



Smart Employee Management System [SEMS]

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Proposal

In this proposal we will provide a complete description about a brand-new employee management system. The primary purpose of our cloud employee management system is to reproduce the traditional management system in a virtual environment and as a result reduce human intervention. This system will use a cloud-based software platform such as Amazon Web Service (AWS) to allow access from any endpoint. The main functionalities of this system will include Employee Record Management, Attendance Monitoring, Timesheet tracking, and Payroll Processing.

Goals

Build a cloud-based platform for Employers

- Gain access to the system.
- Monitor, edit, approve attendance, leaves, payrolls, and worklogs.
- View / Edit Employee records.
- Add / Remove Employees from the system.

Create a virtual environment for the Employees

- Login verification using unique ID.
- View / Edit Timesheets.
- View / Edit Personal Information.

Architecture

Three Tier Architecture:

The system will be incorporating a database and a domain supplied by AWS which will act as our server in our client-server model. With our audience being small businesses with mostly employees using our system, we will build a simple interface for interaction and allow those with privileges to make changes to the data when required.

Model View Controller (MVC):

Our database will be using a Model View Controller architecture and the users of the system will only be exposed to the controller upon editing any data. Any credentialed user will be able to view any employee information they desire.



Service Oriented Architecture (SOA):

Another software design in consideration would be Service-Oriented Architecture. To enhance security of the system, the system will be relying on the multi-factor authentication and reCAPTCHA system from Google.

Socio-Economic Benefits

Our system will provide multiple benefits for the employee and the employer. As the system requires minimal human interaction there are fewer errors, better accuracy, and efficiency. It will allow the company to operate at a much lower overhead, risks, and increased profitability. It will increase employee motivation, engagement, and productivity. Due to the streamlined daily operations, it will increase communication between teams and keep their workflow simple and compact. Lastly, our automated invoice system will reduce or eliminate any human error / cheating possible in wage calculation thus providing tons of socio-economic benefits over traditional systems.

Better than existing systems?

Although there currently exist multiple employee management software systems such as EMPMonitor (a time tracking and workforce productivity management system), Hubstaff (a team productivity management system), and Officevibe (employee performance management system). Our system is intended to provide a more holistic cloud service for employers that not only benefits the employer but also the employee. Our system is intended to provide services that are essential to businesses over the cloud with the sole purpose of helping companies better manage their employees during the covid-19 era. The current solutions to this problem of employee management tend to focus on one specific aspect of employee management like performance and team productivity. Our system will create a way in which employers both save money as well as have a more efficient and effective management system. Through implementation of different architectures our team will manufacture an efficient system that will utilize less resources. Ultimately creating a better solution for businesses in terms of employee management.