

Countdown Sales Service

Project Overview

1 Introduction

This document presents the service, which is the entire application that you will obtain and implement in this project.

1.1 Presentation of the service

The *Countdown Sales Service* allows buyers to see and accept limited commercial offers proposed by sellers similarly somehow to *QoQa* website (www.qoqa.ch). The goal of this project is to create a browser-based application and later a mobile geolocated application as described in Figure 1.

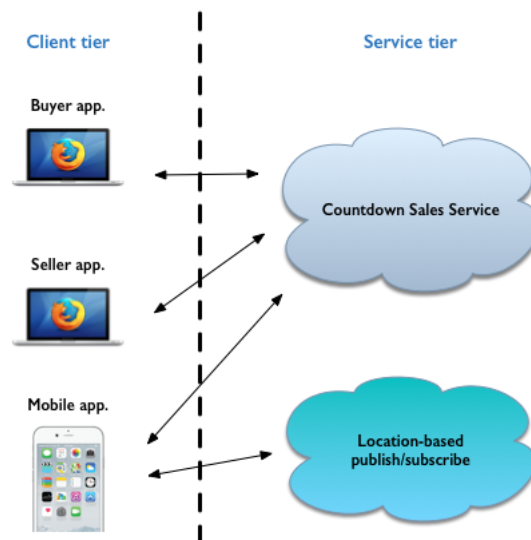


Figure 1: Project architecture overview

Each application of the *Client tier* are briefly described hereafter:

- **Seller app.:** Sellers should propose limited (limited in terms of quantity) offers, and geolocated limited offers in Phase 3, via the web interface. An offer must contain a description, a price as well as a stock, which means that it is limited.
- **Buyer app.:** Buyers should see limited offers as soon as they are proposed and posted by sellers via the web interface. They can also

directly select an offer with a quantity equals to 1 and send this transaction to the seller application. The seller application will after automatically determine if the transaction can be accepted according to the current stock of the selected offer by the buyer.

- **Mobile app.:** Buyers can see an offer when they are close to a specific location linked to this offer proposed by a seller. They can also directly select it.

1.2 Phases of the project

During the semester, the project will consist of three phases. Each phase will extend the previous one and will rely on the concepts and technologies learned in class. At the beginning of each phase, we will give a description of the expected architecture and functionalities of the phase.

During **Phase 1**, students will create a web tier in order to provide the expected applications: a web application for buyers and another one for sellers. Thus, Phase 1 covers topics such as the *Java Server Pages (JSP)*, the *Servlets* and the *Java Messaging Service (JMS)*.

During **Phase 2**, students will add a business tier to the applications created in *Phase 1*. Thus, Phase 2 covers the *Enterprise JavaBeans (EJB)* as well as the *Java Persistence API (JPA)*.

During **Phase 3**, students will create a mobile application capable of interacting with a remote *publish/subscribe* service. Thus, Phase 3 covers the development of a mobile and context-aware application in Swift.