



Universidade do Porto
Faculdade de Engenharia

FEUP

Sales Force Automation

Deliverable 1: Specification

Information Systems

4th year of the Master in Informatics and Computing Engineering

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Project ID: P4 - Sales Force Automation

Group ID: S

Class: 3

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Project overview

The objective of the project is the development of a web application with the intent of making the management of a sales representative's agenda easier. It should automate parts of the processes used to make deals with customers. This not only includes finding potential customers, but also recording past and future commitments and the statuses of negotiations with current ones. Viewing the general situation of the business is also an important trait that must be taken into account to analyze current trends and make correct decisions to who the product should be sold to. While sales force automation systems might be costly and hard to adopt, sales representative can make better and more meaningful use of their time by having access to aggregated and summarized data, which is also an advantage for the business's management.

The project will have interoperability with the ERP Primavera which will be used to obtain, store and manage relevant information such as sales orders history, inventory status, customers profiles and scheduled commitments.

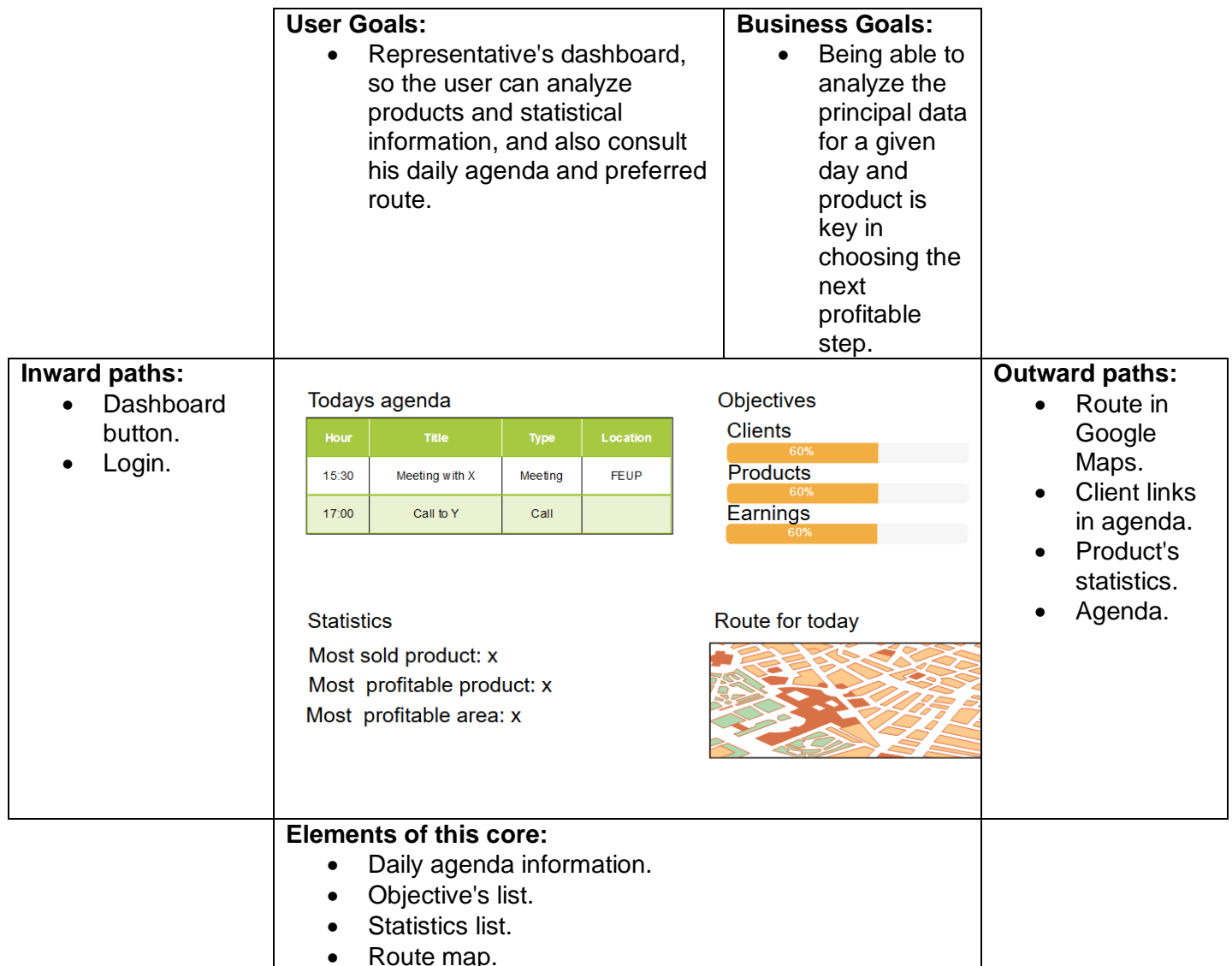
Features

The following table shows information about the application's expected features.

ID	Name	Description	Associated core view ID
F01	Login/Logout	Authentication system.	None
F02	View profile information	Basic information/statistics/ goals.	CV01
F03	View client profile information	Basic information, history of visits and past sales made.	CV06
F04	View list of clients	Search for a specific client.	CV03
F05	View list of client visits	View all the visits made to a client.	CV06
F06	Sales order registration	View all the buyers of the product.	CV07
F07	Update sales order	Input/View new sales.	CV04
F08	View list of sales orders	History of sales made, ordered chronologically.	CV04
F09	View the route for a day	Map route for commitment's locations.	CV01
F10	View agenda	Detailed information of future and past commitments.	CV02
F11	Create commitments in agenda	Input a new commitment.	CV02
F12	Edit commitments in agenda	Edit a current commitment.	CV02
F13	Delete commitments	Delete an existing commitment.	CV02
F14	View opportunities	State of ongoing negotiations.	CV05
F15	Change the state of the negotiations	Change status of an ongoing negotiation.	CV05
F16	View product information	Information about selected product (including stock).	CV07

Information Architecture

CV01 – Dashboard



CV02 – Agenda

User Goals:

- Representative's agenda which displays detailed information about the chosen day's work order.

Business Goals:

- Being able to plan ahead, setup meetings and organize long-term commitments is fundamental in every business management.

Inward paths:

- Agenda button.

October 2014						
Mo	Tu	We	Th	Fr	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4
5	6	7	8	9	10	11

Hour	Title	Type	Location	Notes
15:30	Meeting with X	Meeting	FEUP	Important
17:00	Call to Y	Call		
Value 6	Value 7	Value 8	Value 9	Value 14
Value 10	Value 11	Value 12	Value 13	Value 15

Outward paths:

- Add a commitment to a chosen day.
- Activities agenda.
- Meetings links and notes.
- Calendar interactivity.

Elements of this core:

- Monthly agenda.
- Daily task list.

CV03 - Target customers

User Goals:

- Target customer's listing and general information.

Business Goals:

- Indexing customers provides easy access to its information's, which makes it easier to set up business meetings.

Inward paths:

- Target customer's button.

Search...				Go!
Name	Date/Hour	Location	Cell phone	Notes
João Filipe	11/07/2017 15:42	Rua X	91455663	Sample Text
Value 1	Value 2	Value 3	Value 4	Value 5
Value 6	Value 7	Value 8	Value 9	Value 10
Value 11	Value 12	Value 13	Value 14	Value 15

Outward paths:

- Search for a customer using the search bar.
- Target customers links and notes on the table.
- Add target customers.

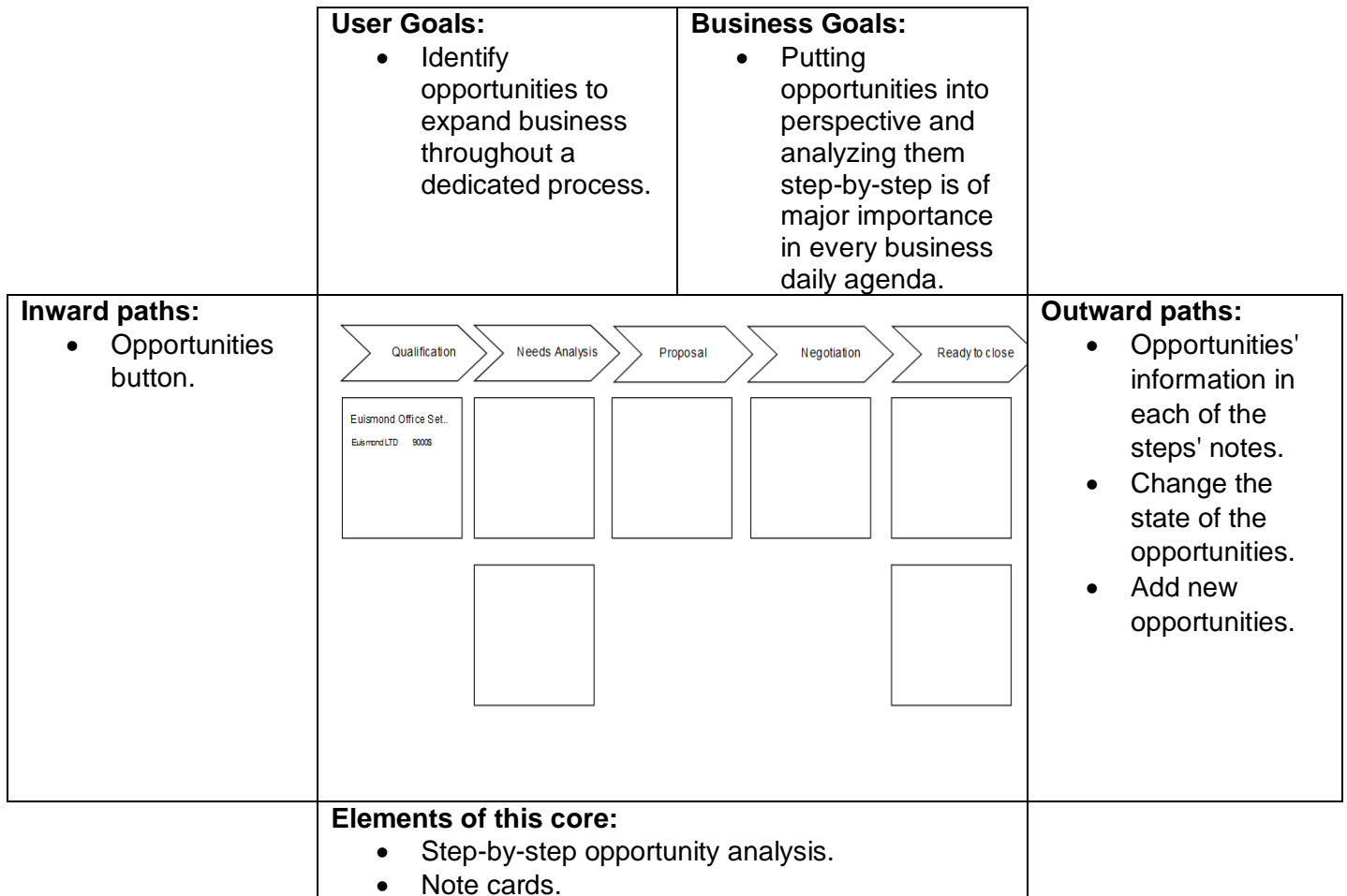
Elements of this core:

- Search bar.
- Customers information table.



CV04 - Sales orders

	User Goals: <ul style="list-style-type: none">Table with sales overall information about the products, such as its id, quantity and buyer's name.	Business Goals: <ul style="list-style-type: none">Being able to identify the key buyers and the most sold products.																									
Inward paths: <ul style="list-style-type: none">Sales orders button.	<div><input type="text" value="Search..."/> <input data-bbox="1160 445 1198 468" type="button" value="Go!"/></div> <table><tr><th>Date/Hour</th><th>Product ID</th><th>Commercial Name</th><th>Quantity</th><th>Buyer Name</th></tr><tr><td>10/04/2017 15:40</td><td>A000123</td><td>Product Z</td><td>3000</td><td>FEUP</td></tr><tr><td>Value 1</td><td>Value 2</td><td>Value 3</td><td>Value 4</td><td>Value 5</td></tr><tr><td>Value 6</td><td>Value 7</td><td>Value 8</td><td>Value 10</td><td>Value 11</td></tr><tr><td>Value 12</td><td>Value 13</td><td>Value 14</td><td>Value 15</td><td>Value 16</td></tr></table>	Date/Hour	Product ID	Commercial Name	Quantity	Buyer Name	10/04/2017 15:40	A000123	Product Z	3000	FEUP	Value 1	Value 2	Value 3	Value 4	Value 5	Value 6	Value 7	Value 8	Value 10	Value 11	Value 12	Value 13	Value 14	Value 15	Value 16	Outward paths: <ul style="list-style-type: none">Search for a sales order using the search bar.Sales orders links and information on the table.Add sales orders.
Date/Hour	Product ID	Commercial Name	Quantity	Buyer Name																							
10/04/2017 15:40	A000123	Product Z	3000	FEUP																							
Value 1	Value 2	Value 3	Value 4	Value 5																							
Value 6	Value 7	Value 8	Value 10	Value 11																							
Value 12	Value 13	Value 14	Value 15	Value 16																							
	Elements of this core: <ul style="list-style-type: none">Table with information regarding sales.Search bar.																										

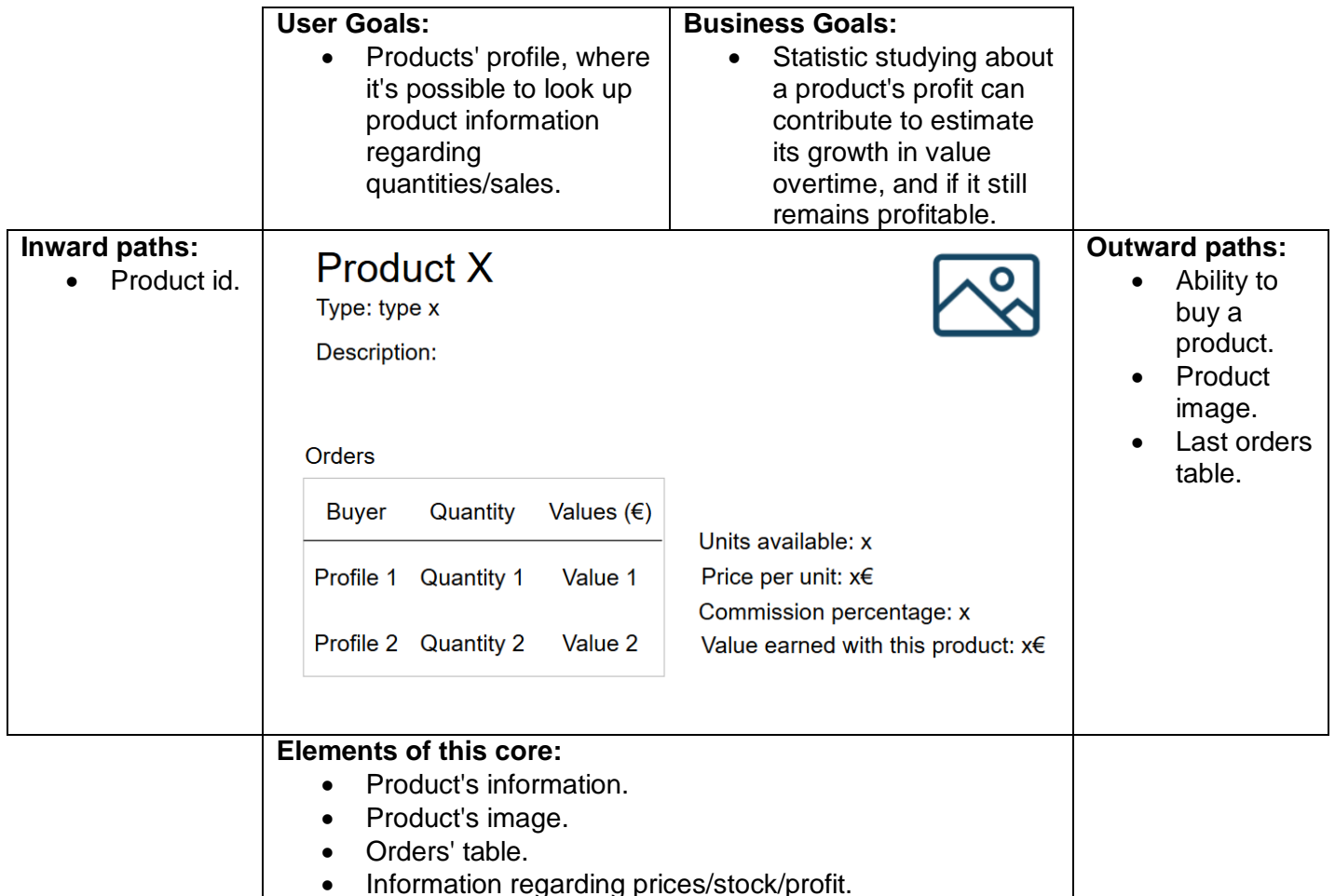
CV05 – Opportunities



CV06 - Client Profile

	User Goals: <ul style="list-style-type: none">Client's profile page, where the representative can track the latest buys, location and contact information.	Business Goals: <ul style="list-style-type: none">Client's management, such as needs, preferred products and contacts, is important in order to deliver a more personalized service.																
Inward paths: <ul style="list-style-type: none">Customer name.	<div><div>Profile X Phone number: 911 911 911 E-mail: example@example.com</div><div></div><div>Visits</div><table><tr><th>Date</th><th>Product</th><th>Types</th><th>Values (€)</th></tr><tr><td>10/02/2017</td><td>Product 1</td><td>Type 1</td><td>Value 1</td></tr><tr><td>09/01/2017</td><td>Product 2</td><td>Type 2</td><td>Value 2</td></tr><tr><td>05/01/2017</td><td></td><td></td><td></td></tr></table></div> <div><div>Location</div></div>	Date	Product	Types	Values (€)	10/02/2017	Product 1	Type 1	Value 1	09/01/2017	Product 2	Type 2	Value 2	05/01/2017				Outward paths: <ul style="list-style-type: none">Location map.Last visits table.Profile image.
Date	Product	Types	Values (€)															
10/02/2017	Product 1	Type 1	Value 1															
09/01/2017	Product 2	Type 2	Value 2															
05/01/2017																		
	Elements of this core: <ul style="list-style-type: none">Profile image.Profile information (name, email, phone).Visits' table.Location map.																	

CV07 - Product information



Interoperability with Primavera

In this section, we will define what webservices will be implemented.

Dashboard

Protocol to get the data that will be presented on the dashboard:

Webservice ID	DASHBOARD
Webservice Description	Provide some metrics related with how well the sales are performing and part of the agenda of the sales representative.
Related Core View(s)	CV01
HTTP Verb	GET
Route	/dashboard.php
Input Example	{"representative_id": "5"}
Expected Output	<pre>{ "dashboard": { "today_agenda": [{ "hour": "09:00", "title": "Meeting with [Tiago:https://example.com/profile?client_id=20] and [Luís:https://example.com/profile?client_id=21]", "type": "Meeting", "location": "UPTEC", "note": "Do not be late." }], "objectives": { "clients": "56", "products": "80", "earnings": "30" }, "statistics": { "most_sold_product_name": "Primavera ERP", "most_profitable_product_name": "Primavera ERP", "most_profitable_area": "Porto" } } }</pre>

Agenda

Protocols to get and set the appointments that a sales representative attended and will attend:

Webservice ID	APPOINTMENTS_NUM_OF_MONTH
Webservice Description	Provide the number of appointments for each day of a month.
Related Core View(s)	CV02
HTTP Verb	GET
Route	/agenda .php
Input Example	<pre>{ "representative_id": "5", "month": "10", "year": "2017" }</pre>
Expected Output	<pre>{"month_appointments": ["10", "15", "0", "5", ...]}</pre> (How many as the month length.)

Webservice ID	APPOINTMENTS_OF_DAY
Webservice Description	Provide the detailed information of the appointments of a specific day.
Related Core View(s)	CV02
HTTP Verb	GET
Route	/agenda .php
Input Example	<pre>{"date": "2017-10-15"}</pre>
Expected Output	<pre>{ "day_appointments": [{ "hour": "15:00", "title": "Meeting with [Tiago:https://example.com/profile?client_id=20] and [Luís:https://example.com/profile?client_id=21]", "type": "Meeting", "location": "FEUP" "note": "Do something." }] }</pre>

Webservice ID	APPOINTMENT_CREATE
Webservice Description	Create an appointment that the sales representative should attend.
Related Core View(s)	CV02
HTTP Verb	POST
Route	/agenda.php
Input Example	<pre>{ "title": "Meeting with [Tiago:https://example.com/profile?client_id=20] and [Luís:https://example.com/profile?client_id=21]", "date": "2017-04-12 14:05", "type": "Meeting", "location": "FEUP", "note": "Maria Ondina is a representant of FEUP." }</pre>
Expected Output	Success: {"id": "51"} Failure: {"message": "It was not possible to create the appointment."}

Webservice ID	APPOINTMENT_UPDATE
Webservice Description	Update the information of an appointment that the sales representative should attend.
Related Core View(s)	CV02
HTTP Verb	POST
Route	/agenda.php
Input Example	<pre>{ "id": "1256", ? "title": "Meeting with [Tiago:https://example.com/profile?client_id=20] and [Luís:https://example.com/profile?client_id=21]", ? "date": "2017-04-12 14:05", ? "type": "Meeting", ? "location": "FEUP", ? "note": "Maria Ondina is a representant of FEUP." }</pre>
Expected Output	Success: {"success": "true"} Failure: {"success": "false"}

Webservice ID	APPOINTMENT_DELETE
Webservice Description	Hide an appointment that the sales representative should attend.
Related Core View(s)	CV02
HTTP Verb	POST
Route	/agenda.php
Input Example	{"id": "5"}
Expected Output	Success: {"success": "true"} Failure: {"success": "false"}

Sales Orders

Protocols to get, create, update and delete information about sales orders:

Webservice ID	SALES_ORDERS
Webservice Description	Get the sales orders.
Related Core View(s)	CV04
HTTP Verb	POST
Route	/sales_orders.php
Input Example	{"representative_id": "0190333001"}
Expected Output	{ "offset": "10", "sales_orders": [{"sales_order_id": "0190333001", "client_id": "0019997721", "date": "2017-04-10", "client_name": "Maria Carolina", "product_id": "A012B", "product_name": "product Z", "quantity": "32" }] }

Webservice ID	UPDATE_SALES_ORDER
Webservice Description	Update information related to a sales order.
Related Core View(s)	CV04
HTTP Verb	POST
Route	/sales_orders.php
Input Example	{ "sales_order_id": "0190333001" ? "client_id": "0019997721", ? "product_id": "A012" ? "quantity": "32", }
Expected Output	Success: { "success": "true" } Failure: { "success": "false" }

Webservice ID	DELETE_SALES_ORDER
Webservice Description	Delete information related to a sales order.
Related Core View(s)	CV04
HTTP Verb	POST
Route	/sales_orders.php
Input Example	{ "sales_order_id": "0190333001" }
Expected Output	Success: { "success": "true" } Failure: { "success": "false" }

Webservice ID	CREATE_SALES_ORDER
Webservice Description	Create a sales order.
Related Core View(s)	CV04
HTTP Verb	POST
Route	/sales_orders.php
Input Example	<pre>{ "representative_id": "0190333001", "client_id": "0019997721", "date": "10/4/2017", "product_id": "A012B", "quantity": "32" }</pre>
Expected Output	Success: <pre>{"id": "51"}</pre> Failure: <pre>{"message": "It was not possible to create the sales order."}</pre>

Client Profile

Protocol to get the information related to a client:

Webservice ID	CLIENT_PROFILE
Webservice Description	Obtain information about a client.
Related Core View(s)	CV06
HTTP Verb	GET
Route	/profile.php?client_id=<client_id>
Input Example	<pre>{"client_id": "1"}</pre>
Expected Output	<pre>{ "id": "1", "name": "José Povinho", "phone number": "961663378", "email": "example@gmail.com", "image": "imageProfileUserA.png", "visits": [{ "date": "", "product_id": "10", "product": "product one", "type": "informal", "value": "10.55" }] }</pre>

Login

Protocol to login:

Webservice ID	LOGIN
Webservice Description	User authentication.
Related Core View(s)	None
HTTP Verb	POST
Route	/login.php
Input Example	<pre>{ "email": "example@gmail.com", "password": "123example123", }</pre>
Expected Output	Success: {"success": "true"} Failure: {"success": "false"}

Target Customers

Protocol to get or search future commitments:

Webservice ID	TARGET_CUSTOMERS
Webservice Description	Check next commitments with target customers.
Related Core View(s)	C03
HTTP Verb	GET
Route	/target_customers.php
Input Example	{"representative_id": 5}
Expected Output	<pre>{ "offset": "10", "target_customers": [{ "customer_id": "5", "name": "José Silva", "date": "2017-02-15 16:00", "location": "Rua Conselheiro Costa Braga, 502", "phone_number": "914852951" }, { "customer_id": "6", "name": "Rui Pereira", "date": "2017-04-20 10:00", "location": "Rua João Machado, 19, 2º A", "phone_number": "961663378" }] }</pre>

Webservice ID	TARGET_CUSTOMERS_SEARCH
Webservice Description	Search next commitments with target customers.
Related Core View(s)	C03
HTTP Verb	GET
Route	/target_customers.php?name=<customer_name>
Input Example	{"customer_name": "José Silva"}
Expected Output	<pre>{ "offset": "10", "target_customers" : [{ "customer_id": "5", "name": "José Silva", "date": "2017-02-15 16:00", "location": "Rua Conselheiro Costa Braga, 502", "phone_number": "914852951" }] }</pre>

Opportunities

Protocol to get, create and edit the state of negotiations:

Webservice ID	OPORTUNITIES
Webservice Description	Retrieves the opportunities.
Related Core View(s)	CV05
HTTP Verb	POST
Route	/opportunities.php
Input Example	{"representative_id": "12345"}
Expected Output	<pre>{ "offset": "10", "confirmation": [{ "opportunity_id": "1234", "customer_id": "123", "customer_name": "João Paulo", "product_name": "Produto X" }], "needs_analysis": [{ "opportunity_id": "1232", "customer_id": "121", "customer_name": "João Paulo", "product_name": "Produto X" }], "proposal": [{ "opportunity_id": "1235", "customer_id": "122", "customer_name": "João Paulo", "product_name": "Produto X" }], "negotiation": [{ "opportunity_id": "1236",</pre>

	<pre> "customer_id": "124", "customer_name": "João Paulo", "product_name": "Produto X" }], "ready_to_close": [{ "opportunity_id": "1238", "customer_id": "125", "customer_name": "João Paulo", "product_name": "Produto X" }] } </pre>
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Webservice ID	CREATE_OPPORTUNITY
Webservice Description	Create a new opportunity.
Related Core View(s)	CV05
HTTP Verb	POST
Route	/opportunities.php
Input Example	<pre> { "representative_id": "12345", "opportunity": { "type": "confirmation", "customer_id": "123", "product_id": "10" } } </pre>
Expected Output	Success: {"id": "51"} Failure: {"message": "It was not possible to create the opportunity."}

Webservice ID	UPDATE_OPPORTUNITY
Webservice Description	Change the state of an opportunity.
Related Core View(s)	CV05
HTTP Verb	POST
Route	/opportunities.php
Input Example	<pre> { "opportunity_id": "5" "representative_id": "12345", "opportunity ": { "type": "confirmation", "customer_id": "123", "product_id": "10" } } </pre>
Expected Output	Success: {"success": "true"} Failure: {"success": "false"}

Webservice ID	DELETE OPPORTUNITY
Webservice Description	Delete the state of an opportunity.
Related Core View(s)	CV05
HTTP Verb	POST
Route	/opportunities.php
Input Example	{"opportunity_id": "12345"}
Expected Output	Success: {"success": "true"} Failure: {"success": "false"}

Product Information

Protocol to get the details of a product,

Webservice ID	PRODUCT_INFORMATION
Webservice Description	Retrieves the details of a product.
Related Core View(s)	CV07
HTTP Verb	GET
Route	/product.php?product=<product_id>
Input Example	{"product_id": "12345"}
Expected Output	{ "product_name": "X", "description": "The description of this product", "photo_url": "photos/abc.jpg", "units_available": "10", "price_per_unit": "10.55", "commission_percentage": "0.1", "value_earned": "100", "orders": [{ "name": "Maria Ondina", "quantity": "1", "value": "10.55" }] }

Project Schedule

16/20-10-2017	23/27-10-2017	30/03-11-2017	06/10-11-2017	13/17-11-2017	20/24-11-2017	27/01-12-2017	04/08-12-2017
Interoperability: WS layer + Model, Controller + API C# Primavera + ERP validation Primavera							
Product							
Profile Page							
Agenda							
		Target Customers					
		Sales Orders					
		Opportunities					
			Dashboard				
			Documentation				
				Missing features completion and project refinement			