

Software Requirements Specification

Wouter Van Rossem

November 5, 2009

Abstract

This document describes the Software Requirements Specifications for the software behind an online auction website. This project is part of the course on software engineering at the Vrije Universiteit Brussel.

Contents

Chapter 1

Introduction

1.1 Purpose

The purpose of this document is to present an overall description and listing of the functionality of the system behind an online auction website. This document is intended for users of the system including designers, testers, implementation unit and the employer.

1.2 Scope

Salesmen is the system behind an online auction website. An auction site is a web application where users can buy and sell objects. Users can place auctions or bid on auctions of other users.

1.3 Definition And Abbreviation

- *SRS*: Software Requirements Specification
- *UML*: Unified Modelling Language

1.4 Reference

1.5 Overview

Section 2 describes the general factors that affect the product and its requirements. This section does not state specific requirements. Instead, it provides a background for those requirements, which are defined in detail in Section

3 of the SRS, and makes them easier to understand.

Section 3 contains all of the software requirements, to a level of detail sufficient to enable designers to design the system to satisfy these requirements, and testers to test that the system satisfies these requirements.

Chapter 2

Overall Description

2.1 Product Perspective

The project will make use of a database and a web server that can be accessed with any web browser.

2.2 User Characteristics

The users of the system will be users with different levels of technical expertise. Any user with a basic understanding of the internet and auctions should be able to make use of all the available functionality of the system. There are three different types of users:

- **Guests:** These are visitors of the site which don't have an account yet or aren't logged in.
- **Member:** These are users of the site who have an account and are logged in.
- **Administrators:** These are special members of the site who manage the site.

2.3 Interfaces

2.3.1 User interfaces through forms

Account information

- Username (mandatory)
- Password (mandatory)
- Password verification (mandatory)
- E-mail (mandatory)
- E-mail verification (mandatory)
- Default Language

Personal information

- First Name (mandatory)
- Last Name (mandatory)
- Address (optional)
- Phone number (optional)
- Date of birth (mandatory, minimum 18 years old)

Registration form

- Account information (mandatory)
- Personal information (mandatory)

Login form

- Username
- Password

Auction search form

- Auction name

Member search form

- Member name

Place auction form

- Auction name
- Transport options

- Minimum price
- Duration
- Auction type
- Category
- Tags
- Other information

Bidding form

- Maximum offer

2.4 Product Functions

2.4.1 Guest

Guests can

- Browse through auctions
- Request an account
- Log in

2.4.2 Member

Members can

- Browse through auctions
- Place auctions
- Bid on auctions
- Access and change their account information
- Contact other users

2.4.3 Administrator

Administrators can

- Manage the members
- Manage the auctions

2.5 Constraints

- The system must work on Linux, and more specifically on Wilma
- The design should be modular, so extensions and replacements of modules will be simplified
- The web interface should be simple, attractive and standard (CSS, XHTML)
- The basic programming language must be Java
- Only open source software and libraries may be used

2.6 Apportioning of Requirements

In order to have a working prototype available at the end of the first iteration, some functionality have different priorities.

- **Must have:** These functionalities should definitely be in the system, preferably after the first iteration.
- **Want to have:** These functionalities should be in the system, but could be dropped when there isn't enough time.
- **Nice to have:** These functionalities should only be implemented if all the 'must have' and 'want to have' requirements are implemented and there is still some time left.

Chapter 3

Specific Requirements

3.1 Functional Requirements

3.1.1 Guest

Create a new account

Priority Must have

Actor Guest

Preconditions User is not logged in

Description A guest can create a new account so that he or she can use the full functionality of the site

Path

1. Guest selects *register*
2. Guest fills in *registration form*
3. Guest submits form
4. System checks form and if valid saves it
5. System send a confirmation mail

Exceptions

1. Username is already taken
2. Incorrect information in the registration form

Result An account is created for the user

Log in

Priority Must have

Actor Guest

Preconditions The user is registered on the site. User is not logged in.

Description If a user is registered but not logged in, he or she can log in to use the full functionality of the site.

Path

1. Guest fills in login form
2. Guest submits form
3. System checks if the form is valid and if so logs the user in

Exceptions

1. Incorrect username and or password

Result The user is logged in

3.1.2 Guest and Member

Search for an auction

Priority Must have

Actor Member or Guest

Preconditions User is at the home page

Description Guests and members can search for auctions

Path

1. Users enters a search term in the search field
2. User submits the search
3. System returns all found auctions that match this search query

Exceptions None

Result The found auctions for the search term

3.1.3 Member

Log out

Priority Must have

Actor Member

Preconditions Member is logged in

Description Members who are logged in can log out

Path

1. Member selects *log out*
2. System logs the member out

Exceptions None

Result The member is logged out

Search a user

Priority Want to have

Actor Member

Preconditions User is at advanced search page

Description Members can search for other members

Path

1. Member enters search term in search member field
2. Member submits search
3. System returns all users corresponding to that search query

Exceptions None

Result The found members for the search term

Place an auction

Priority Must have

Actor Member

Preconditions Member is logged in. User is at home page or user home

Description Members of the site can create a new auction on which other members can bid

Path

1. User selects *place auction*
2. User fills in *new auction form*
3. User submits the form
4. System checks the form and if valid creates the auction

Exceptions Incorrect information in the form, incomplete form

Result Auction is placed

Bid on auction

Priority Must have

Actor Member

Preconditions

1. User is logged in
2. User is on an auction page
3. Auction is not of the user

Description Members can bid on auctions of other members

Path

1. User select *bid*
2. User fills in bidding form
3. User submits form
4. System checks form and if valid places the bid

Exceptions Wrong bid value in the form, incomplete form , not enough credit on salespal account

Result The bid is placed on the auction

Modify account information

Priority Must have

Actor Member

Preconditions User is logged in. User is at control panel

Description Members can modify their account information

Path 1. User selects *modify account*
 2. User changes account information form
 3. User submits the form
 4. System checks the form and if valid, makes the changes

Exceptions Incorrect information, incomplete form

Result The account information of the user is changed

Send a personal message to another member

Follow an auction

View Transaction

Pay transaction

Rate transaction

Top-up salespal

View salespal

Add seller to favourites

3.1.4 Administrator

Remove a user

Priority Must have

Actor Administrator

Preconditions User is at control panel

Description User selects *manage users* and selects a user from the users list. After the user is selected, *remove user* is selected.

Exceptions None

Result A user is removed from the system

Remove an auction

Priority Must have

Actor Administrator

Preconditions User is at control panel

Description User selects *manage auctions* and selects an auction from the auctions list. After the auction is selected, *manage auction* is selected.

Exceptions None

Result Auction is removed

3.2 Database Requirements

All data will be saved in the database. The database always remain consistent. There will be many concurrent request for the database. A good database structure will be needed.

3.3 Design Constraints

1. The design must be object-oriented
2. Design diagrams must be made using UML