

DELIVERABLE #2

TEAM:

DataBase

BY:

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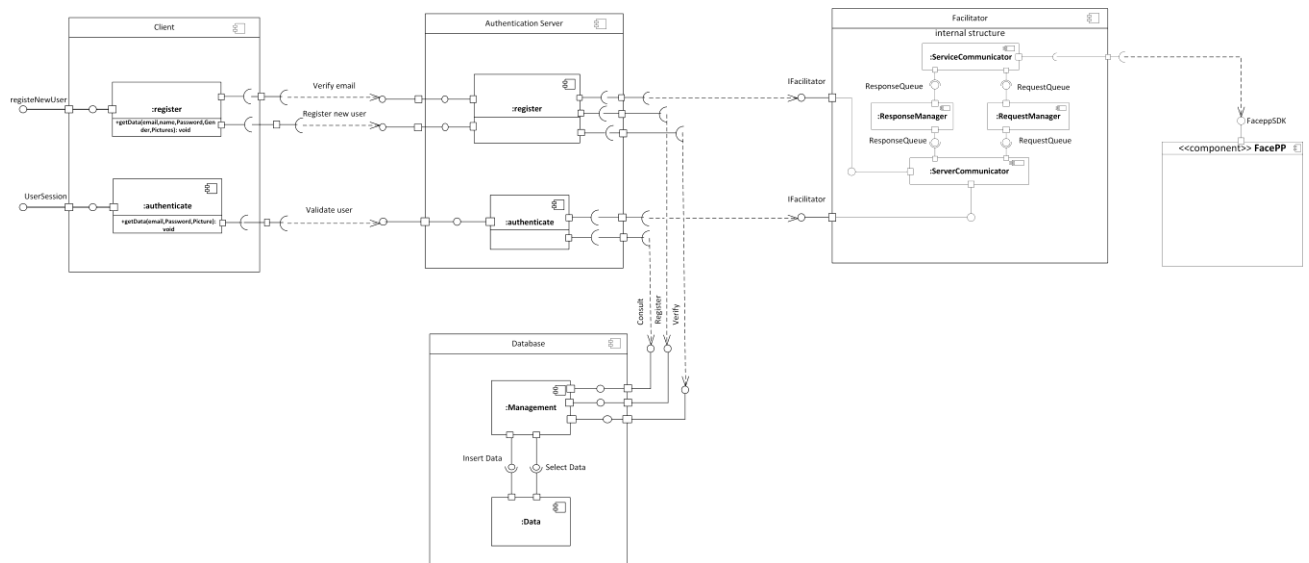
Medellín

2016

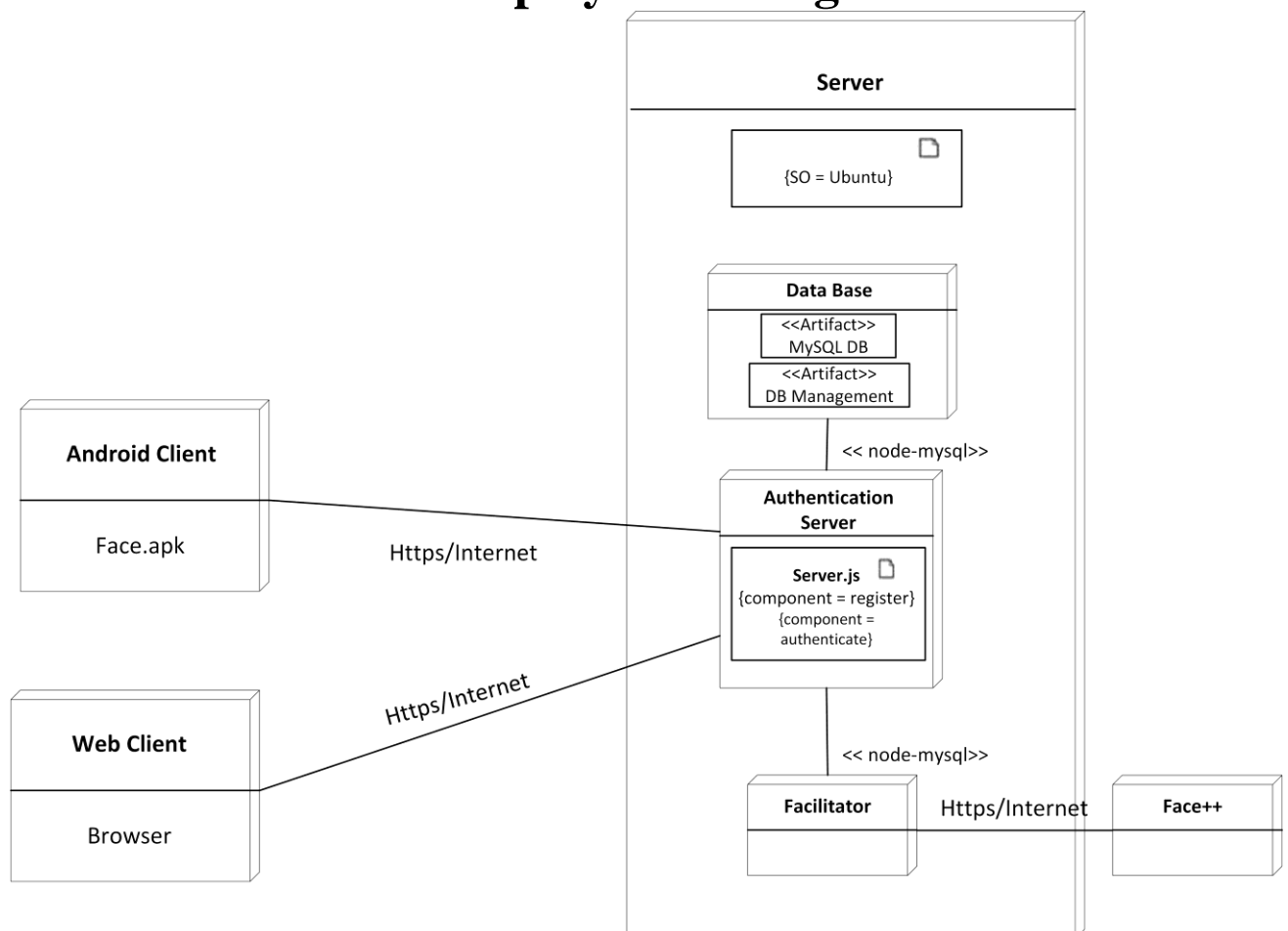
1. Software Design

1.1. Software architectures

Component Diagram



Deployment Diagram



1.2. Module interface specifications

I. Introduction

The database provides storage of all information that the other components needs to perform registry operations and user authentication. This information includes identifiers, personal data and the set of pictures of an user. A server connects to the services of the database and they manage the correct insertion and query on data.

II. Interface Overview

a. Services Provided

Service	Provided by	Tested By
1. Insert new user into database.	insertData	TC1
2. Select an user from database.	selectData	TC2
3. Consult if an e-mail exists in the database	consultEmail	TC3

b. Access Methods

Access Method	Parameter name	Parameter type	Description	Exceptions	Map to services
insertData	1. e-mail: IN	1. String	1. Identifier of an user	2 3	1
	2. external_ID: IN	2. String	2. Identifier of the user provided by facilitator		
	3. name: IN	3. String	3. name of the user		
	5. Pictures: IN	5. Vector<Picture>	5. Set of pictures of the user for training facilitator		
	6. Gender	6. String	6. Gender of the user		
	7. Password	7. String	7. Alphanumeric String previously chosen by the user for login.		
	8. Result: OUT	8. String	8. Code that indicates if the user was correctly inserted.		
selectData	1. external_ID:	1. String	1. Id provided by facilitator and	1 4	2

	IN 2. e-mail: IN 3. password: IN 4. Result: OUT	2. String 3. String 4. String	previously stored in the database and belongs to an user 2. e-mail provided by an user through the testing/android client in the login. 3. password provided by the user through the testing/android client in the login. 4.Code that indicates if an user matches or not with the parameters sent.		
consultEmail	1. e-mail:IN 2. Result: OUT	1. String 2. String	1. e-mail entered by an user 2. Code that indicates if the e-mail belong to an existing user in the database or not.	1	3

c. Access Method Effects

Access Method	Description
insertData	Takes the attributes of an user (e-mail, external_ID, name, e-mail, gender, password) and inserts them into a table of Users. Then, takes a vector of pictures of the user and inserts it into a table of Pictures where every picture has an Identifier and the Identifier of the owner user. Returns a code that indicates if the user was correctly inserted or not.
selectData	Takes an external_ID provided by facilitator in authentication (login), the e-mail and the password provided by an user in the login. Search for an user in database that matches with the three parameters. Returns a code that indicates if an user matches with the parameters sent or not.
consultEmail	Takes an e-mail entered by an user and searches if the e-mail belongs to an existing user in the database. Returns a code that indicates if the e-mail e-mail belong to an existing user in the database or not.

III.Local Types

Type	Value Space
Picture	Is an object that has two attributes: An Integer ID and a JPG file.

VI. Exception Dictionary

Exception Name	Assumption	Tested by
1. No Data Found	The external_ID or the e-mail sent in the request does not appear in the database.	TC2, TC3
2. External_ID duplicated	Inserting an user with an external_ID that already exists in the database.	TC1
3. e-mail duplicated	Inserting an user with an e-mail that already exists in the database.	TC1
4. e-mail or password does not match	The external_ID sent in the request appears in the database but the e-mail or password of his own user does not match with the provided by user in the client interface.	TC2

VII. Test Cases

a. TC1: insertData

Step	Description	Input Type/Value	Expected Result	Service	Preamble
1	Send a request for the creation of a new user	user_ID external_ID name e-mail Pictures Gender Password	Code indicating that the user was correctly inserted or indicating that exception 1 occurred.	1	

b. TC2: selectData

Step	Description	Input Type/Value	Expected Result	Service	Preamble
1	Send a request for searching an user in database	external_ID e-mail Password	Code indicating success if there is an user with the external_ID sent and plus, the e-mail and password provided matches with the e-mail and password stored for that user. Otherwise, a code indicating that exceptions 1 or 4 occurred.	2	

c. TC3: consultEmail

Step	Description	Input Type/Value	Expected Result	Service	Preamble
1	Send a request for searching an e-mail in the database.	e-mail	Code indicating success if the e-mail is stored in the database. Otherwise, code indicating that exception 1 occurred.	3	

VIII. Design Issues

IX. Review Questions

Requirement Validity

1. For each service provided by the module, is the service valid for all expected uses of this module? If not, give an example of a use where the service is not valid.
2. For each service provided by the module, is the service valid for all expected configurations and versions of this module? If not, give an example of a needed configuration or version where the service is not valid.
3. For each service needed described in this specification, is a module (or set of modules) identified that this module is allowed to use to satisfy the need?
4. Are there cases where the interface specification could not be satisfied or was incomplete?
If so, how should it be changed?

Requirements Sufficiency

1. Does the set of services provided specify all of the services that will be needed by users of this module? Are there any services defined that are not identified in the requirements?
2. Does the set of services needed specify all of the services that this module will need from other modules in order to operate correctly?
What services are needed that are not identified in the requirements?

Consistency Between Services Provided and Access Programs

1. For each Services Provided described in this specification, which access program(s) can be used to satisfy the service?

2. For each access program specified in sections 1.2.2 which Service Provided is satisfied by the access programs?

Access Program Adequacy

1. Is the set of access programs sufficient to satisfy the needs of modules that are allowed to use this module?

2. Are there access programs that should be combined into one access program?

3. Are there single access programs that should be refactored into several different access programs?

4. Are the performance requirements adequate for the uses that will be made of this module?

2. Handoff

Handoff 3, 03/03/2016

What has been done during the last period?

The following work products were initiated:

- Software architectures
- Module interface specifications

How the work should be continued?

Next work products we have to do are:

- Product improvements and corrections in the first deliverable.
- Continue with Module interface specifications
- Continue with Software architectures
- Use cases
- GUI flow diagram
- Class diagram

Is there any obstacle blocking the team?

- We have some difficulty understanding how is the communication process between server and database.
- We need to wait for some answers from the interviews with stakeholders.

What unit tests have been covered during this shift?

Doesn't apply.

What has been done during the last period?

The next work products:

- Product improvements and corrections in the first deliverable.
- Module interface specifications
- Software architectures
- Use cases
- GUI flow diagram

How the work should be continued?

Next work products we have to do are:

- Class diagram
- Kanban
- Alpha state advance report

Is there any obstacle blocking the team?

- We have some difficulties understanding the communication process between the server and database.
- Communication with members of all the teams is good but insufficient.

What unit tests have been covered during this shift?

Doesn't apply.

What has been done during the last period?

The next work products:

- Class diagram
- Kanban
- Alpha state advance report

How the work should be continued?

Continue developing the work products for the next delivery.

Is there any obstacle blocking the team?

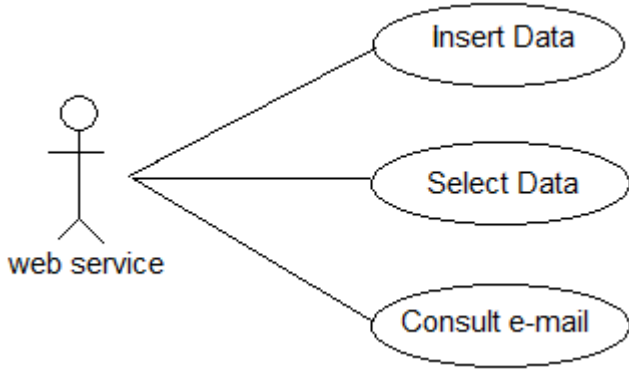
- Much of the work of all teams is shared in a very close day to the delivery.

What unit tests have been covered during this shift?

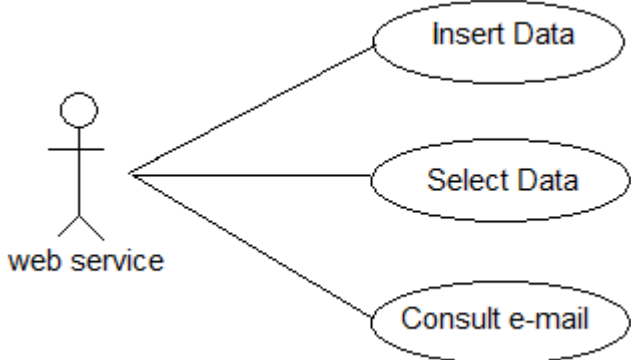
Doesn't apply.

3. Work Products

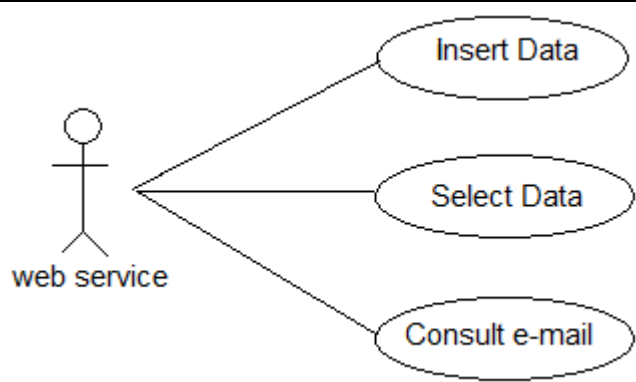
3.1. Use cases

Use Case	UC01 insertData		
Version	2.0		16/03/2016
Author	Laura Sanabria, Eliana López		
Source	DSD Process Work Products		
Purpose	Inserting a new user into database.		
Goals	G1: Having a storage for futures logins. G2: Providing the storage of the data for a quick authentication.		
Summary	This is web service that receives the information of the a new user from the server and inserts it as a new register in the database.		
Actors	Web service		
Precondition	The server has all the information needed of an user for the insertion.		
Interaction Sequence	Web service	Database: Management	
1	Send the information of the new user: e-mail, external_ID, name , pictures, gender and password.		
2		Receive new user information.	
3		Insert information of the new user into database.	
		Return code indicating that the insertion was succesfully.	
Alternative Sequence			
3		The user can't be inserted because his external_ID or e-mail is already stored in database for another user.	
4		Return code indicating that the external_ID or e-mail is duplicated.	
Duration	Optimum: 1 seg	Average: 5 seg	Maximum: 1 min
Frequency	Everyday		
Type	Primary		
Postconditions	The user is inserted on the database.		
Chart	 <pre>graph LR Actor[web service] --- UC1([Insert Data]) Actor --- UC2([Select Data]) Actor --- UC3([Consult e-mail])</pre>		
Interface			

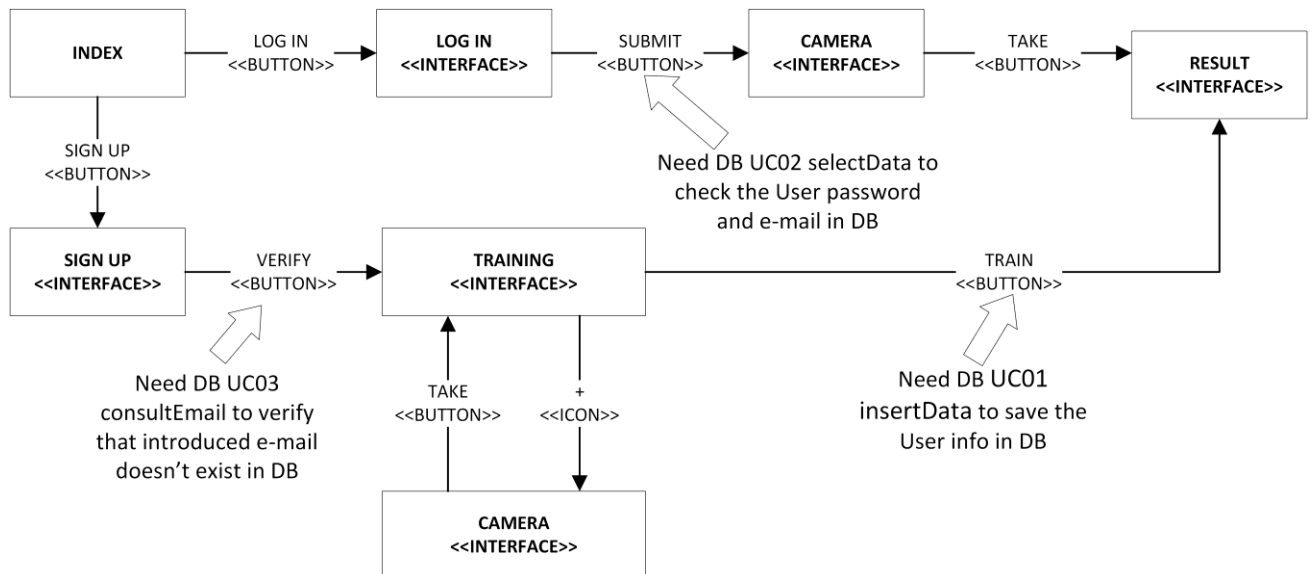
Use Case	UC02 selectData		
Version	2.0		16/03/2016
Author	Laura Sanabria, Eliana López.		
Source	DSD Process Work Products		

Purpose	Select an user from database and retrieve his information.	
Goals	G1: Providing data for a correctly authentication.	
Summary	The web service receives the external_ID of an user from the server and searches for this user in the database.	
Actors	Web service	
Precondition	The server has an external_ID, an e-mail and password ready to send. The user is registered into database.	
Interaction Sequence	Web service	Database: Management
1	Send the external_ID of an user, his e-mail and password to the web service	
2		Receive the external_ID, his e-mail and password of the user.
3		Searches for the user that matches with the three parameters.
4		Returns a code indicating that the user matches.
Alternative Sequence		
3.1		The external_ID does not appear in the database.
4.1		Returns a code indicating that the external_ID does not appear in the database.
3.2		The e-mail or password does not match with the e-mail and password of the user with the external_ID.
4.2		Returns a code indicating that e-mail or password does not match.
Duration	Optimum: 1 seg Average: 5 seg Maximum: 1 min	
Frequency	Everyday	
Type	Primary	
Postconditions	The code indicating that the user was authenticated is returned.	
Chart	 <pre> graph LR Actor[web service] --- UC1([Insert Data]) Actor --- UC2([Select Data]) Actor --- UC3([Consult e-mail]) </pre>	
Interface		

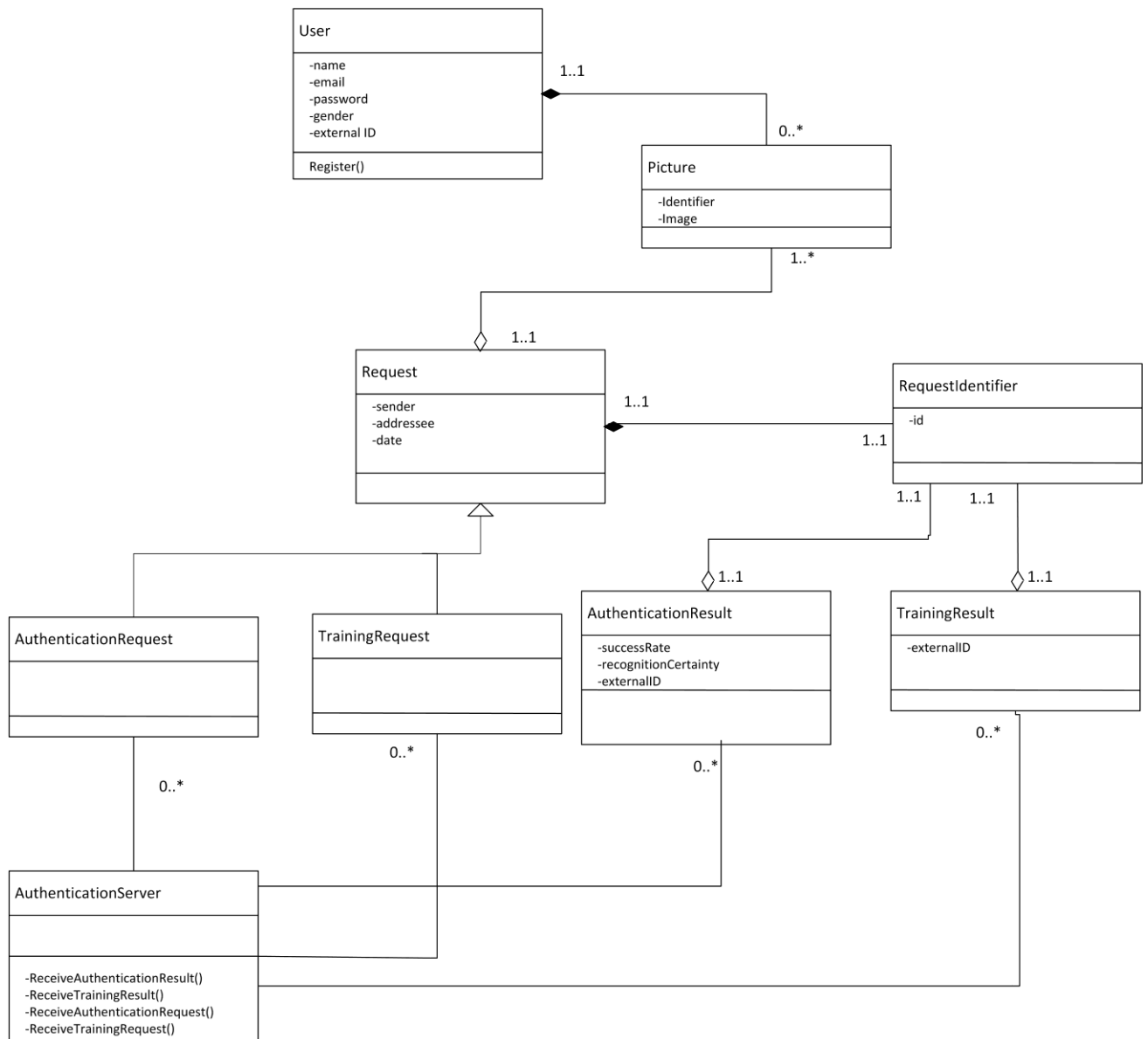
Use Case	UC03 consultEmail		
Version	1.0		16/03/2016
Author	Laura Sanabria, Eliana López		
Source	DSD Process Work Products		
Purpose	Consult if an e-mail exists in the database.		
Goals	G1: Avoiding duplicated users.		
Summary	The web service receives the e-mail of an user from the server and consult if exists into database.		
Actors	Web service		

Precondition	The server has an e-mail that needs verification.	
Interaction Sequence	Web service	Database: Management
1	Sends the e-mail to the web service	
		Receives an e-mail.
2		Searches for the e-mail in the database.
3		The web service returns a code indicating if the e-mail is stored or not in the database.
Duration	Optimum: 1 seg Average: 5 seg Maximum: 1 min	
Frequency	Everyday	
Type	Primary	
Postconditions	A code indicating if the e-mail is stored or not in the database is returned.	
Chart	 <pre> graph LR WS[web service] --- ID([Insert Data]) WS --- SD([Select Data]) WS --- CE([Consult e-mail]) </pre> <p>The diagram shows a stick figure actor labeled 'web service' connected to three use cases: 'Insert Data', 'Select Data', and 'Consult e-mail'.</p>	
Interface		

3.2. GUI flow diagram



3.3. Class diagram



3.4. Kanban

Objectives	To do	Doing	Done
		<div>Task 1: Establish tasks and deadlines</div> <div>Responsible: Eliana Lopez (Project Manager)</div>	<div>Team</div> <div>Seeded</div> <ul style="list-style-type: none"> <input type="checkbox"/> Mission defined <input type="checkbox"/> Constraints known and defined <input type="checkbox"/> Growth mechanisms in place <input type="checkbox"/> Composition defined <input type="checkbox"/> Responsibilities outlined <input type="checkbox"/> Required commitment level clear <input type="checkbox"/> Required competencies identified <input type="checkbox"/> Size determined <input type="checkbox"/> Governance rules defined <input type="checkbox"/> Leadership model selected <div>1 / 5</div>
		<div>Task 2: Explain practices to follow</div> <div>Responsible: Eliana Lopez (Project Manager)</div> <div>Task 3: Define roles and responsibilities</div> <div>Responsible: Eliana Lopez (Project Manager)</div>	<div>Team</div> <div>Formed</div> <ul style="list-style-type: none"> <input type="checkbox"/> Individual responsibilities accepted and aligned to competencies <input type="checkbox"/> Enough members recruited <input type="checkbox"/> Roles understood <input type="checkbox"/> How to work understood <input type="checkbox"/> Members introduced <input type="checkbox"/> Members accepting work <input type="checkbox"/> External collaborators identified <input type="checkbox"/> Communication mechanisms defined <input type="checkbox"/> Members commit to team <div>2 / 5</div>
		<div>Task 4: Identify and evaluate risks</div> <div>Responsible: Eliana Lopez (Project Manager)</div> <div>Task 5: Plan Delivery</div> <div>Responsible: Eliana Lopez (Project Manager)</div>	<div>Way of Working</div> <div>Principles Established</div> <ul style="list-style-type: none"> <input type="checkbox"/> Team actively support principles <input type="checkbox"/> Stakeholders agree with principles <input type="checkbox"/> Tool needs agreed <input type="checkbox"/> Approach recommended <input type="checkbox"/> Operational context understood <input type="checkbox"/> Practice & tool constraints known <div>1 / 6</div>
		<div>Task 5: Plan Delivery</div> <div>Responsible: Eliana Lopez (Project Manager)</div> <div>Task 6: Report Project States</div> <div>Responsible: Eliana Lopez (Project Manager)</div>	<div>Work</div> <div>Initiated</div> <ul style="list-style-type: none"> <input type="checkbox"/> Required result clear <input type="checkbox"/> Constraints clear <input type="checkbox"/> Funding stakeholders known <input type="checkbox"/> Initiator identified <input type="checkbox"/> Accepting stakeholders known <input type="checkbox"/> Source of funding clear <input type="checkbox"/> Priority clear <div>1 / 6</div>

		<div>Task 7: Report the work progress</div> <div>Responsible: Eliana Lopez (Project Manager)</div> <div>Team</div> <div>Collaborating</div> <div> <input type="checkbox"/> Works as one unit <input type="checkbox"/> Communication open and honest <input type="checkbox"/> Focused on mission <input type="checkbox"/> Members know each other </div> <div>3 / 5</div>	
		<div>Task 8: Establish common vocabulary</div> <div>Responsible: Daniel Ospina (Analyst Requirements)</div> <div>Requirements</div> <div>Conceived</div> <div> <input type="checkbox"/> Stakeholders agree system is to be produced <input type="checkbox"/> Users identified <input type="checkbox"/> Funding stakeholders identified <input type="checkbox"/> Opportunity clear </div> <div>1 / 6</div>	
		<div>Task 6: Report Project States</div> <div>Responsible: Eliana Lopez (Project Manager)</div> <div>Work</div> <div>Under Control</div> <div> <input type="checkbox"/> Tasks being completed <input type="checkbox"/> Unplanned work under control <input type="checkbox"/> Risks under control <input type="checkbox"/> Estimates revised to reflect performance <input type="checkbox"/> Progress measured <input type="checkbox"/> Re-work under control <input type="checkbox"/> Commitments consistently met </div> <div>4 / 6</div>	
		<div>Task 9: Manage the development of tasks</div> <div>Responsible: Eliana Lopez (Project Manager)</div> <div>Way of Working</div> <div>In Use</div> <div> <input type="checkbox"/> Practices & tools in use <input type="checkbox"/> Regularly inspected <input type="checkbox"/> Adapted to context <input type="checkbox"/> Supported by team <input type="checkbox"/> Feedback mechanisms in place <input type="checkbox"/> Practices & tools support collaboration </div> <div>3 / 6</div>	
		<div>Task 7: Report the work progress</div> <div>Responsible: Eliana Lopez (Project Manager)</div> <div>Way of Working</div> <div>Foundation Established</div> <div> <input type="checkbox"/> Key practices & tools selected <input type="checkbox"/> Practices needed to start work agreed <input type="checkbox"/> Non-negotiable practices & tools identified <input type="checkbox"/> Gaps between available and needed way-of-working understood <input type="checkbox"/> Gaps in capability understood <input type="checkbox"/> Integrated way of working available </div> <div>2 / 6</div>	
		<div>Task 10: Define tests strategies</div> <div>Responsible: Daniel Ospina (Analyst Requirements)</div> <div>Requirements</div> <div>Bounded</div> <div> <input type="checkbox"/> Development stakeholders identified <input type="checkbox"/> System purpose agreed <input type="checkbox"/> System success clear <input type="checkbox"/> Shared solution understanding exists <input type="checkbox"/> Requirement's format agreed <input type="checkbox"/> Requirements management in place <input type="checkbox"/> Prioritization scheme clear <input type="checkbox"/> Constraints identified & considered <input type="checkbox"/> Assumptions clear </div> <div>2 / 6</div>	
		<div>Task 5: Plan Delivery</div> <div>Responsible: Eliana Lopez (Project Manager)</div> <div>Work</div> <div>Prepared</div> <div> <input type="checkbox"/> Commitment made <input type="checkbox"/> Cost and effort estimated <input type="checkbox"/> Resource availability understood <input type="checkbox"/> Risk exposure understood <input type="checkbox"/> Acceptance criteria established <input type="checkbox"/> Sufficiently broken down to start <input type="checkbox"/> Tasks identified and prioritized <input type="checkbox"/> Credible plan in place <input type="checkbox"/> At least one team member ready <input type="checkbox"/> Integration points defined </div> <div>2 / 6</div>	

3.5. Alpha state advance report

State	How was achieved	Task	Date/Duration	Characteristics
<div> <div>Team</div> <div>Seeded</div> <ul style="list-style-type: none"> <input type="checkbox"/> Mission defined <input type="checkbox"/> Constraints known and defined <input type="checkbox"/> Growth mechanisms in place <input type="checkbox"/> Composition defined <input type="checkbox"/> Responsibilities outlined <input type="checkbox"/> Required commitment level clear <input type="checkbox"/> Required competencies identified <input type="checkbox"/> Size determined <input type="checkbox"/> Governance rules defined <input type="checkbox"/> Leadership model selected <div>1 / 5</div> </div>	From the solution identified was defined the mission of the team and the Working Rules.	Establish task and deadlines	13/02/2016 1 hour	It was determined that the team would be formed by 6 people
<div> <div>Team</div> <div>Formed</div> <ul style="list-style-type: none"> <input type="checkbox"/> Individual responsibilities accepted and aligned to competencies <input type="checkbox"/> Enough members recruited <input type="checkbox"/> Roles understood <input type="checkbox"/> How to work understood <input type="checkbox"/> Members introduced <input type="checkbox"/> Members accepting work <input type="checkbox"/> External collaborators identified <input type="checkbox"/> Communication mechanisms defined <input type="checkbox"/> Members commit to team <div>2 / 5</div> </div>	It defined the roles of each of the members of the team. All have to respond by the work of all.	Explain practices to follow	15/02/2016 1 hour	We will work with the cascade method
		Define roles and responsibilities	15/02/2016 1 hour	Daniel Ospina is requirements analyst, Eliana López is project manager, Jeison Hurtado is developer, John Yepes is system architect, Sebastián Betancur is tester and Nataly Sanabria is developer
<div> <div>Way of Working</div> <div>Principles Established</div> <ul style="list-style-type: none"> <input type="checkbox"/> Team actively support principles <input type="checkbox"/> Stakeholders agree with principles <input type="checkbox"/> Tool needs agreed <input type="checkbox"/> Approach recommended <input type="checkbox"/> Operational context understood <input type="checkbox"/> Practice & tool constraints known <div>1 / 6</div> </div>	Between team members are understood the context in which to work and it was defined the schedule	Identify and evaluate risk	16/02/2016 3 hours	For this we used the ideas of all teams
		Plan delivery	17/02/2016 1 hour	It was in a meeting
<div> <div>Work</div> <div>Initiated</div> <ul style="list-style-type: none"> <input type="checkbox"/> Required result clear <input type="checkbox"/> Constraints clear <input type="checkbox"/> Funding stakeholders known <input type="checkbox"/> Initiator identified <input type="checkbox"/> Accepting stakeholders known <input type="checkbox"/> Source of funding clear <input type="checkbox"/> Priority clear <div>1 / 6</div> </div>	When you initialize the job is declared priorities and plan change, also identify the states of project	Plan delivery	18/02/2016 1 hour	For the plan should take into account the dates for delivery of the work
		Report project states	19/02/2016 1 hour	We use the plan delivery for identify this.

<div> <div>SEMAT Kernel</div> <h2>Requirements</h2> <div> <div>Conceived</div> <ul style="list-style-type: none"> <input type="checkbox"/> Stakeholders agree system is to be produced <input type="checkbox"/> Users identified <input type="checkbox"/> Funding stakeholders identified <input type="checkbox"/> Opportunity clear <div>1 / 6</div> </div> </div>	<p>Making a deep analysis behind the requirements stated in the document of concept of operations</p>	<p>Establish common vocabulary</p>	<p>01/03/2016 1 hour</p>	<p>Based on the document and the meeting with Stuart Faulk</p>
<div> <div>SEMAT Kernel</div> <h2>Work</h2> <div> <div>Under Control</div> <ul style="list-style-type: none"> <input type="checkbox"/> Tasks being completed <input type="checkbox"/> Unplanned work under control <input type="checkbox"/> Risks under control <input type="checkbox"/> Estimates revised to reflect performance <input type="checkbox"/> Progress measured <input type="checkbox"/> Re-work under control <input type="checkbox"/> Commitments consistently met <div>4 / 6</div> </div> </div>	<p>Coordinating the form of work between team members</p>	<p>Report project states</p>	<p>01/03/2016 1 hour</p>	<p>The team proposes methods to control the work</p>
<div> <div>SEMAT Kernel</div> <h2>Way of Working</h2> <div> <div>In Use</div> <ul style="list-style-type: none"> <input type="checkbox"/> Practices & tools in use <input type="checkbox"/> Regularly inspected <input type="checkbox"/> Adapted to context <input type="checkbox"/> Supported by team <input type="checkbox"/> Feedback mechanisms in place <input type="checkbox"/> Practices & tools support collaboration <div>3 / 6</div> </div> </div>	<p>Applying working methods in group for obtaining best results</p>	<p>Manage the development of the tasks</p>	<p>01/03/2016 1 hour</p>	<p>Practices and tools support collaboration are used</p>

<div> <div>Way of Working</div> <div>Foundation Established</div> <ul style="list-style-type: none"> <input type="checkbox"/> Key practices & tools selected <input type="checkbox"/> Practices needed to start work agreed <input type="checkbox"/> Non-negotiable practices & tools identified <input type="checkbox"/> Gaps between available and needed way-of-working understood <input type="checkbox"/> Gaps in capability understood <input type="checkbox"/> Integrated way of working available <div>2 / 6</div> </div>	<p>Selecting tools and other useful practices for a good team work</p>	<p>Report the progress work</p>	<p>01/03/2016 1 hour</p>	<p>During the class</p>
<div> <div>Requirements</div> <div>Bounded</div> <ul style="list-style-type: none"> <input type="checkbox"/> Development stakeholders identified <input type="checkbox"/> System purpose agreed <input type="checkbox"/> System success clear <input type="checkbox"/> Shared solution understanding exists <input type="checkbox"/> Requirement's format agreed <input type="checkbox"/> Requirements management in place <input type="checkbox"/> Prioritization scheme clear <input type="checkbox"/> Constraints identified & considered <input type="checkbox"/> Assumptions clear <div>2 / 6</div> </div>	<p>The requirements for the project were identified and modeled</p>	<p>Define tests strategies</p>	<p>01/03/2016 1 hour</p>	<p>This was done using the pre-conceptual schema</p>
<div> <div>Work</div> <div>Prepared</div> <ul style="list-style-type: none"> <input type="checkbox"/> Commitment made <input type="checkbox"/> Cost and effort estimated <input type="checkbox"/> Resource availability understood <input type="checkbox"/> Risk exposure understood <input type="checkbox"/> Acceptance criteria established <input type="checkbox"/> Sufficiently broken down to start <input type="checkbox"/> Tasks identified and prioritized <input type="checkbox"/> Credible plan in place <input type="checkbox"/> At least one team member ready <input type="checkbox"/> Integration points defined <div>2 / 6</div> </div>	<p>All the requirements for the work were achieved.</p>	<p>Plan delivery</p>	<p>01/03/2016 1 hour</p>	<p>For the plan should take into account the dates for delivery of the work</p>