



GUESSBID

## Requirements Analysis and Specification Document

Author: Nguyen Van Minh

*April, 27, 2015*

## CONTENTS

---

1	Introduction .....	3
1.1	Description .....	3
1.2	Goals .....	3
1.3	architecture .....	3
1.4	Glossary .....	4
1.5	Identifying stakeholders .....	4
2	Actors.....	5
3	Requirements.....	5
4	Specification .....	5
5	Scenarios.....	5
6	UML models.....	6
7	Alloy models .....	6
8	Used tools .....	6

# 1 INTRODUCTION

---

## 1.1 DESCRIPTION

This project will simulate the inverse auction system. By comparison with the traditional one, the buyer sets up bidding item hence the sellers will try to compete with another. Regarding the rule, the seller who issues *smallest unique bid* is winner.

Registration users in this system should have right to create and manage auctions and take part in another. In addition, after finishing auction the transaction will be started and the money is taken away from the winning seller's credit.

## 1.2 GOALS

This system has to provide main features respecting possible users:

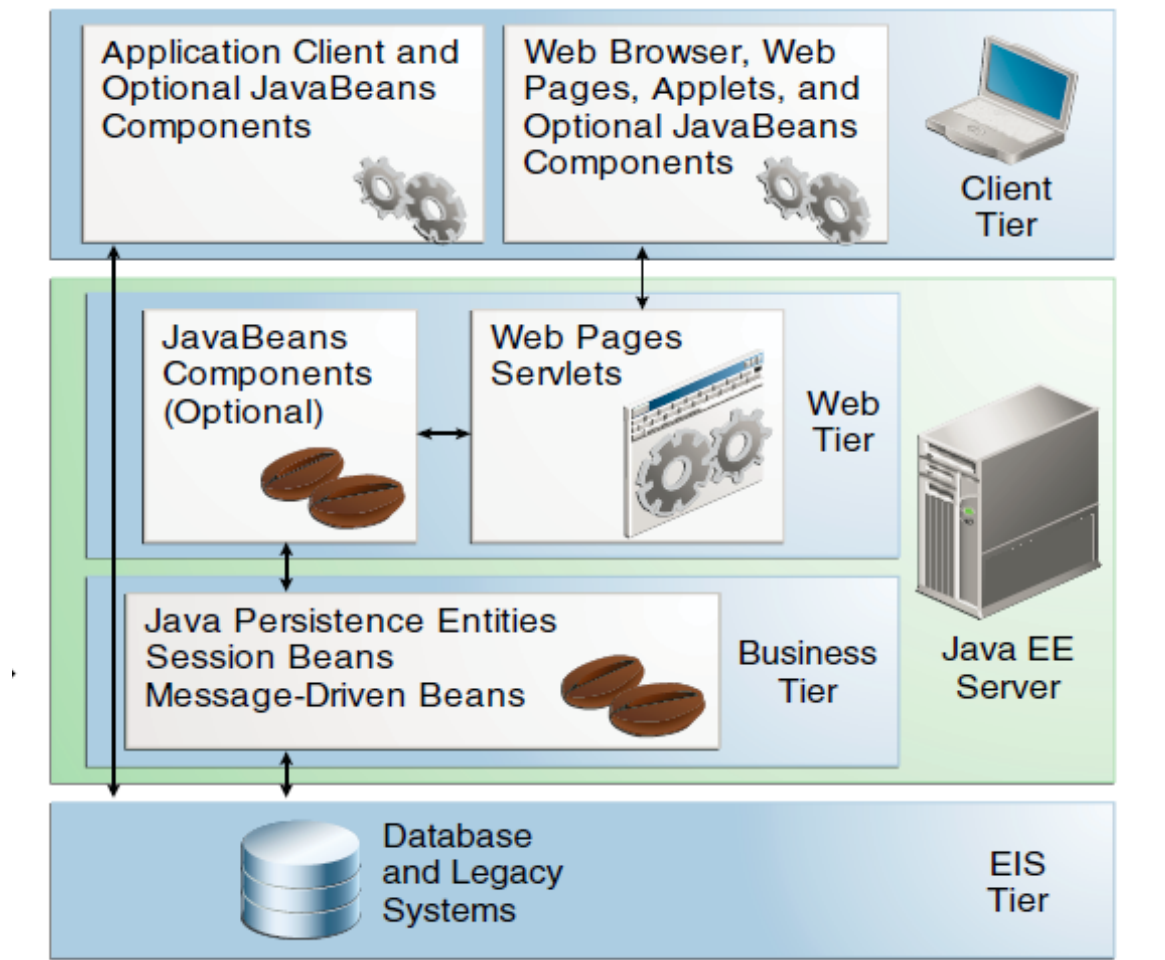
- Registration of person to the system.
- Linking user to a certain virtual credit.
- Finding and joining, checking status of any unexpired auctions from other users.
- Managing his/her own auction: set the expired date, close the auction before due date, change information about item.

## 1.3 ARCHITECTURE

This system applies multi-tier architecture of EJB web application in terms of giving nice solution on working logically and easily.

The main objective of Java EE application here is that enables developers to concentrate on business logic which makes the whole system is clean, well-organized.

Users can access to the web application (client tier) which interacts with the system through web interface. In the meantime, the system runs within Web tier, Business tier and Database (EIS tier). Developer has huge power to design the logic of system, oriented class by Java beans as well as creating separated User Interface by Web pages servlet.



## 1.4 GLOSSARY

In the first place, I need to clarify some words using in the system:

- User: apparently the registration users which followed successfully registration process.
- Auction: notified as real life auction which one item will be bring out to estimate. Only one among the competitions is winner respecting the specific rule.
- Buyer: user who set up the auction.
- Seller: user who try to win the auction.
- Bid: the amount of credit put on the auction to guesstimate the item.

## 1.5 IDENTIFYING STAKEHOLDERS

Our "financial" stakeholder is the professor who provide me this respectful project. As far as a mandatory project, the professor would like to have me pass by all the development process truly as a completed software.

Thus I need to follow from the beginning to the end of software process including requirement analysis documentation, design document, implementation, project reporting and final presentation. As a matter of fact, this project tends to run as well as EJB web application with required functionalities.

I might consider this project is attempt to lack some compatible functionalities in compared with another existed large systems as biddingo.com. By the way, my purpose is trying my best with respect to understanding well through all development process by multi-tier architecture of EJB platform and provide acceptable not only functions but also UI for users.

## 2 ACTORS

---

I indicate actors as below:

- Guest: the one who only access to home page of system which merely involves information about system.
- User: the registration user who possibly create/manage his/her own auctions and join another ones.
- Administrator: the only one is possible to check and manage all users in the system.

## 3 REQUIREMENTS

---

As aforementioned, for each goals I will derive:

- Registration of person to the system:
  - The system has to provide sign up functionality.
- Linking user to a certain virtual credit:
  - The system will create a virtual credit of 100 for registration user (as requiring from the description of project). Also bearing in mind that issuing bid costs of 2.
- Finding and joining, checking status of any unexpired auctions from other users:
  - The system should provide well-organized auction page to user with briefly description, status for each auctions.
- Managing his/her own auction: set the expired date, close the auction before due date, change information about item:
  - The system will be able to allow user all those above activities concerning every auctions. Thus user can intuitively control his/her auction so far.

## 4 SPECIFICATION

## 5 SCENARIOS

---

We try to point out some possible scenarios:

- Francesca is a doctor but she always want to open an orphanage to help lost children since she was a little girl. One day, she and her friends embark on the real work. Indeed, she is in charge of buying house equipment. She is wondering few days of reasonable sellers then accidentally a

friend of her tells about the website which can handle her situation best. Therefore Francesca checks on the website, after reading the brief information of the systems in connection with huge potential sellers in many categories, she totally realize the benefit of the system and create an account immediately.

- Francesca brings her auction with careful description to the website after a week. She also sets the starting expected price, expired date within one month (which should be synchronized with her friends' work on building completely the outer of the orphanage).
- Francesca receives over 10 documentation of sellers in merely one week. They are all applicable to her willing. She is very satisfy as soon as the system pick the winner after closing the auction. The seller contacts directly to her afterwards and everything goes well to the new orphanage.
- Francesca now checks on the website unintentionally. She clicks on the home page and surprisingly finds an interesting auction. This auction concerns "Hans Andersen fairy tales" collection version 1997 which has meaningful portrait on the cover of every individual volume. The buyer has every parts but volume 2 and somehow Francesca has that book in her old bookshelf. The buyer – book collector seems excited of this collection and he puts on very high price for that book. In fact, Francesca has already bought a new completely collection of this lovely "Hans Andersen" stories. Accordingly, she joins in the auction, checks the current status of all other bidding competition. Finally, she brings out her bid which is smallest unique and still very high price as regard to an old book. Without doubt, she wins the auction by a smile of an ordinary nerd.

## 6 UML MODELS

---

## 7 ALLOY MODELS

## 8 USED TOOLS

---