EMPLOYEE EXPENSE TRACKING SYSTEM

SYSTEM DOCUMENTATION

TWIN-CIRCA MARKETING

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# Introduction

*This section should include a high level description of why this System Design Document has been created. It should also provide what the new system is intended for or is intended to replace. More detailed descriptions of the architecture and system components will be described throughout subsequent sections of the document.*

*What are expenses in accounting?*

*What are expenses for the company, of the company, or in businesses?*

*How to handle these expenses?*

*Current state of technology.*

*What are the problems encountered?*

*What are the main benefits of having a system?*

*State all the reasons above why these resulted to having an expense tracking software.*

*What is the system all about? (note: indicate that it is a web app not desktop or mobile app)*

*Include accounting terms like revolving fund, reimbursement, replenishments*

# Objectives

## General Objective

Handle employees expenses and report submission to accounting/finance department for reimbursement

## Specific Objectives

Manage and recording of expenses

View and monitoring overall expenses per employee

Employee expense analytics/ Provide statistic reports

Expense report submission and approval

Reimbursement/replenishment

Revolving fund monitoring

# Scope and Limitation

*What is this all about?*

## Scope of the project

Analytics

Employee Management (incl. revolving fund monitoring)

Expense Records and Monitoring

Expense Report Management

Payment Records and Monitoring

Vendor Records

Reporting

Activity Logs

## Limitation

*(note: limited but subject for improvement)*

Built in payment system or payment system integration

Online Transaction (Recording of Expenses, etc.)

Record Mileage expenses

Per diem expenses

~~Notifications~~

# System Overview

*This section should describe the basic system design goals, functionality and architecture. It may include a high level description of the approach used to develop the system design. It may also include high-level descriptions of the system’s hardware, software, database, and security components. Depending on the complexity of the system this section may also include component and/or contextual diagrams of the system and system components.*

## System Environment

*What is this all about?*

Hardware: 4GB RAM, 120GB ROM

Development: Netbeans 6.8 + Grails 1.2.1, Visual Studio Code 1.51

Unit Test: Junit

Diagrams: Visio 2007

Database Management System: MySQL

Server: Windows Server 2008

Server: Apache Tomcat 6

Revision control: Sourceforge Subversion -

https://comp5541-team4.svn.sourceforge.net/svnroot/comp5541-team4

Discussion: Google groups

Application Architecture: Single-Page Application

Languages: HTML, CSS, JavaScript, PHP 7.3

Web Application Frameworks: Vue.js 2.5, Laravel 7.28

UI Libraries: Vuetify 2.3

## System Design Specification

*What is system design specification and why do we need it?*

### Process Specification

*What is process specification?*

#### Process Flow Diagram

#### Context Flow Diagram

#### Diagram 0

### Data Specification

*What is this all about?*

#### Entity Relationship Diagram

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# Appendices

## Appendix A (Gantt Chart)

## Appendix B (Definition of Terms)

Accounting terms

Expense

Replenishment

Reimbursement

IT technical terms

Database

Database Management System

Server

## Appendix C (Existing Forms and Reports)

## Appendix D (User Guide)

### Access, Authentication and Authorization

*Discuss roles and permissions, username password, how to access the system, what link can you access it to, etc.*

### Application Modules

Main (including the header, sidebar, and footer)

*(note: state all meaning of button with icons only, and status colors)*

Dashboard

User Profile

Employees

Expenses

*(note: state all statuses and their corresponding colors)*

Expense Reports

*(note: state all statuses and their corresponding colors)*

Payment Records

*(note: state all statuses and their corresponding colors)*

Vendors

Departments

Job Designations

Expense Types

Activity Logs

Settings

### Basic Tasks (change this title)

*State complete process at least one cycle*

### Troubleshooting

Unable to access link

No network connection

Server down/error

Unable to login

Invalid username and password

Deactivated account

## Appendix E (Developer’s Guide)

*State all technologies used.*

*Languages,*

*frameworks,*

*ui tools such as material design, vuetify framework, and icons and fonts,*

*vue.js tools and libraries such as vue-router, vuex,*

*laravel tools and libraries including laravel sanctum for authentication, spatie laravel permission,*

*include also links of these libraries and frameworks*

## Appendix F (Configuration and Deployment)

### Hardware Requirements

*State recommended specifications.*

### Software Requirements

*State recommended specifications.*

### Linux Server Configuration

*Tutorial with screenshots*

### Apache Configuration

*Tutorial with screenshots*

### MySQL Configuration

*Tutorial with screenshots*

### Application Deployment

*Tutorial with screenshots*

Discuss File/Database Backup and Restoration