
Enterprise

**<Coding Turk System>
Software Requirements Specification
For Desktop Version**

Version <1.0>

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Software Requirements Specification	Date: 10/12/2017
Desktop Version	

Revision History

Date	Version	Description	Author
10/12/2017	1.0	Version 1.0 for Desktop Version	Joseph Schauer Suman Islam Qizhi Zhao Weicheng Huang

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Software Requirements Specification

1. Introduction

This section gives a scope description and overview of everything included in this SRS document. Also, the purpose for this document is described and a list of abbreviations and definitions is provided.

1.1 Purpose

The purpose of this document is to give a detailed description of the requirements for the "Coding Turk System" (CTS) software. It will illustrate the purpose and complete declaration for the development of system. It contains an overview of the use-case model, description of technical feasibility, specific requirements, functional and nonfunctional requirements, and supplementary requirements.

1.2 Scope

CTS is a desktop application where a client can hire develops to implement applications. The application should available in window, mac and Linux system.

In this system where registered users can be either be a client who posts system request or a developer who implements the system a client posted. A super-user handles user accounts, money related issues and proctor user activities. The super-user's id and password can be hardcoded. A client can post a project with the system requirements and developers have the options to bid on the projects. The winning bidder will be chosen by the client and a portion of the fee will be collected by the super user.

Furthermore, this software is just a demo that help student to understand software engineering. Internet is not required for this software. All system information is maintained in a database, which is hard coded in the source code. With the source code, you can run the complete version of this software.

CTS is now an open source software under MIT license.

1.3 Definitions, Acronyms, and Abbreviations

Term	Definition
Visitor	Software user who are not registered
Client	Registered software user, can post a system demand and hire developer
Developer	Registered software user, can bid on any demand with promised timeline and money
Super-User	System administrator who is given specific permission for managing and controlling the system
CTS	Coding Turk System
Markdown	Markdown is a lightweight markup language with plain text formatting syntax

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1.4 References

[1] IEEE Software Engineering Standards Committee, "IEEE Std 830-1998, IEEE Recommended Practice for Software Requirements Specifications", October 20, 1998.

1.5 Overview

The rest of this document includes three chapters. The second one provides an overview of the system functionality and system interaction with other systems. This chapter also introduces different types of user and their interaction with the system. Further, the chapter also mentions the system constraints and assumptions about the product.

The third chapter provides the requirements specification in detailed term and a description of the different system interfaces. Different specification techniques are used to specify the requirements more precisely for different audiences.

The fourth chapter provides supporting information for this document.

2. Overall Description

This section will give an overview of the whole system. The system will be explained in its context to show how the system interacts with other systems and introduce the basic functionality of it. It will also describe what type of user that will use the system and what functionality is available for each type. At last, the constraints and assumptions for the system will be presented.

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2.1 Use-Case Model Survey

The users we have are the Super-User, Clients, Developers and Visitor. The use case diagram below shows the relations and capabilities of all users. The Super-User can manage users such as process/approve application, transaction management and proctor user activity. Visitors can see top developers, clients and apply to become either a developer or a client.

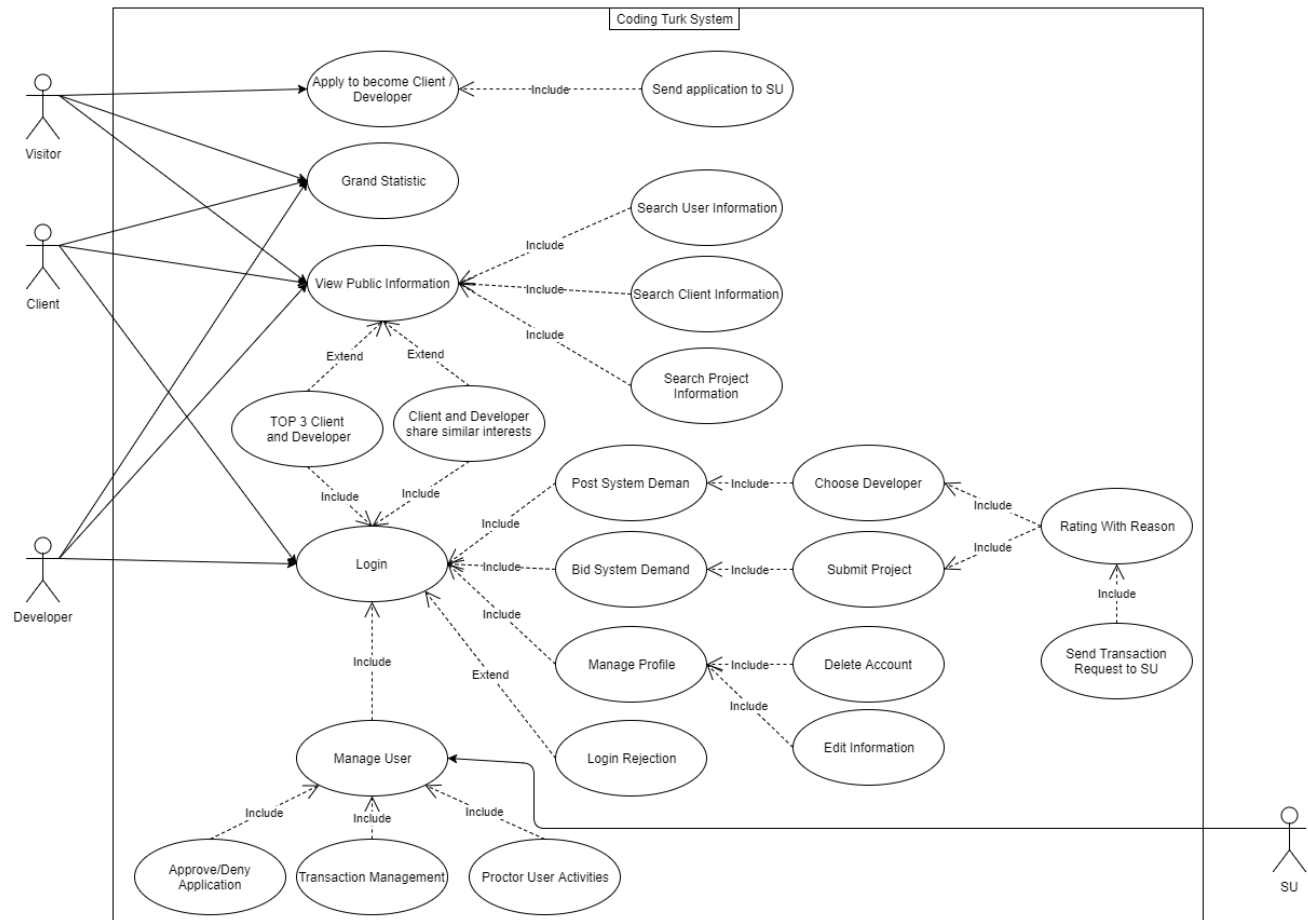


Figure 1. The Use-Case Diagram for the System

2.2 Assumptions and Dependencies

- CTS depend on the MariaDB database system.
- CTS is an open source software for study purpose, we do not deal with security problem, all user id and password is stored in MariaDB database, super user's id and password is hardcode in the source code.
- CTS is a local desktop application, all information will download and stored in the machine. We assumed that there is enough hard drive space to store all information's.

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3. Specific Requirements

The system will be using local hosting desktop application. There is no need for internet and our platform will rely on python and PYQT5. Our database will be built using MariaDB database system. MYSQL might be required as well. There are no other requirements for testers.

3.1 Use-Case Reports

Use Case: Apply for an account

Diagram:

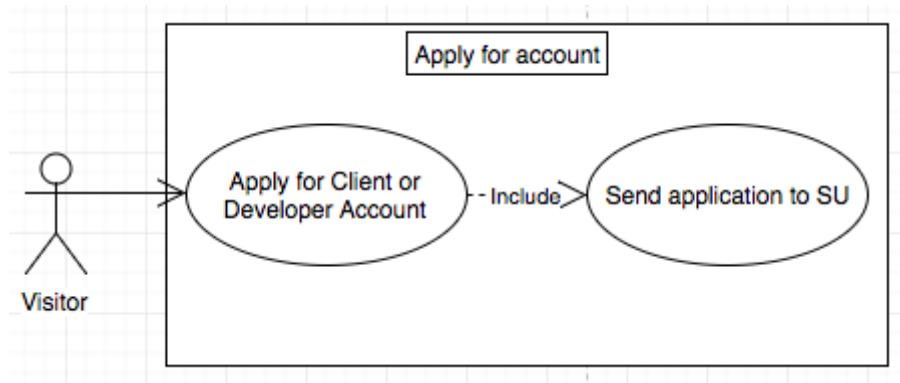


Figure 2. Apply for an account Use-Case

Brief Description: Only a visitor can apply to be a client or developer.

Initial Step-By-Step Description:

1. The visitor must choose to apply as a client or developer.
2. The visitor must enter basic information, choose a unique user id and a password, and deposit money.
3. If the super-user denies the application, the visitor will be blocked from logging in with a reason why he/she was rejected.
4. If the super-user accepts the application, the visitor will be shown a welcome screen and prompted to add more information about him/herself. This information will be visible to all visitors, clients, and developers.

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Use Case: View/Search Client/Developer Information
Diagram:

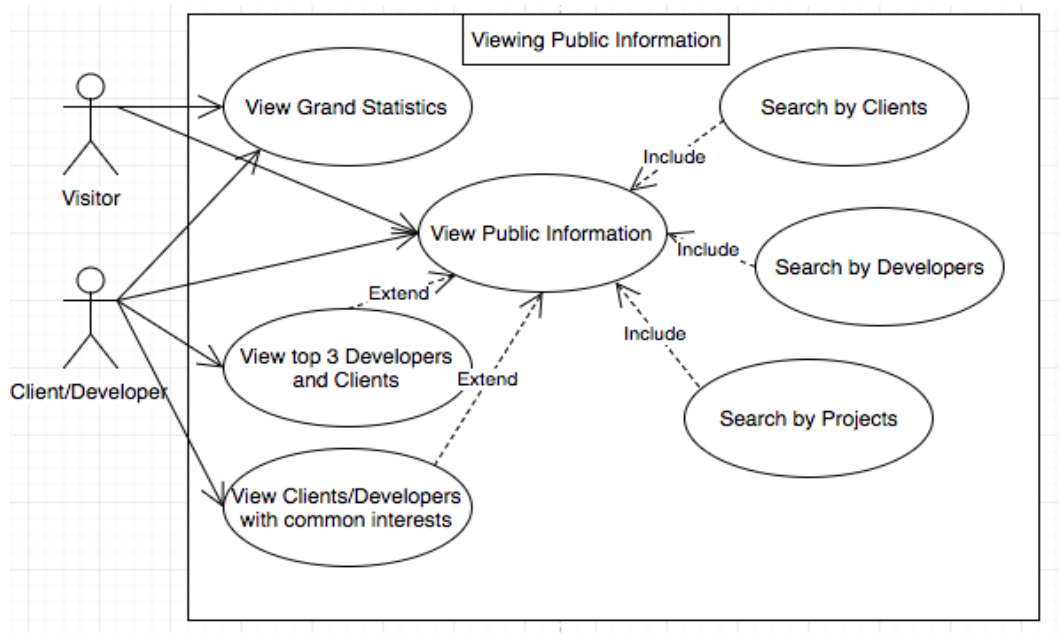


Figure 3. The View/Search User-Case

Brief Description: Visitors, Clients, and Developers can view public information of other clients and developers and search by client, developer, or project.

Step-By-Step Description:

1. A visitor, client, or developer can view the system's statistics. This includes the number of clients and developers, clients with the most projects, and developers making the most money.
2. A visitor, client, or developer can view public information. A client or developer is shown the top 3 developers and clients by default if their account is new, or clients and developers with common interests if they have a project history.
3. A visitor, client, or developer can search for client information, developer information, or project information by selecting one of the three and entering a keyword such as name to search for.

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Use Case: Requesting a project
Diagram:

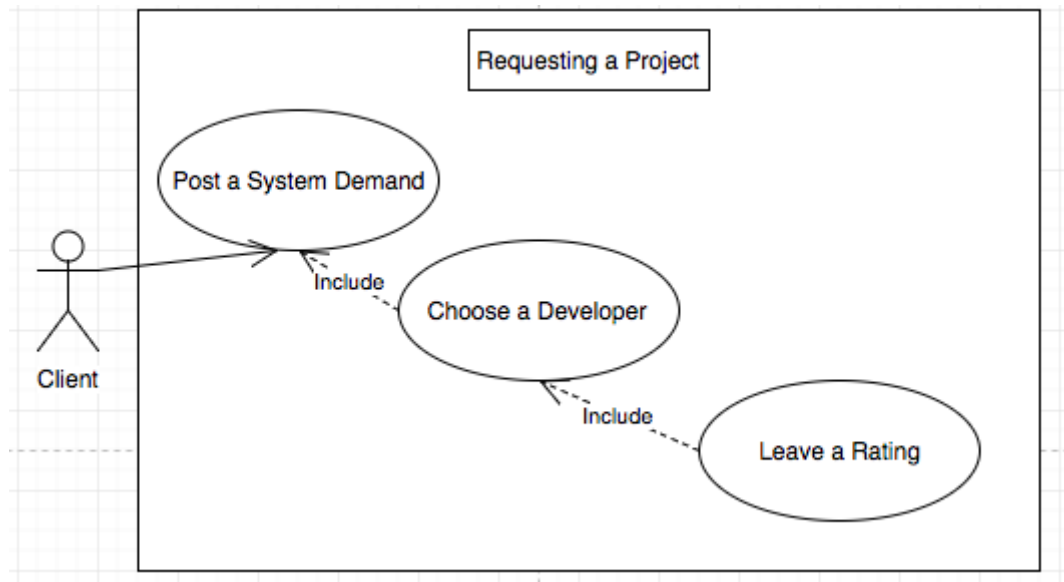


Figure 4. The Requesting a Project User-Case

Brief Description: A client can request a project and choose a developer to complete the project.

Step-By-Step Description:

1. Once a client has logged in, he/she may post a system demand. To do this, he/she must write a paragraph describing the system desired, and a timeline describing when the bidding will be over and when the project should be completed.
2. Any developer can make a bid for the project.
3. Once the bidding is done, the client may choose any developer to complete the project. If the client does not choose the lowest bid made, then he/she must provide a reason.
4. Once a developer is chosen, half of the price is transferred from the client to the developer as the front.
5. If there was no bidder after the bidding period, then the project is removed the client is charged \$10.
6. Once the developer completes and submits the project, the client must leave a rating from 1 to 5, with 5 being the best rating. If the rating is 3 or above, then the other half of the bidding price is transferred from the client to the developer. If the rating is 2 or less, then the client must leave a note explaining why the rating was low, and the client, super-user, and developer must discuss how much of the remaining price will be given to the client. The super-user will make the final decision and leave a justification.

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Use Case: Completing a Project
Diagram:

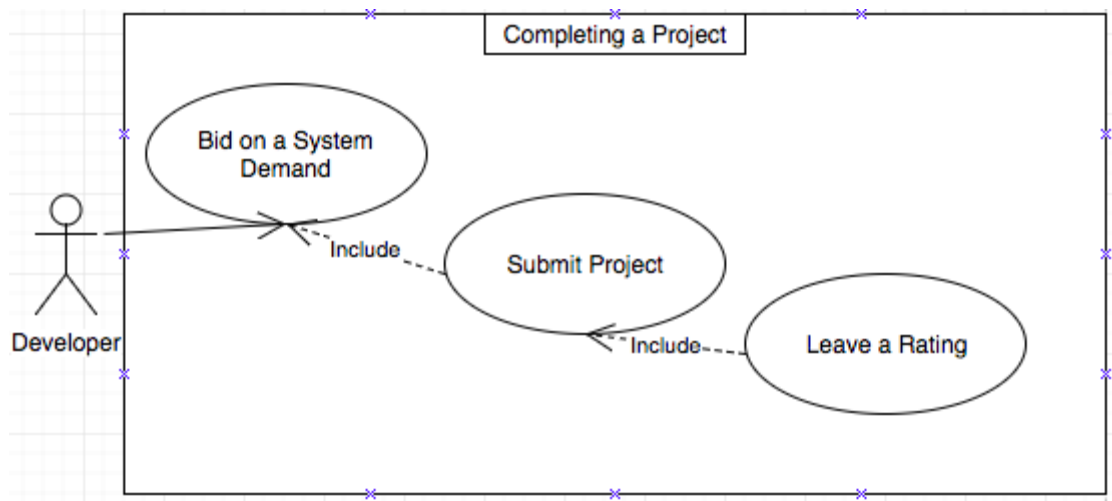


Figure 5. The Completing a Project User-Case

Brief Description: A developer can bid to complete a project, and get paid in return for completing it.

Step-By-Step Description:

1. A developer can search for projects to bid on from the search page.
2. A developer can bid on any project. The developer must bid a price.
3. If the developer is selected, then the developer is paid half of the bid from the client up front. The developer should complete and submit the project by the deadline specified by the client.
4. After submitting the project, the developer may rate the client from 1 to 5.
5. The developer will be paid the remainder of the bid as specified in the client's use case.

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Use case: Manage User

Diagram:

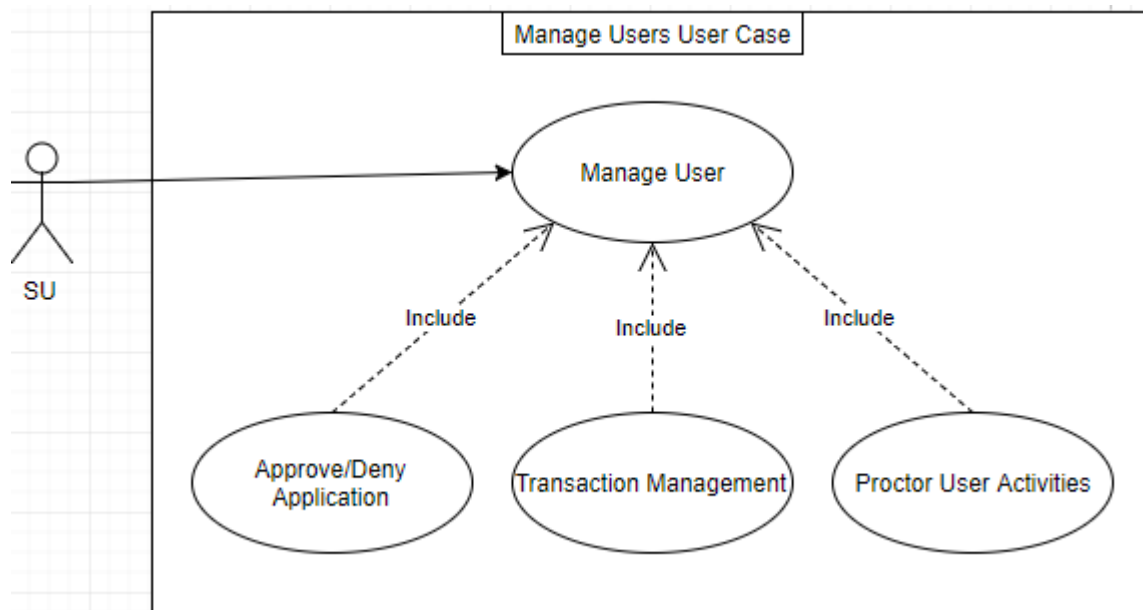


Figure 6. The Manage Users User-Case

Brief Description: The Super-User manages the clients' and developers' accounts.

Step-By-Step Description:

1. The super-user must go through a different log-in procedure.
2. The super-user can approve or deny visitors' applications to become clients or developers.
3. The super-user decides how much money the client will pay the developer when the developer gets a bad rating, and can change that rating.
4. The super-user can warn clients and developers if they give too many ratings of 1 or 5. Continued abuse of the rating system can get a user placed on the blacklist for a year.

3.2 Supplementary Requirements

- System compliance: The desktop user-interface shall be Window, Linux, and Mac OS compliant.
- Design for Ease-of-Use: The user interface of the CTS shall be designed for ease-of-use and shall be appropriate for a computer-literate user community with no additional training on the system.
- Database Access Response Time: The system shall provide access to the MariaDB database with no more the 5 second latency.

4. Supporting Information

This Software Requirements Specification includes:

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