# U.PORTO

**INFORMATION SYSTEMS**

Integrated Masters in Informatics and Computing Engineering
2020/2021

## Project Specification

Project ID P1 - Intercompany

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# Project Overview

The present document provides insights on the development process of the course project for Information Systems (SINF - EIC0040) of the Integrated Masters in Informatics and Computing Engineering (MIEIC) at the Faculty of Engineering of the University of Porto (FEUP).

The project in question is based on a fundamental pillar: comfort for the customer. Thus, we are specifying an illustrative model of two companies, one which bottles and sells beverages and one other that sells bottles, and automating the business interaction between them with an integration with PRIMAVERA's ERP software.

The aim of this project is to develop an interface that allows the companies to define a set of reactive processes that are integrated with the *Jasmin* platform: that is, processes that are executed *in response* to specific user-driven events, such as an invoice being generated or new stock being registered, and admit the concept of continuations, which define a sequence of trigger-process-stop steps within a single automated process.

To achieve this goal our work is divided in two phases. In this first, planning phase, we have modeled a set of business processes between the two aforementioned companies, and have identified, developed and mocked up the core views and functionalities needed to implement our product.

In this project we will use *Jasmin* to deal with all the data and processes surrounding transactions, inventory and information about each product. This information will be accessible after establishing a communication layer between *Jasmin* and the backend of our project.

For the validation of the project, as said above, we will use two ficticious companies both utilizing *Jasmin.* These companies, *KSede* and *BottleFlip* interact in two key ways, as described by the BPMN diagrams present in section 4 of this report. KSede buys bottles from BottleFlip for the production of their products, various bottled beverages, and *BottleFlip* rents their factory space from *KSede,* who owns the building where they both operate.

# Features

## Process List View

- **Process visualization** - list of the processes established between the two selected companies represented on a table with their IDs, description and respective timestamp.
- **Add new process** - button that links to New Process View, which allows the user to create a new process.
- **Process details** - each ID links to their respective details.

## Process Creation / Editing View

- **Edit** - button that allows the user to edit a process.
- **Delete** - option to delete the process and return to Processes View.
- **Confirm** - option to confirm the new process and return to Processes View.

## Process Log List View

- **Process status** - table representing the status (success/pending/error) of process instances that are currently running or have recently run.
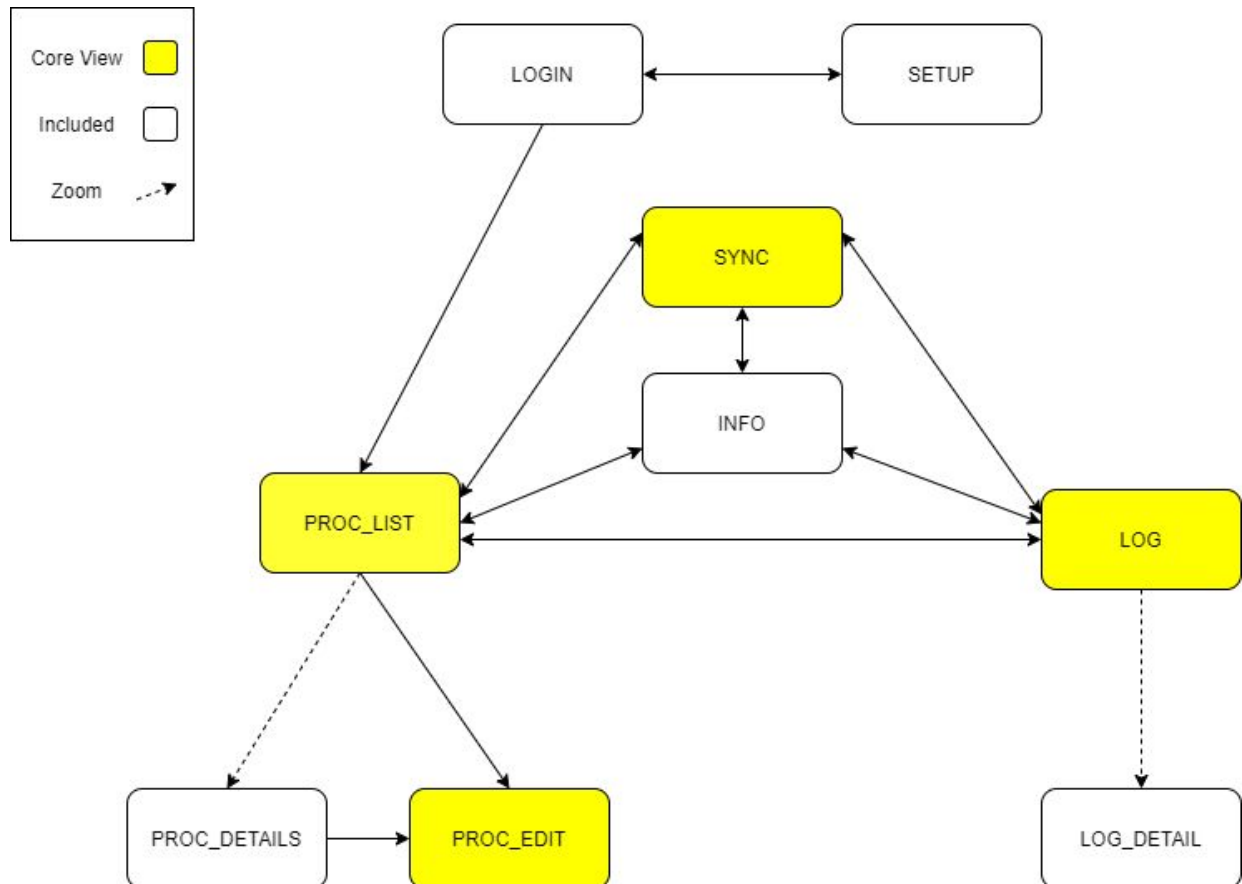
## Master Data Synchronization Management View

- **Company items** - tables representing the IDs and names of the items of each company.
- **Equivalent items** - table allowing the user to make a correspondence between the items IDs from both companies.

## Integration Setup View

- **Company Information** - allows the user to stand up a new instance of the platform by providing the name, tenant code, client ID and client secret of the companies, as well as their desired credentials for authentication.

# Sitemap

# Information Architecture (Core views)

## Integration Setup (SETUP)



## Process List (PROC_LIST)

# Process Creation / Editing (PROC_EDIT)



**User and Business Rules**

Create a process between the selected companies.

Edit an existing process.

**Inwards Paths / Trigger Words**

- "Add New Process" button from **Processes** view.

- Process IDs from **Processes** view.

**Outward Paths/Call to Action**

- Delete button links to **Processes** view.

- Confirm button goes to **Processes** view.

- Top navigation bar.

**Elements of the core**

Company 1 and Company 2 selectors
Delete process button
Confirm process button.

Table representing the steps of the process
Edit process button

# Process Log List (LOG)



**User and Business Rules**

Check the status of the processes between both companies.

Check the status of the requests to Jasmin.

**Inwards Paths / Trigger Words**

- Top navigation bar.

**Outward Paths/Call to Action**

- Each process ID links to its details.

- Top navigation bar.

**Elements of the core**

Logs table
Process IDs (details)

# Master Data Synchronization Management (SYNC)



## User and Business Rules

Check common products present in both companies.

Add/Remove correspondences between the products present in both companies.

**Inwards Paths / Trigger Words**

- Top navigation bar

**Outward Paths/Call to Action**

- Add new entry in the correspondences table.
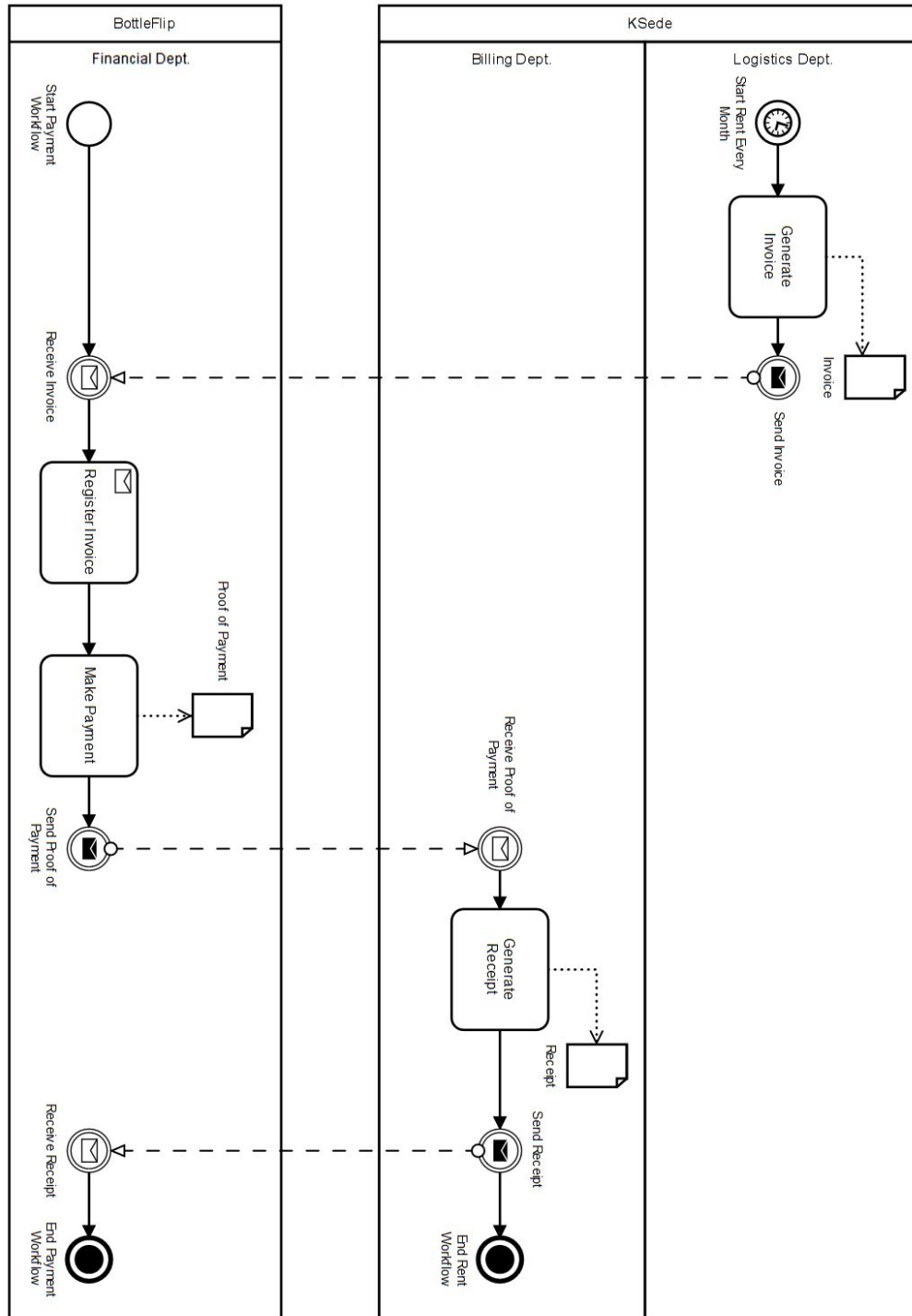
- Select Company 1 and Company 2.

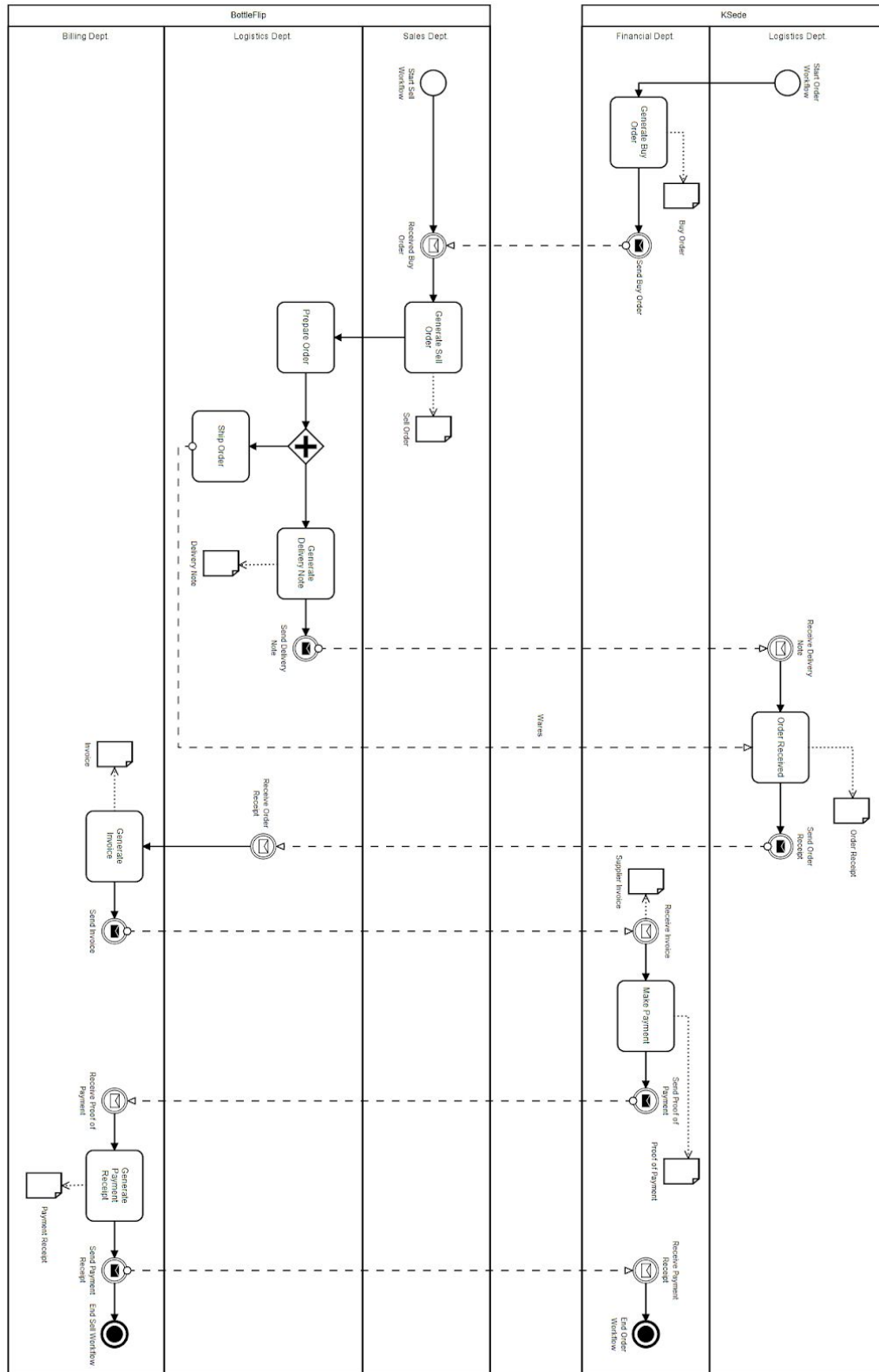- Top navigation bar.

**Elements of the core**

Company 1 and Company 2 selectors
Table with product IDs and their respective names from Company 1
Table with product IDs and their respective names from Company 2
Table with IDs correspondence between the products from both companies.

# BPMN Flows



Simple BPMN diagram

Complex BPMN diagram

# Project Planning (Gantt Chart)

**SINF 20/21: Intercompany Integration - Group B**  SIMPLE GANTT CHART by Vertex42.com
https://www.vertex42.com/ExcelTemplates/simple-gantt-chart.html

Company Name
Project Lead

Project Start: 23/10/2020
Display Week: 1

| TASK | ASSIGNED TO | PROGRESS | START | END |
|------|-------------|----------|-------|-----|
| **Phase 1 - Functional Specification** | | | | |
| Task 1 | Jasmin Setup | 100% | 10/23/20 | 10/24/20 |
| Task 2 | BPMN Diagrams | 100% | 10/26/20 | 11/5/20 |
| Task 3 | Gantt Chart | 100% | 10/26/20 | 11/5/20 |
| Task 4 | fformation Architecture (core view | 100% | 10/26/20 | 11/9/20 |
| Task 5 | Functionalities/ Features (sitemap) | 100% | 10/26/20 | 11/9/20 |
| Task 6 | Write Specification Report | 100% | 11/9/20 | 11/11/20 |
| **Phase 2 - Product Development** | | | | |
| Task 1 | Development Environment Setup | 0% | 11/12/20 | 11/19/20 |
| Task 2 | erability of Database with Backenc | 0% | 11/19/20 | 12/3/20 |
| Task 3 | ication and Development of Web F | 0% | 11/26/20 | 12/14/20 |
| Task 4 | Overview Dashboard Development | 0% | 12/3/20 | 12/14/20 |
| Task 5 | ral Dashboards Prototype Develop | 0% | 12/3/20 | 12/14/20 |
| **Phase 3 - Project End** | | | | |
| Task 1 | Write Final Report | 0% | 12/13/20 | 12/17/20 |
| Task 2 | Preparing Presentation | 0% | 12/16/20 | 12/17/20 |
| Task 3 | Product Presentation | 0% | 12/18/20 | 12/18/20 |
| Task 4 | Last Minute Improvements | 0% | 12/18/20 | 12/20/20 |
| Task 5 | Final Delivery | 0% | 12/20/20 | 12/20/20 |

out 19, 2020 — out 26, 2020 — nov 2, 2020 — nov 9, 2020 — nov 16, 2020 — nov 23, 2020 — nov 30, 2020 — dez 7, 2020 — dez 14, 2020 — dez 21, 2020