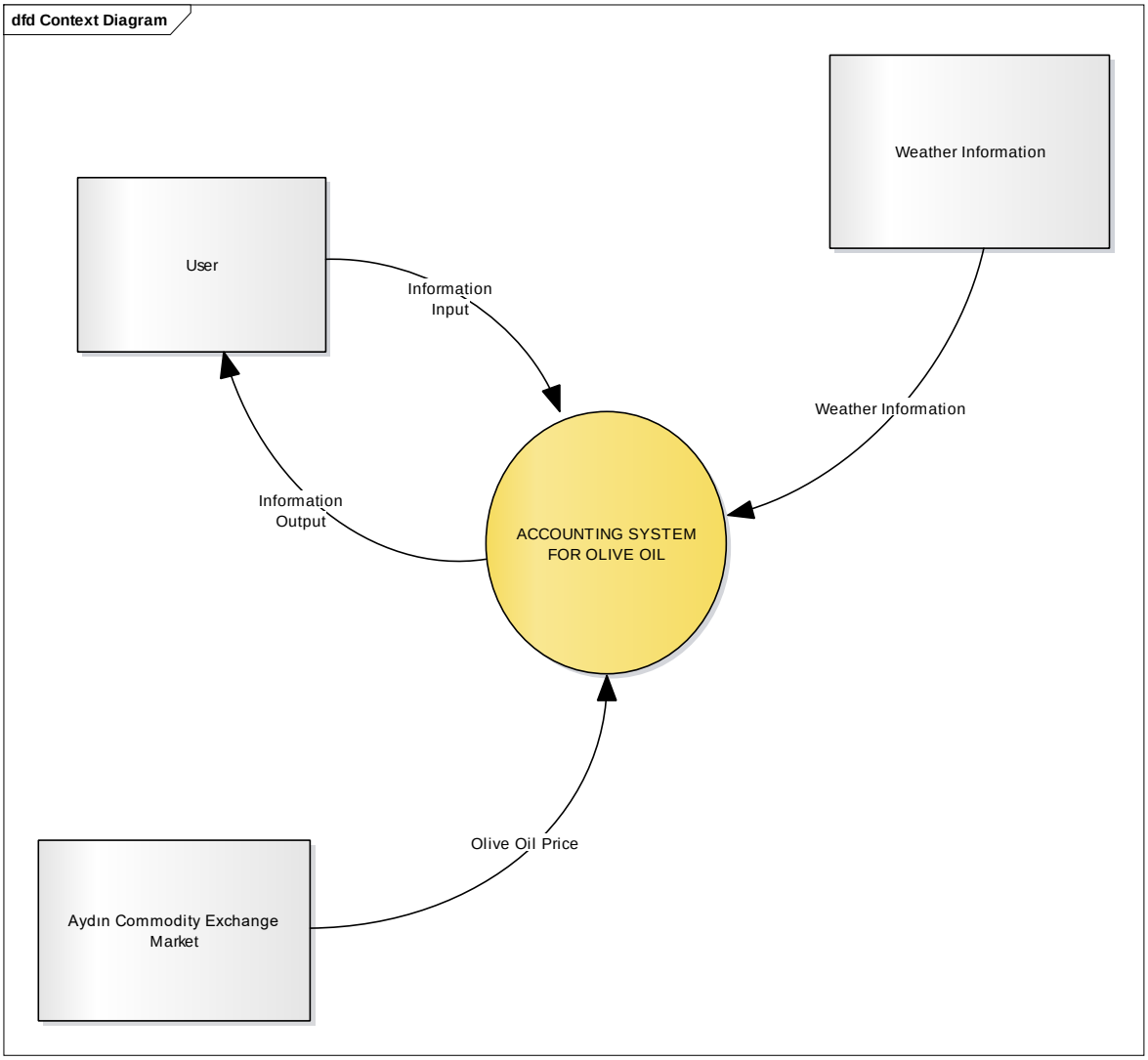

act System should be able to ...
Start
System get data from Aydın Commodity Exchange Market.
Data send to the Information System.
Show output to the user.
Final


act System should be able to ...
Start
Take necessary data from internet.
Send weekly weather information to the database.
Necessary data send to the Information System
Output showed to the User.
Final

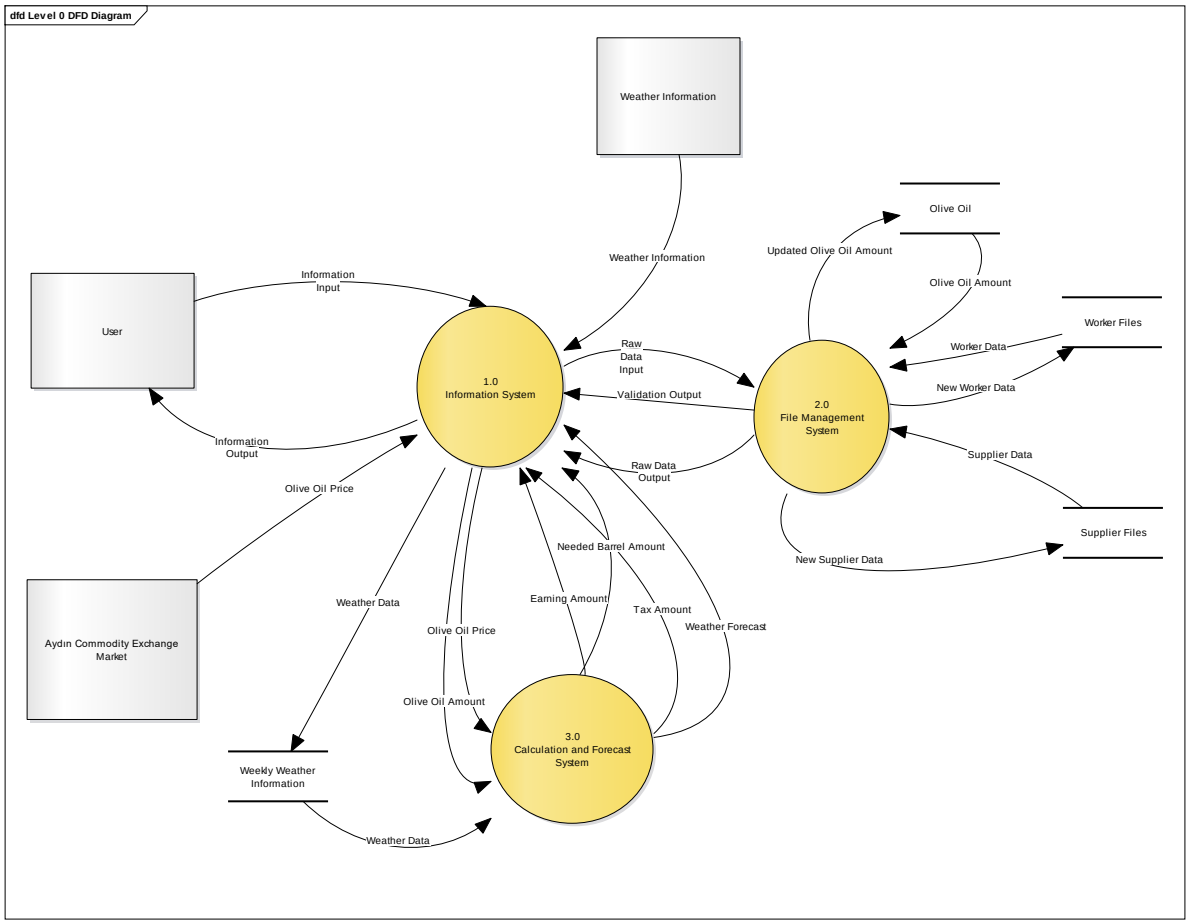

act System should be able to store and update supplier files for barrel when it needed.
Start
User add new Supplier Files
Take data from Information System.
User wants to see Supplier Files
Output showed to the User.
Final
Enter the Validation Process and check wheter the data valid or not.
Validated data enter the Data Router.
Supplier File Validation checks the data wheter it is valid or not according to the Supplier Files database.
Valid
Validation Output Process
Validation output send to the Information System.
Valid
Data send to the Data Sender.
Raw data output send to the Information System.

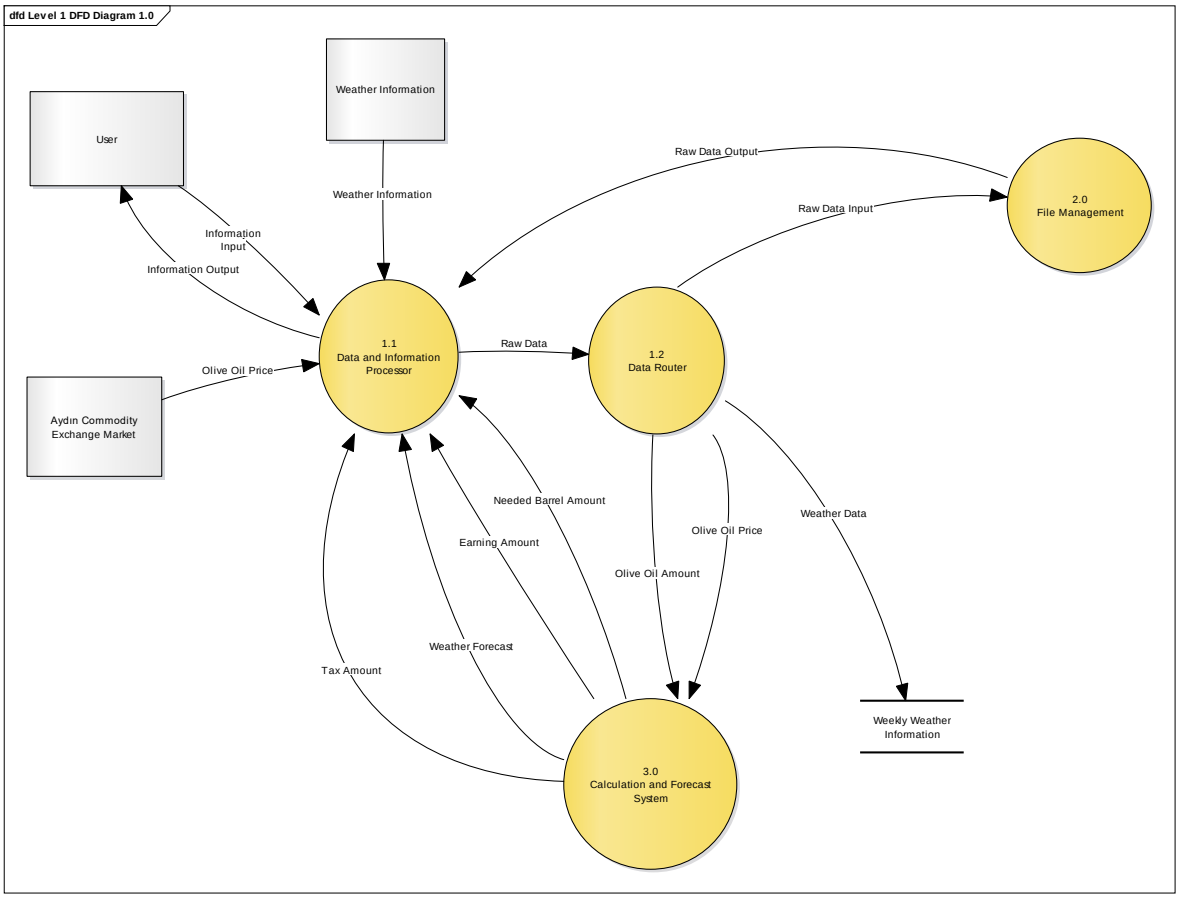

act System should be able to store and update worker files when it needed.
Start
Take data from Information System.
User add new Worker Files
User wants to see Worker files.
Output showed to the User.
Final
Enter the Validation Process and check wheter the data valid or not.
Validated data enter the Data Router.
Worker File Validation checks the data wheter it is valid or not according to the Worker Files database.
Valid
Validation Output Process
Validation output send to the Information System.
Valid
Data send to the Data Sender.
Raw data output send to the Information System.

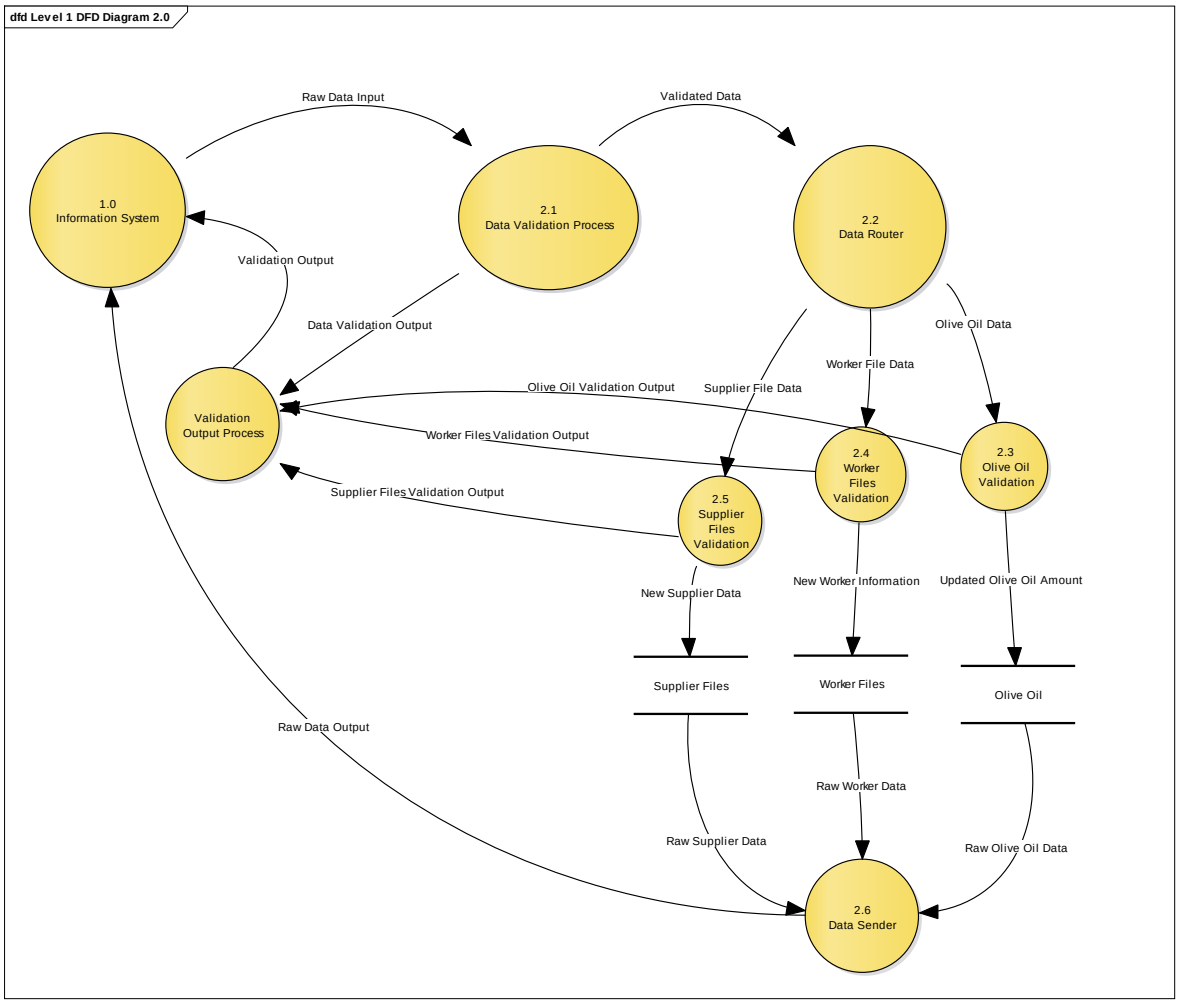
3.3. Context Model

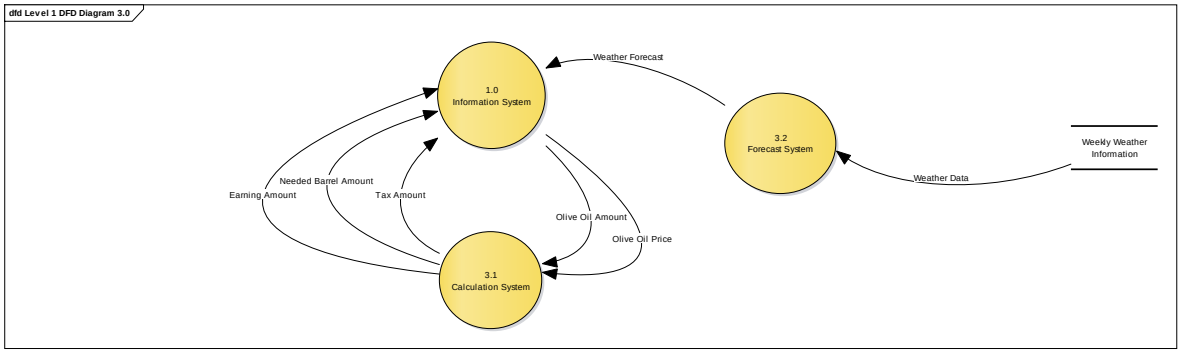


3.4. Data Flow Diagrams



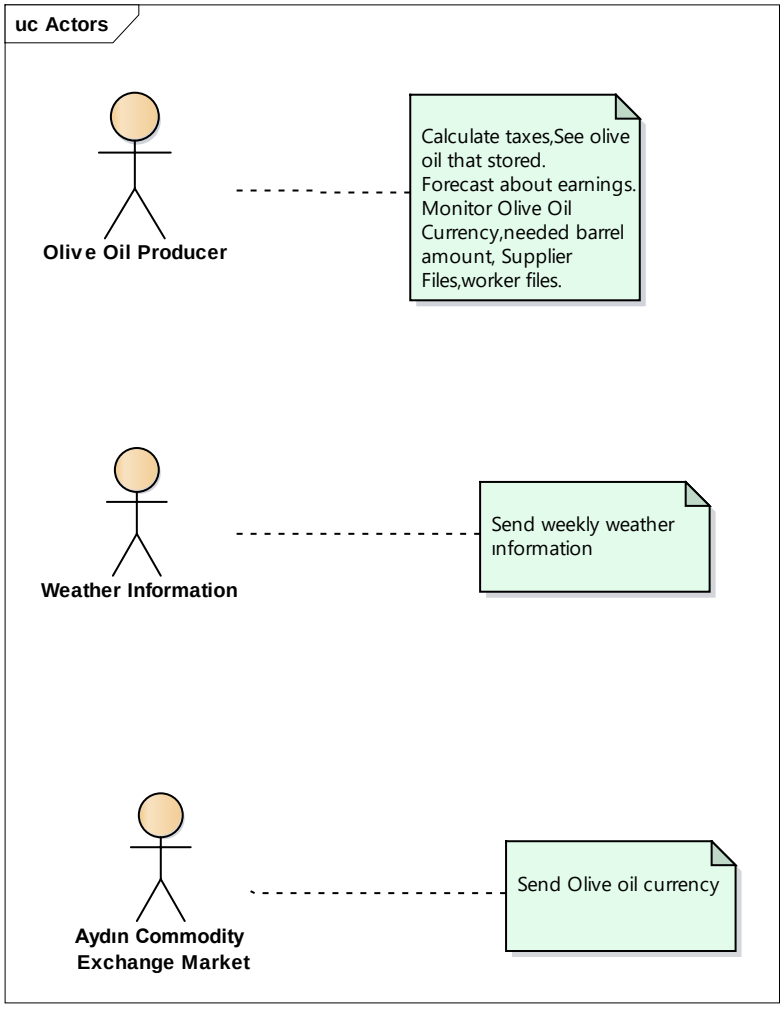

dfd Level 1 DFD Diagram 1.0
Weather Information
User
Weather Information
Raw Data Output
2.0
File Management
Raw Data Input
Information Input
Information Output
1.1
Data and Information Processor
Raw Data
1.2
Data Router
Olive Oil Price
Aydın Commodity Exchange Market
Needed Barrel Amount
Earning Amount
Olive Oil Price
Weather Data
Olive Oil Amount
Weather Forecast
Tax Amount
Weekly Weather Information
3.0
Calculation and Forecast System


dfd Level 1 DFD Diagram 2.0
Raw Data Input
Validated Data
1.0
Information System
2.1
Data Validation Process
2.2
Data Router
Validation Output
Data Validation Output
Olive Oil Data
Worker File Data
Olive Oil Validation Output
Supplier File Data
Validation
Output Process
Worker Files Validation Output
2.4
Worker
Files
Validation
2.3
Olive Oil
Validation
Supplier Files Validation Output
2.5
Supplier
Files
Validation
New Supplier Data
New Worker Information
Updated Olive Oil Amount
Supplier Files
Worker Files
Olive Oil
Raw Data Output
Raw Worker Data
Raw Supplier Data
Raw Olive Oil Data
2.6
Data Sender

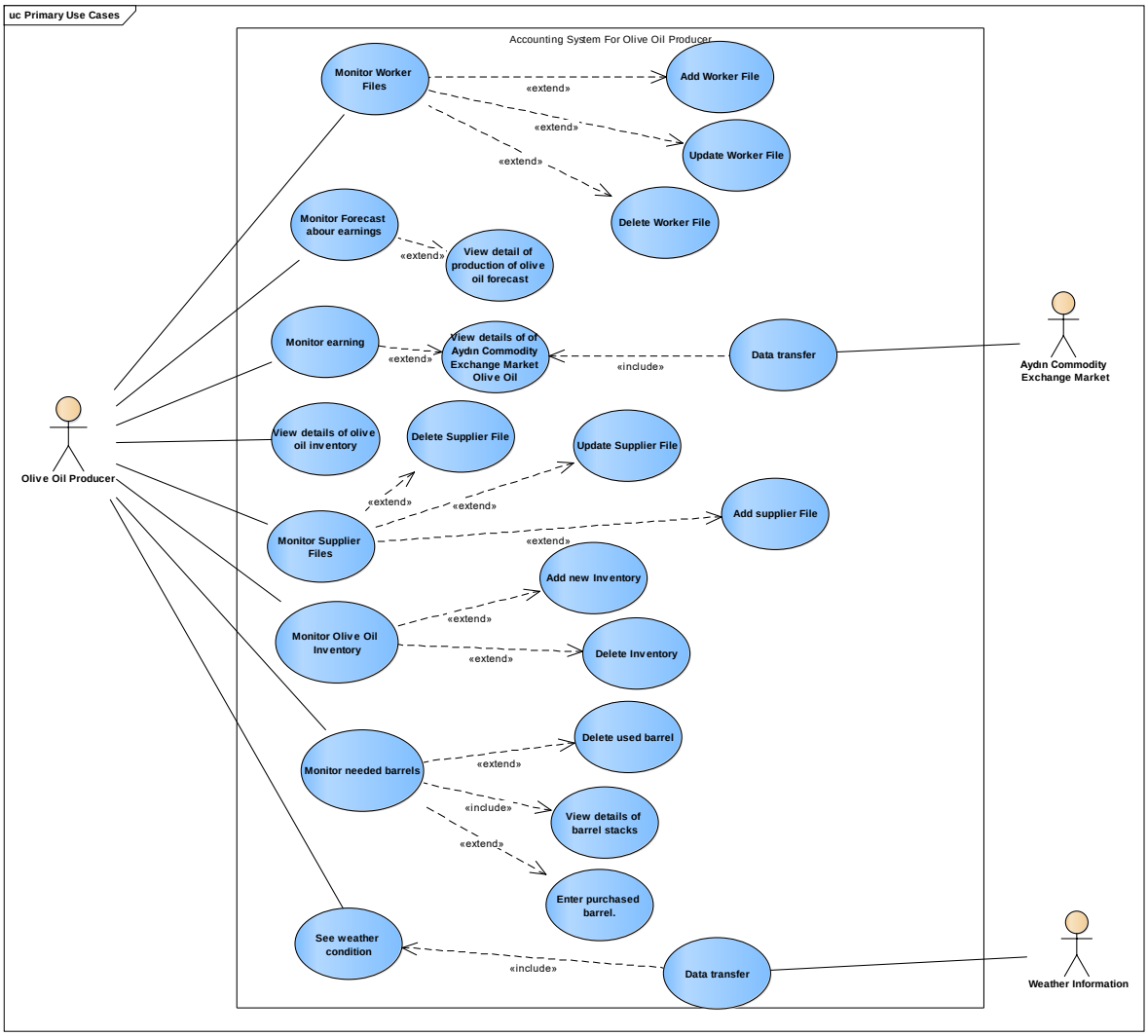

dfd Level 1 DFD Diagram 3.0
Weather Forecast
1.0
Information System
3.2
Forecast System
Weekly Weather
Information
Weather Data
Needed Barrel Amount
Earning Amount
Tax Amount
Olive Oil Amount
Olive Oil Price
3.1
Calculation System

3.5. Use Cases

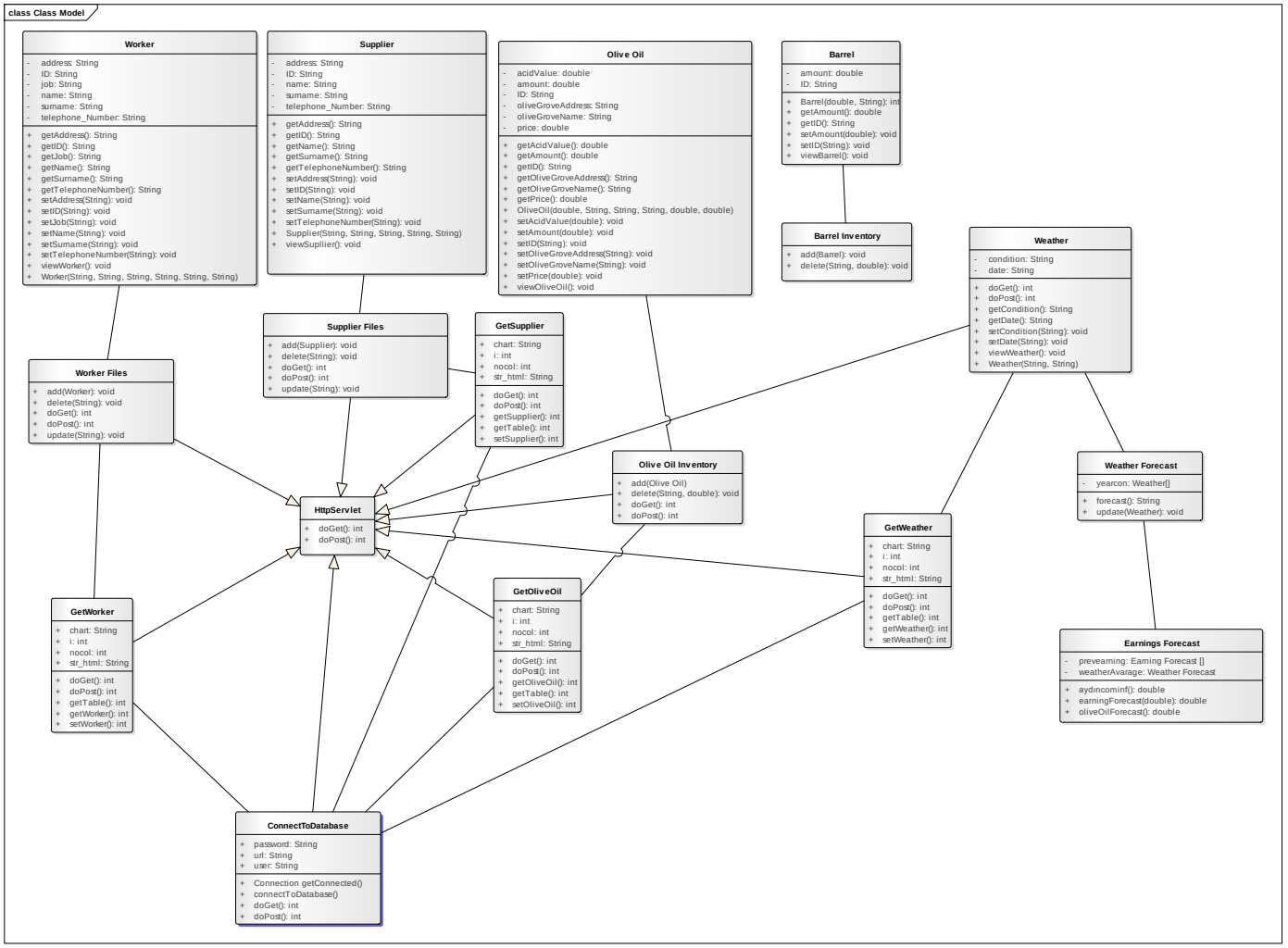
3.5.1. Actors



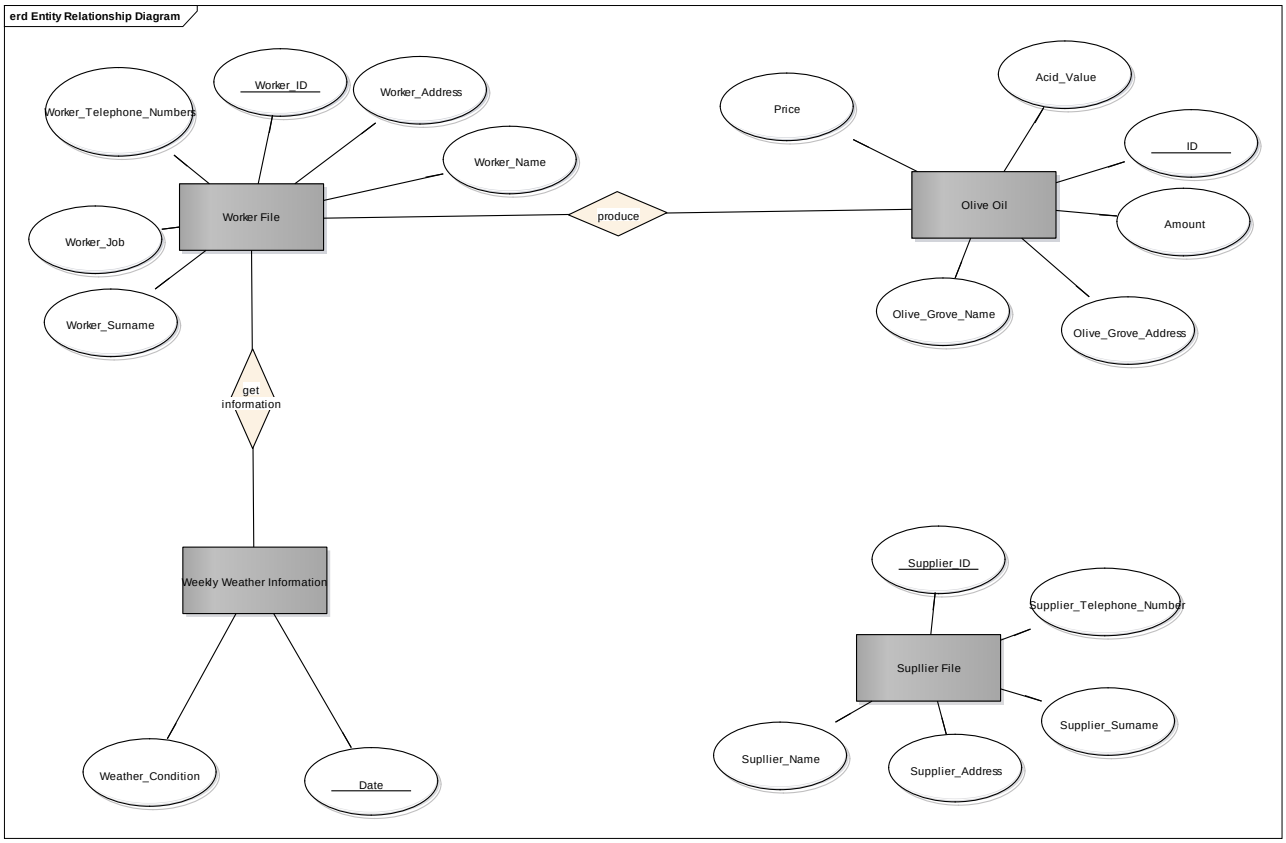
3.5.2. Use Case Diagrams



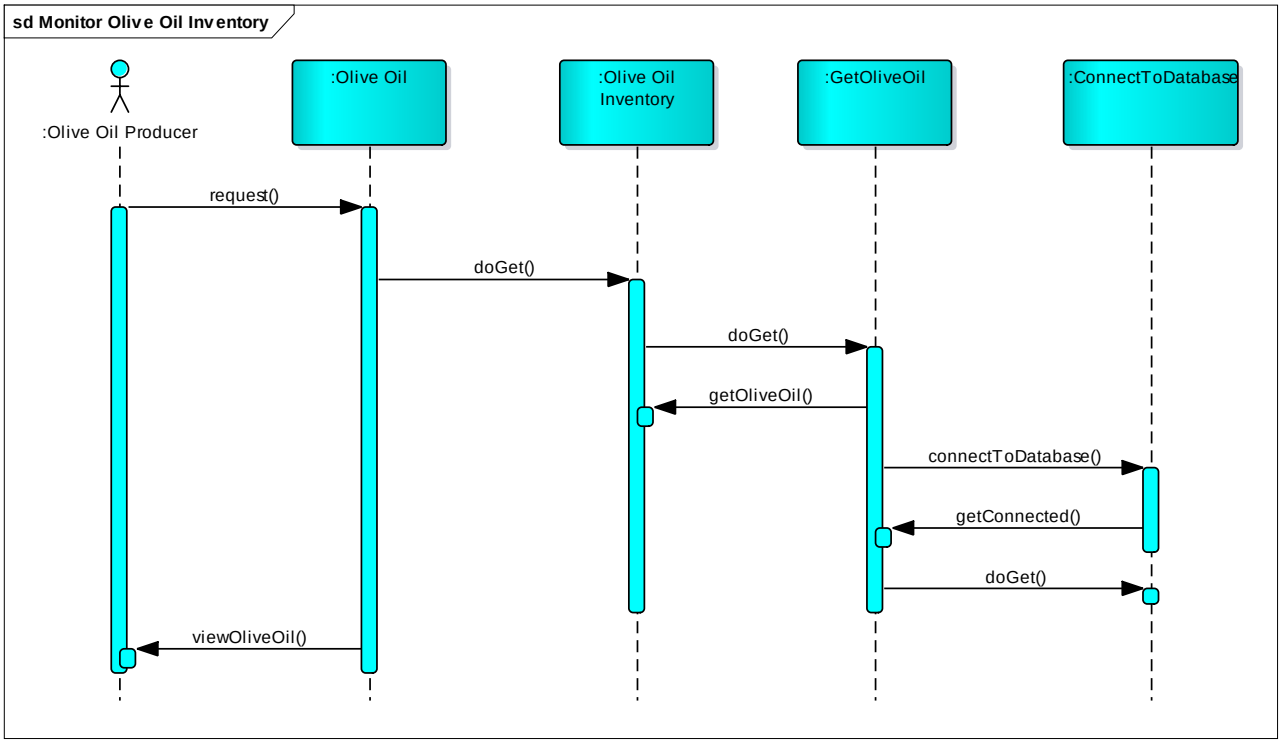
3.6. Class Diagrams

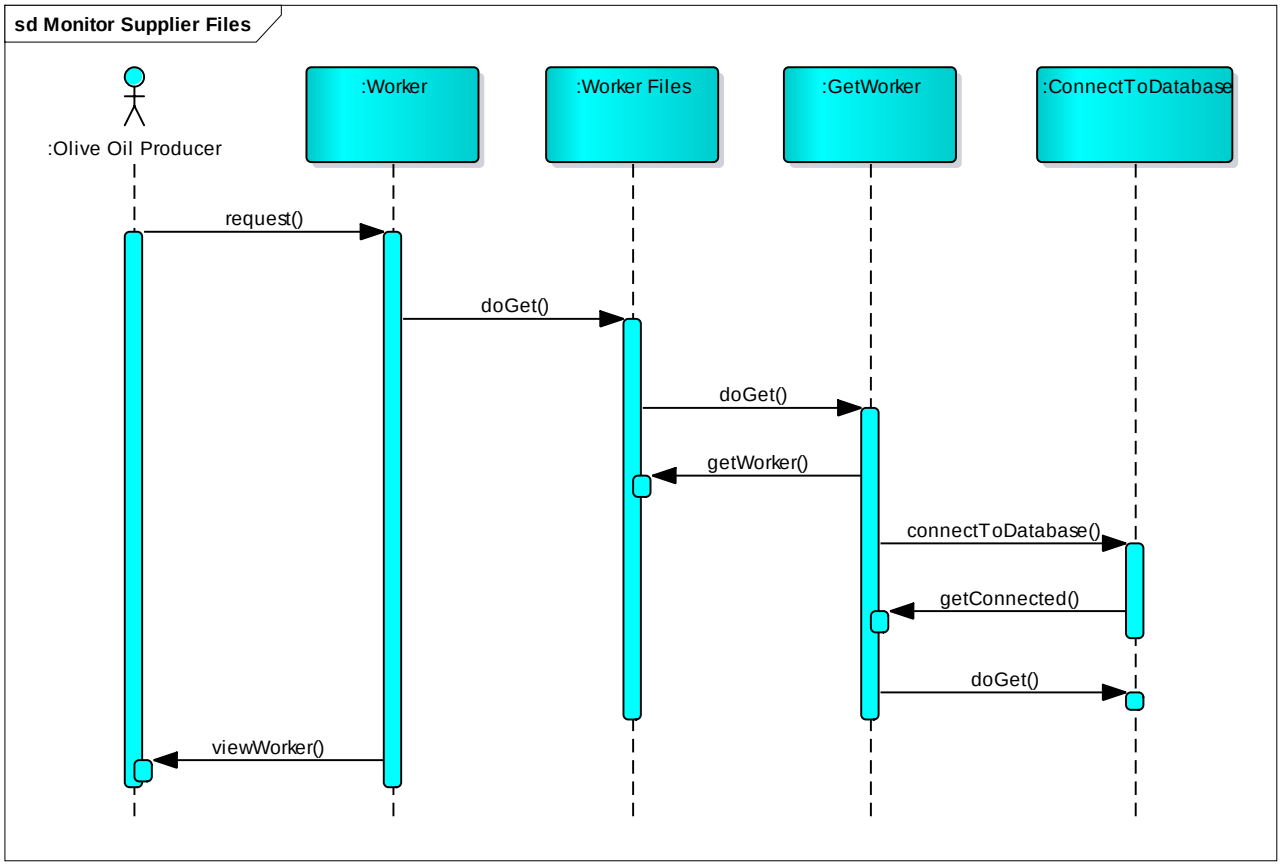


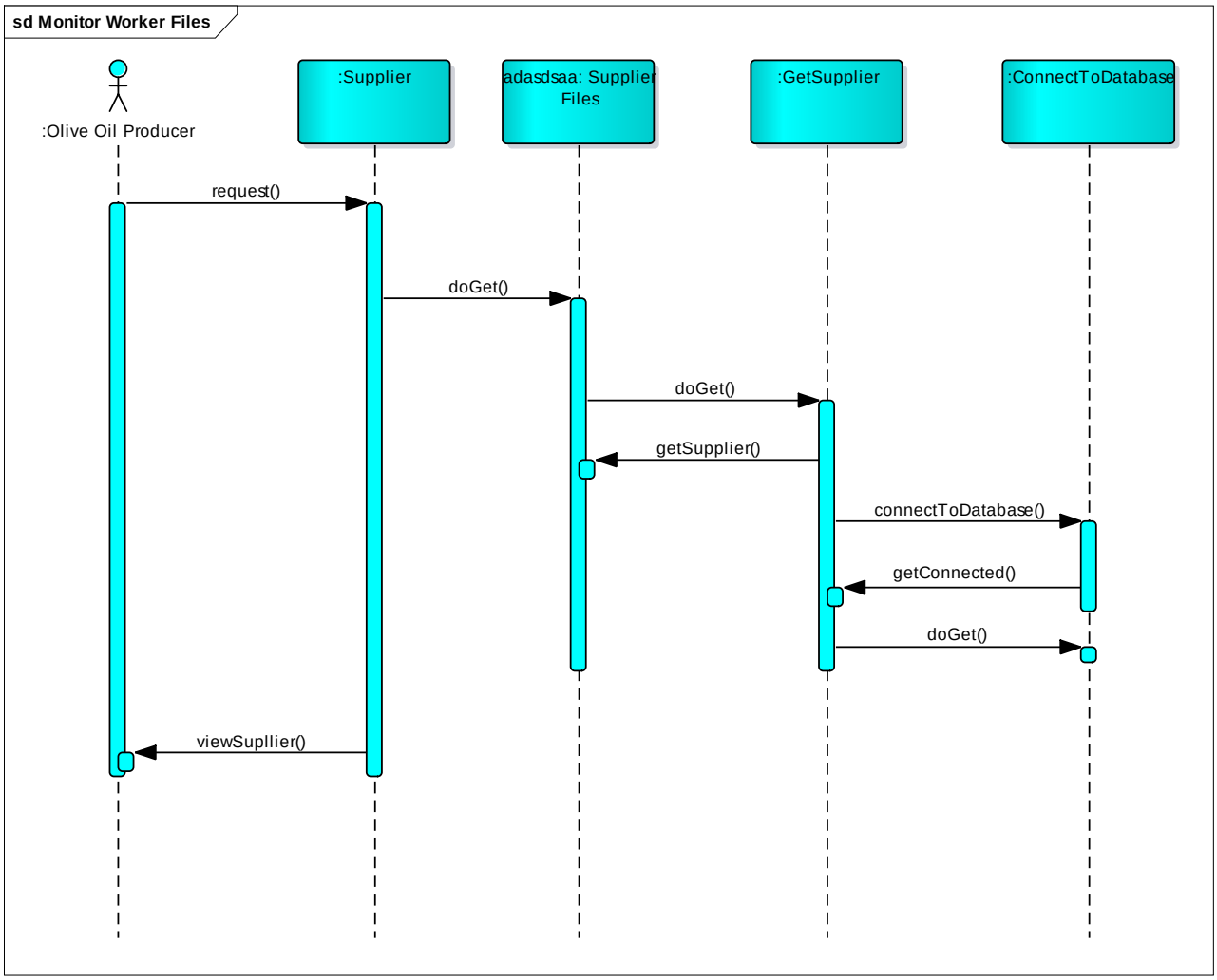
3.7. E/R Diagrams

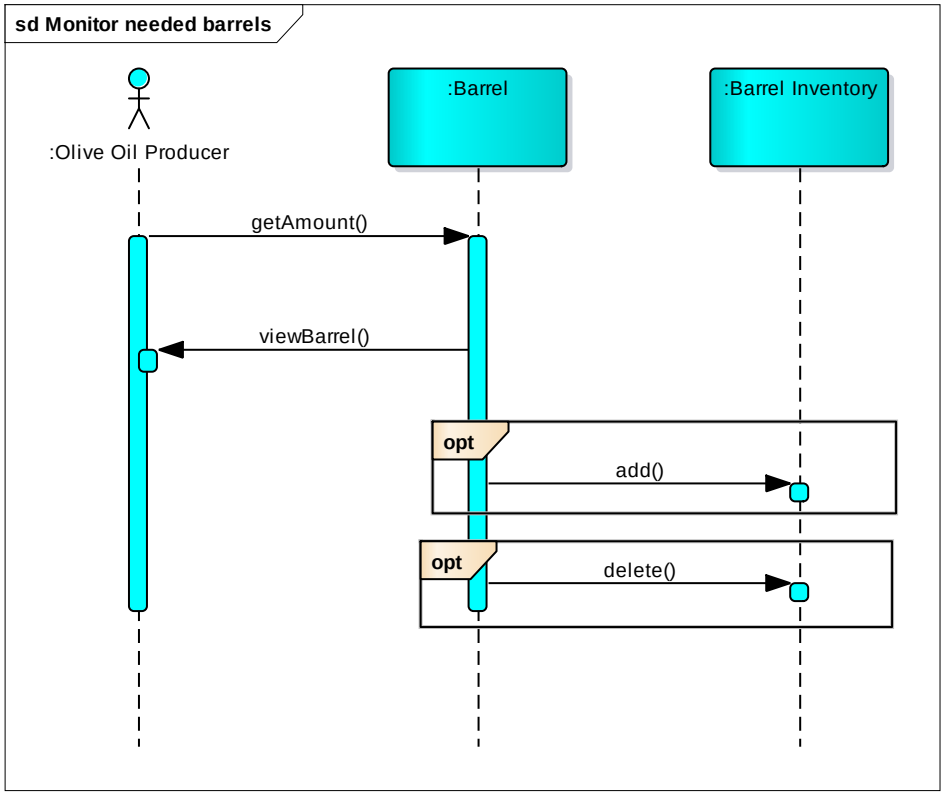


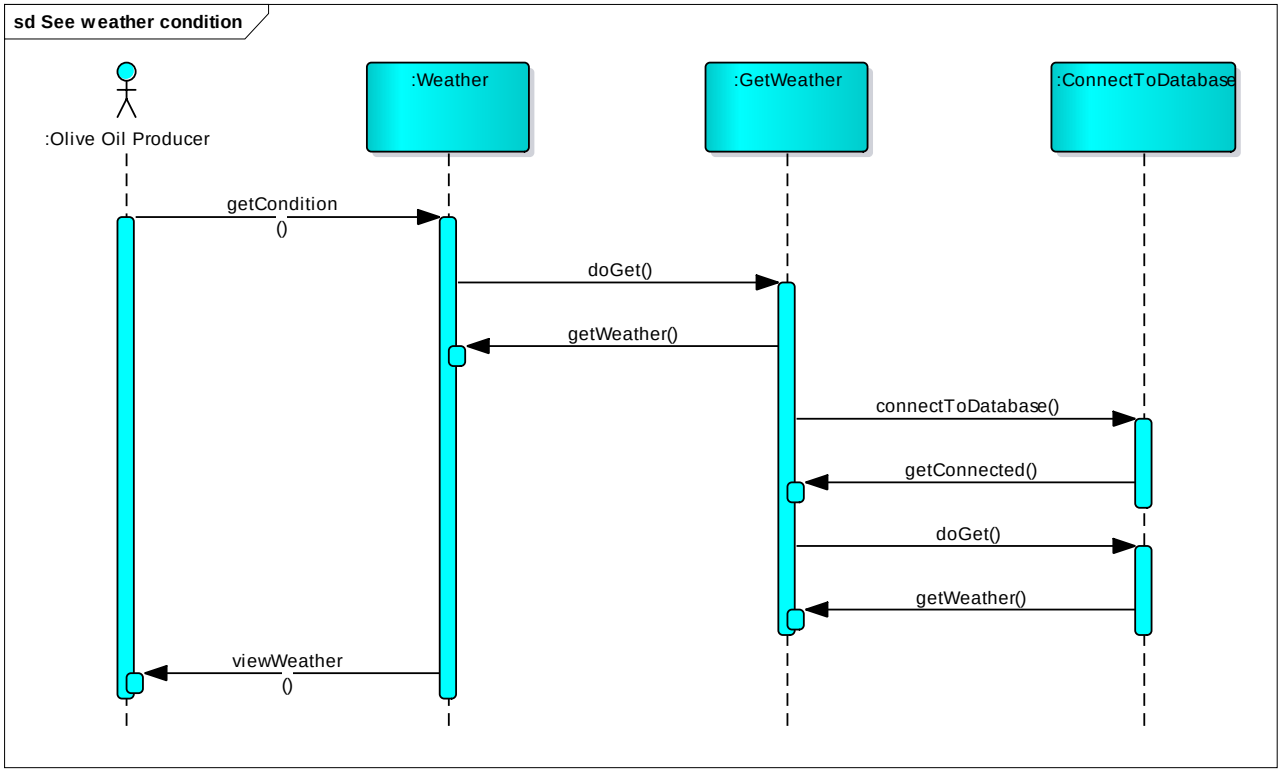
3.8. Sequence Diagrams



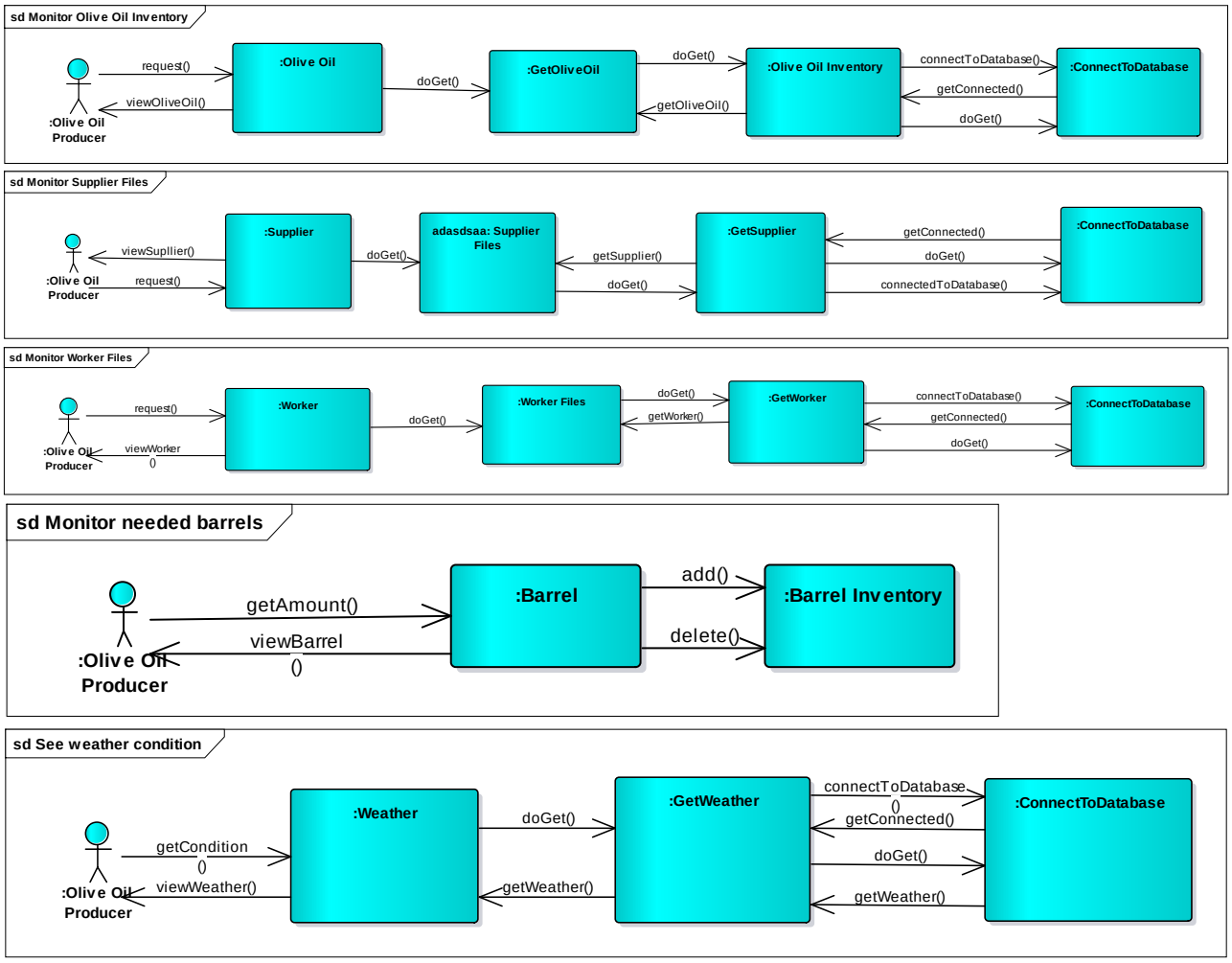



sd Monitor Worker Files
:Olive Oil Producer
:Supplier
adasdsaa: Supplier Files
:GetSupplier
:ConnectToDatabase
request()
doGet()
doGet()
getSupplier()
connectToDatabase()
getConnected()
doGet()
viewSupllier()


sd Monitor needed barrels
:Olive Oil Producer
:Barrel
:Barrel Inventory
getAmount()
viewBarrel()
opt
add()
opt
delete()


sd See weather condition
:Olive Oil Producer
:Weather
:GetWeather
:ConnectToDatabase
getCondition
()
doGet()
getWeather()
connectToDatabase()
getConnected()
doGet()
getWeather()
viewWeather
()

3.9. Communication Diagrams



4. Conclusion

We made video call with customer. After specifying the problem and boundaries of problem, we come up with a system design. And our client is satisfied with it.