Online Money Management System

Software Requirements Specification

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Revision History

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Document Approval

The following Software Requirements Specification has been accepted and approved by the following:

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1. Introduction

1.1 Purpose

The main purpose of Online Money Management System is to provide the facility to keep track of money on the hand of individuals. It allow individuals to have a vivid record regarding their economic transactions such as expenses, debits, credits, incomes and individuals can also record their bank transactions. This facility is a great help for individuals living with limited income.

1.2 Scope

Our software product named as Money Manager, which is an online system intended to keep record of individuals economic transaction. It will provide following facilities to individuals.

- Keep Records in a system secured by password, and accessible from anywhere if internet connection is available.
- See overview about current balance, average expense, total debit amount and total credit amount.
- Add expenses in custom defined categories along with date and description of expense.
- View Expense in different categories and total expense from a partiular date to another date.
- See overview of credits, the person from whom money is borrowed along with date, and option to close the record when money is paid back.
- See overview of debits, the person to whom money is given along with date and option to close the record when money is given back.
- Facility to add bank transaction details such as online payment, deposit, withdrawal.. etc

1.3 Definitions, Acronyms, and Abbreviations

Following are some of the abbreviations used in this document

- OMMS : Online Money Management System
- SRS : Software Requirement Specification
- GUI : Graphical User Interfaces
- PHP : Hypertext Preprocessor
- HTML : Hyper Text Markup Language
- CSS : Cascading Style Sheet
- DB : Database
- SQL : Structured Query Language
- HTML 5 : HTML Version 5

Following are some of the definitions/acronyms used in this documents

- Debit : An entry recording a sum owed.
- Credit : An entry record of sum received(Borrowed)
- Bank transactions : Deposit/Withdraw/Transfer

1.4 References

Following are some of references that may be required during the implementation of proposed Software.

- W3Schools
  Tutorials for
  - HTML
  - CSS
  - JavaScript
  - PHP
  - MySQL

A small description about the terms used in this section is given in Appendix.

1.5 Overview

The rest of this SRS is organized as follows: Section 2 gives an overall description about software product. It gives what level of proficiency is expected of the user, some general constraints while making the software and some assumptions and dependencies that are assumed. Section 3 gives specific requirements which the software is expected deliver. Functional requirements are given as various use cases. Some performance requirements and design constrains are also given. Section 4 will give some possible future extension of the system. Finally section A contain appendices.

2. General Description

2.1 Product Perspective

OMMS is aiming individuals who want to keep track of their daily expenses, debits are credits. It will help individuals to know about their expenses in various categories and to review and plan their economic transaction accordingly.

2.2 Product Functions

OMMS should support following use cases.

Class of use case	Use case	Comment
Use cases related to system authorization	Register for an account	Allow to registers individuals in system
	Login	Log in into OMMS by giving username and password
	Change password	Change OMMS Password
Use cases related to Expenses	Add expense record	Add a record with date, description and amount
	View expenses	View expenses with category wise total and overall total between selected dates.
Use cases related to Credits	Add Credit entry	Add entry with date, second party and amount.
	Close entry	Close entry when money is paid back
	View Entries	See list of Credits received so far.
Use cases related to debit	Add debit entry	Add entry with date, second party and amount
	Close entry	Close entry when money is given back
	View Entries	See list of debits.
Use cases related to bank transactions	Deposit	Add record of deposit
	Withdrawal	Add record of withdrawal
	Money transfer	Add record of some money transfers

Special Use cases	Add category	Add custom category to include expense.
	Set current balance	Set current available balance
	Set current balance in bank	Set current balance in bank account.
Administrative Use cases	Login	This will help administrator to log in to administrative module.
	Add news and notification	Add news and notifications regarding OMMS.
	Edit news and notification	Edit Already posted news and notifications.
	Delete news and notification	Delete published news and notifications.
	Change Admin password	Change password of administrative user.

2.3 User Characteristics

- User should have basic knowledge about using computer and internet.
- User should be able to understand meaning of terms used in user menu..

2.4 General Constraints

- OMMS requires a working internet connection
- OMMS is a single user per account system.

2.5 Assumptions and Dependencies

- User have a working internet connection and a platform which is able to connect to internet.
- User is having a modern internet browser which support javascript and HTML 5.

3. Specific Requirements

Interface Requirements

3.1.1 User Interfaces

User will be provided with a GUI interface designed using HTML/CSS which can be be viewed properly in a modern web browser.

3.1.2 Hardware Interfaces

There is no specific hardware requirement. Software can work smoothly in any modern web browser supporting HTML 5 standards.

3.1.4 Communications Interfaces

There should be a working internet connection for accessing OMMS using a web browser.

3.2 Functional Requirements

3.2.1 Keep Track of expenses

3.2.1.1 Introduction
This component of system will allow individuals to record their expense details including date, description and amount and to view them between two selected dates along with their category wise sum and overall sum.
3.2.1.2 Inputs
Following are the inputs required in these component.

- Inputs required for record entry
  - Date
  - Category
  - Description
  - Amount
- Optional inputs in show records
  - Starting date
  - Ending date

3.2.1.3 Processing
Following are the processing that take place in these components.

- Record Entry
  All of the inputs will be validated when user press submit button, and if they are valid it will be recorded in database.
- Show Records
  By default, all of the transactions specified between dates in settings will be selected and they will be summed based on category and overall sum also calculated.

3.2.1.4 Outputs

- Show Records
  Show users, records regarding expenses between selected dates along with category wise sum and overall sum.

3.2.1.5 Error Handling
Inputs will be validated and user will be notified with error message if any.

3.2.2 Keep Track of Debits

3.2.2.1 Introduction
This section will help users to add details of their debits along with debit information, such as second party , date and amount.
3.2.2.2 Input
Following are required for debit entry

- Second party
- Date
- Amount

3.2.2.3 Processing
The given input will be validated and will be stored in database if input is valid
3.2.2.4 Output
This will show debit information along with a button to close debit.
3.2.2.5 Error handling
Inputs will be validated and user will be notified with error message if any.

3.2.3 Keep Track of Credits

3.2.3.1 Introduction
This section will help users to add details of their credits along with credit information such as second party, date and amount.
3.2.3.2 Input
Following are required inputs for credit entry

- Second party
- Date
- Amount

3.2.3.3 Processing
The give input will be validated and will be stored in database if input is valid.
3.2.3.4 Output
This will show credit information along with a button to close credit.
3.2.3.5 Error Handling
Inputs will be validated and user will be notified with error message if any.

3.2.4 Keep Track of Bank Transactions

3.2.4.1 Introduction
This section will help users to keep track of their bank transaction details such as deposit, withdrawal, online transfer..etc
3.2.4.2 Input
Following are the inputs required

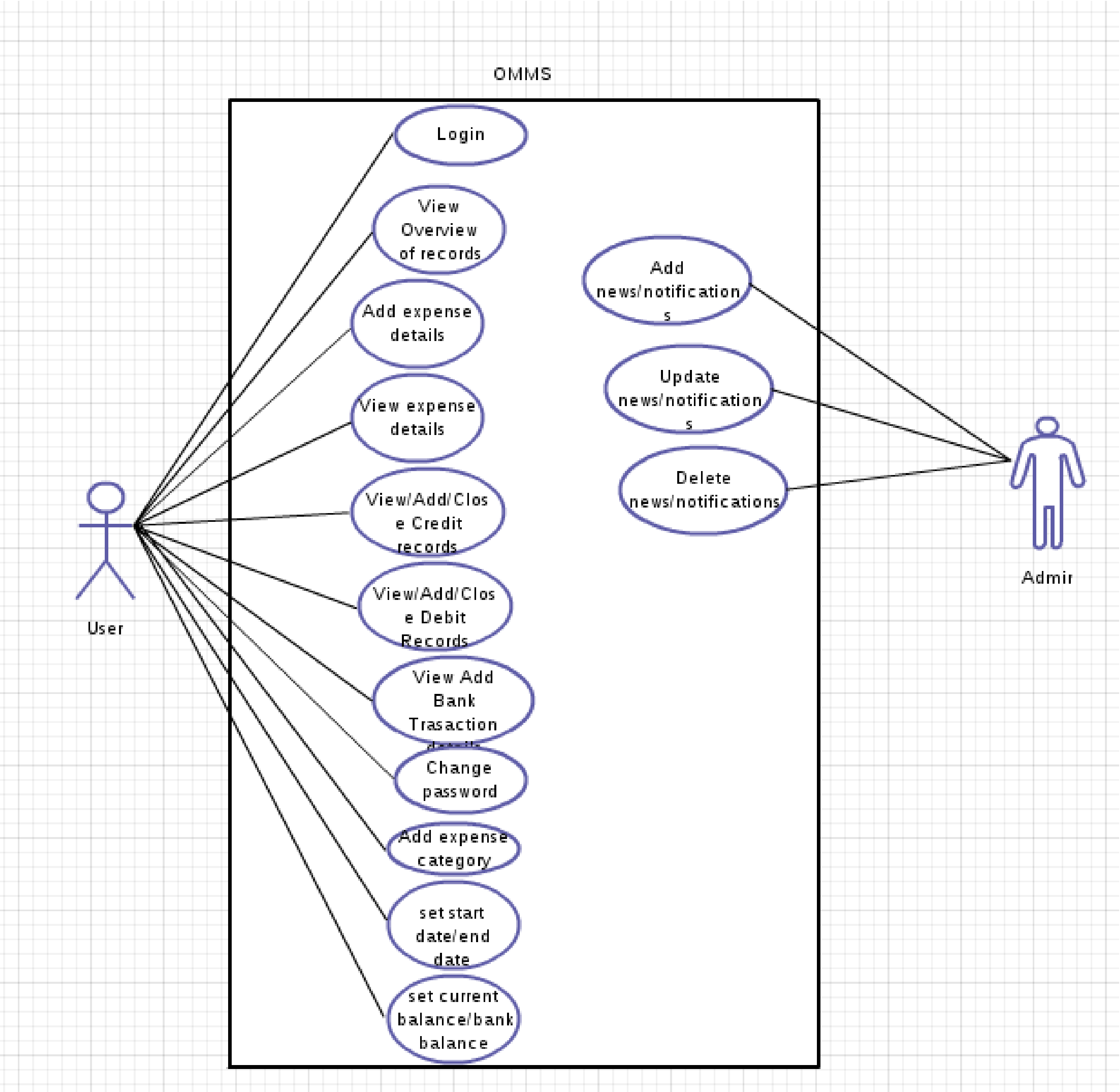
- Type of transactions(Deposit, Withdrawal, Transfer)
- Date
- Amount

3.2.4.3 Processing

Given inputs will be validated and will be recorded in database if it is valid.
3.2.4.4 Output
Show details regarding bank transactions
3.2.4.5 Error Handling
Inputs will be validated and user will be notified with error message if any.

3.3 Use Cases

Use case diagram of whole system can be shown as



3.4 Non-Functional Requirements

3.5.1 Performance

The software product should be able to perform in optimal way, if the environments are working properly. Following are different environmental constrains that affect performance of system.

- Hosting server
- Operating System
- Web browser
- Speed of internet connection.

3.5.2 Reliability

The software product should be reliable if a reliable internet connection is available.

3.5.3 Availability

The availability of software product depends on the performance of server. If server is highly available one, then the software product will be available round the clock.

3.5.4 Security

The system will be using secured password system encrypted with hashed encryption technique and only users registered for an account can access the information.

3.5.5 Portability

Proposed software product will be highly portable. Since it is a web based application, it can be used in any platform with a modern web browser supporting HTML 5 standard

4. Future Extension

Following are the some of the features that can be added into the OMMS in future.

- Provide various platform dependent interfaces such as
    - Android interface
    - Windows Interface
    - iPhone interface
    - GNU/Linux interface
    - Mac OSX interface

Appendix

- HTML

HTML or HyperText Markup Language is the main markup language for creating web pages and other information that can be displayed on a web browser. HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like <html>), within the web page content. HTML tags most commonly come in pairs like <h1> and </h1>, although some tags represent empty elements and so are unpaied, for examples <img>. The first tag in a pair is the start tag, and the second tag is the end tag (they are also called opening tags and closing tags). In between these tags we designers can add text, further tags, comments and other types of text-based content.

The purpose of web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.

HTML elements for the building blocks of all website. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. It can embed scripts written in language such as JavaScript which affect the behavior of HTML web pages.

- CSS

Cascading Style Sheets(CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL

CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content (such as by allowing for tableless web design).

CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices. It can also be used to allow the web page to display differently depending on the screen size or device on which it is being viewed. While the author of a document typically links that document to a CSS file, readers can use a different style sheet perhaps one on their own computer to override one the author has specified.

- JavaScript

JavaScript(JS) is a dynamic computer programming language. It is most commonly used as part of web browsers, whose implementation allow client-side scripts to interact with the user, control the browser, communicate asynchronously, an alter the document content that is displayed. It is also being used in server-side programming, game development and the creation of desktop and mobile applications.

JavaScript is a prototype-based scripting language with dynamic typing and has first-class functions. Its syntax was influenced by C. JavaScript copies many names and naming conventions from Java, but the two languages are otherwise unrelated and have very different semantics. The key design principles within JavaScript are taken from Self and Scheme programming languages. It is a multiparadigmn language, supporting object-oriented, imperative and functional programming styles.

- PHP

PHP is a server-side scripting language designed for web development but also used as a general purpose programming language. PHP is now installed on more than 244 million websites and 2.1 million web servers. Originally created by Ramsus Lerdorf in 1995, the reference implementation of PHP is now produced by The PHP Group. While PHP originally stood for Personal Home Page, it now stands for PHP: Hypertext Preprocessor, a recursive backronym.

PHP code is interpreted by a web server with a PHP preprocessor module, which generates the resulting web page: PHP commands can be embedded into an HTML source document rather than calling an external file to process date. It has also evolved to include a command-line interface capability and can be used in standalone graphical applications.

- MySQL

MySQL is the world's second most widely used open-source relational database management system(RDBMS). The MySQL development project has made its source code available under the terms of GPL, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQLAB, now owned by Oracle Corporation