

Software Requirements Specification for Employee Management System (City Bank)

Version: 1.0 Approved

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Date: 20-08-2024

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1. Introduction

1.1 Purpose

This document outlines the requirements for a system to manage employees efficiently at City Bank. The system will handle employee records, attendance, performance tracking, and payroll.

1.2 Scope

The Employee Management System (EMS) is designed to simplify HR operations, reduce manual effort, and ensure accurate employee data management.

1.3 Intended Audience

- HR Department
- IT Team
- Management

1.4 References

IEEE Template for System Requirements Specification Document

<https://goo.gl/nsUFwy>

2. Overall Description

2.1 Product Perspective

It is an open source project and it has a very active developer team to support it and provide feedback to user. It was developed to run on Windows, Mac OS X and Linux The application is user-friendly with an intuitive interface that makes it easy for users to navigate and complete transactions. The application is also optimized for different platforms such as mobile devices and desktops.

2.1 Product Functions

Workspace:

New: Creates a new workspace.

Delete: Deletes the current workspace.

Rename: Renames the current workspace

Help :

Check for Updates: Displays the plugins that can be updated to newer versions

About: Displays the logo of City Bank, which licenses are being used, the product version and other info.

Main Pages:

Overview: Displays the Overview page, which by default includes the tabs: Appearance, Layout, Graph, Context, Filters, Statistics and Queries.

Data Laboratory: Displays the Data Laboratory page, which by default includes the tab Data Table.

Preview:

Displays the Preview page, which by default includes the tabs: Preview and Preview Settings.

2.3 User Classes and Characteristics

Typical organization, who want to use to maintain their information about current employee.

Programmers who are interested in working on the project by further developing it or fix existing bugs.

2.4 Operating Environment

- Windows 8
- Windows 10
- Windows 11
- Mac OS
- Linux

2.5 Design and Implementation Constraints

Employee Management System is developed in Java, it uses OpenGL for its visualization engine and has been built on top of the NetBeans Platform. It uses a modular design where every feature is wrapped into a separate module and the modules depend on each other through well-written APIs. There are several APIs available to make plugin development easy.

2.6 Assumptions and Dependencies

Employee Management System is developed in Java and therefore requires Java to be installed on the user's system. The latest stable version of Employee Management System requires Java version 7 or higher. This applies to Windows and Linux users. On Mac OS X, Java is bundles with the application.

3. External Interface Requirements

3.1 User Interfaces

Application will be accessed through a Browser Interface. The interface would be viewed best using 1024 x 768 and 800 x 600 pixels resolution setting. The software would be fully compatible with Microsoft Internet Explorer for version 6 and above. No user would be able to access any part of the application without logging on to the system.

3.2 Hardware Interfaces

Server Side:

Operating System: Windows 10 ,Windows 11.
Processor: Pentium 3.0 GHz or higher.
RAM: 256 Mb or more.
Hard Drive: 10 GB or more.

Client Side:

Operating System: Windows 9x or above, MAC or UNIX.
Processor: Pentium III or 2.0 GHz or higher.
RAM: 256 Mb or more.

3.3 Software Interfaces

Client Side: HTML, Web Browser, Flash Player, MS Office, Windows 10/11

Web Server: HTML, MS Office, Windows 10/11

3.4 Communications Interfaces

- The Customer must connect to the Internet to access the Website:
- Dialup Modem of 52 kbps
- Broadband Internet
- Dialup or Broadband Connection with an Internet Provider.

4. System Features

4.1 Employee Profiles

- Store details like name, ID, position, department, and contact info.
- Enable quick edits and updates.

4.2 Attendance Tracking

- Allow employees to clock in/out digitally.
- Monitor leaves and absences.

4.3 Payroll Management

- Automate salary calculations based on attendance and deductions.
- Generate detailed payslips for employees.

4.4 Performance Reviews

- Record performance feedback.
- Store review history for all employees.

4.5 Reporting

- Provide attendance and payroll reports.
- Generate summaries for management review.

4.6 Security

- Verify the identity of the user before allowing any transactions.
- It's various payment gateways facilitate to secure payment processing.
- Use encryption and tokenization to protect sensitive data such as credit card information.
- It's fraud detection system that detect and prevent fraudulent transactions.

5. System Requirements

5.1 Functional Requirements

- Add, update, and delete employee details.
- Track employee attendance in real-time.
- Automate salary and bonus calculations.

5.2 Non-Functional Requirements

- **Usability:** Easy for HR staff to navigate and use.
- **Security:** Protect sensitive employee data with role-based access.
- **Performance:** Handle up to 10,000 employees efficiently.

6. Tools and Technology

- **Frontend:** React.js or Angular
- **Backend:** Python (Django/Flask) or Java (Spring)
- **Database:** MySQL/PostgreSQL

7. Software Quality Attributes

The Quality of the System is maintained in such a way so that it can be very user friendly to all the users. The software quality attributes are assumed as under:

- Accurate and hence reliable.
- Secured.
- Fast speed.
- Compatibility.

8. Constraints

- The system will require an internet connection.
- Only authorized personnel can access HR and payroll sections.

9. Future Enhancements

- Integration with a mobile app for employees.
- Advanced analytics for employee performance trends.