

Enterprise Resource Planning (ERP)

Teammates:

1. Akshay Kumar S20170010006
2. Deepesh Bhageria S20170010041
3. Atul Vidyarthi S20170010016
4. Kalpajyoti Handique S20170010061
5. Saurabh Sanjay Petkar S20170010142
6. Siddharth Goswami S20170010152

General:

Project:

To build an Enterprise Resource Planning (ERP) software, a business management software, for a company.

Background and Purpose:

Enterprise resource planning (ERP) is a business process management software that allows an organization to use a system of integrated applications to manage the business and automate many back-office functions. The back-office functions may be related to technology, services and human resources. There are a number of ERPs already existing. However, only large-scale company actually make use of it. So, this is an attempt to make a smaller ERP for the companies on the small-scale.

Functional Requirement:

- Sign-up for the CEO of the company on the first start of software.
- Other users could simply login in their account provided to them by their head.

- There is a hierarchy of employees each with a limited access to the database and jobs as per their role in the company. The CEO is at the top of the hierarchy.
- Each employee at the certain level can appoint members in the lower hierarchy.
- There are three departments in the project - Sales, HR and Accounting.
- Jobs of the CEO is as follows:
 - Assign the heads of the departments
 - Monitor the data of the departments
 - Could add or remove any employee in the hierarchy.
- The HR department is responsible for the following:
 - Recruitment of the new employees
 - Maintaining the profile, payroll, taxes of the employees
 - Training of the employees
 - Performance management of the employees (Key Performance Indicator)
 - Resolving the complaints

It has following level of members:

- CHRO – The head of the department on the national level appointed by the CEO of the company.
 - HR manager – On the state level.
 - HR generalist – On District level
-
- The Sales department is responsible for the following:
 - Tracking the sales, purchases and achievements monthly
 - Giving proper incentives to the employees.
 - Maintaining the records of the leads and prospective clients
 - Maintaining the profile of customers and their needs
 - To maintain the records of the transactions
 - Invoicing and report generation

It has the following members:

- Director of Sales
 - Regional sales manager
 - Branch sales manager
 - Sales associates
-
- The Accounting department is responsible for the following:
 - To keep an account of the payables of the purchases, marketing and so on.

- To maintain revenue tracking and account receivables
- To prepare the reports of the financial statements such as budgeting, forecasting.

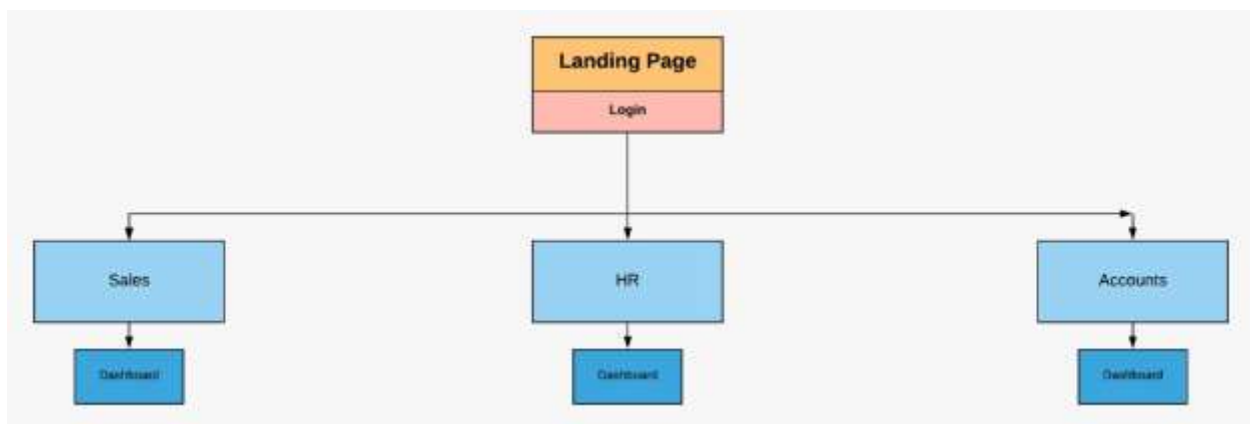
- Actual control of the payroll of the employees

It has the following members in the hierarchy:

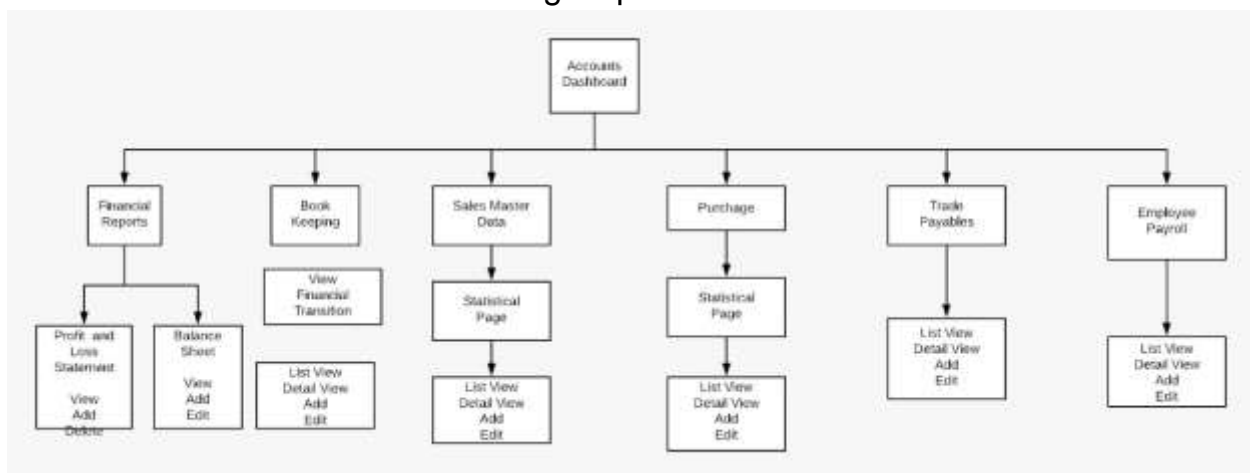
- Chief Finance Officer (CFO) – national level
- Treasury Manager
- Accounting Manager
- Accountant
- Book Keepers

Workflow:

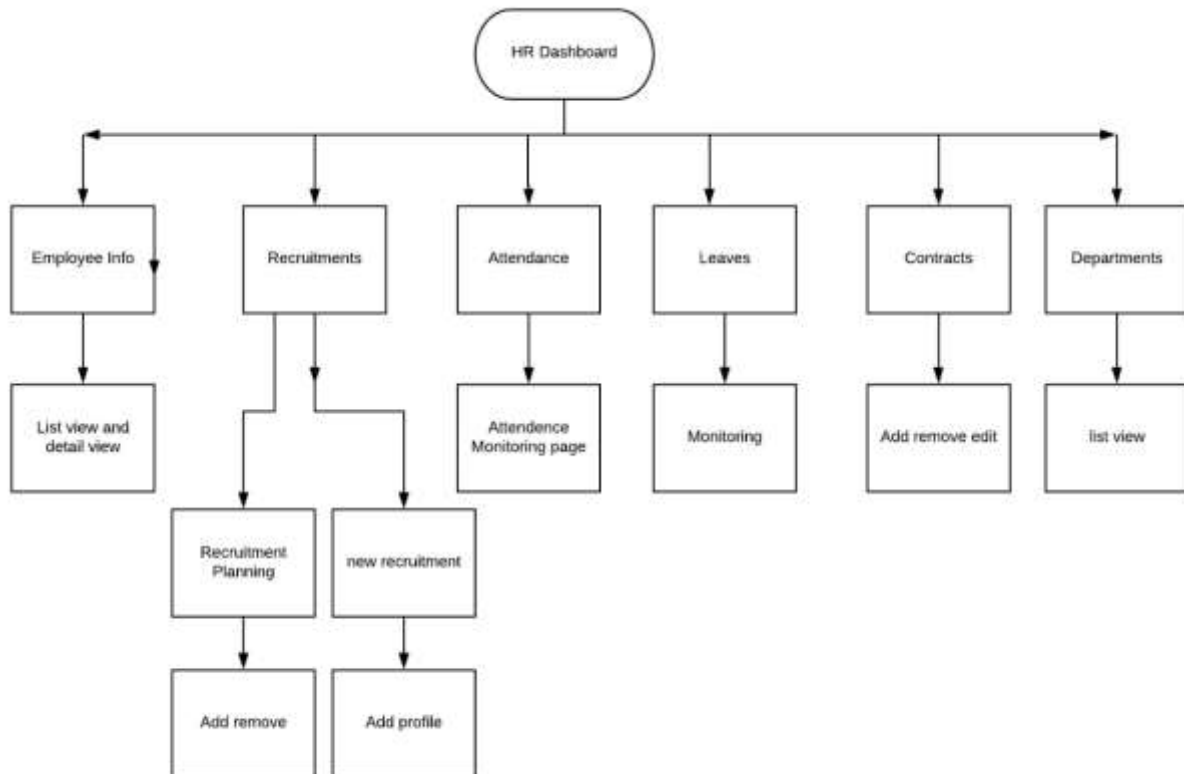
1. Start of the software



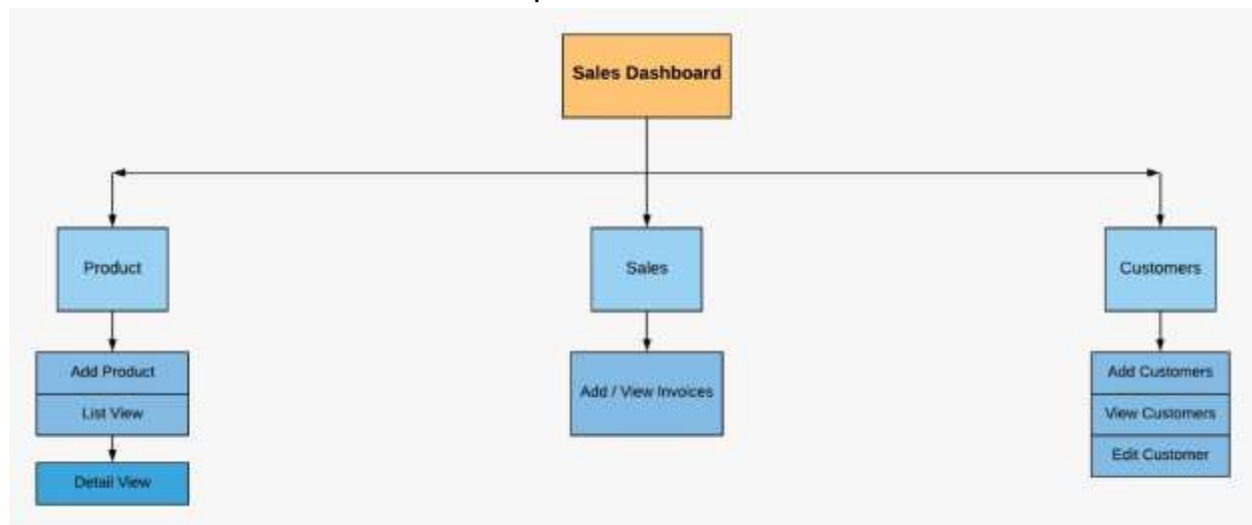
2. Accounting Department Dashboard



3. HR Department Dashboard



4. Sales Department Dashboard



Operational Requirement:

Security: Django offers several security features making the software safe and secure. These are listed as follow:

- Cross Site Scripting (XSS) protection
- Cross site request forgery (CSRF) protection
- SQL injection protection
- Clickjacking protection
- Host Header validation
- Session Security

Audit Trail: Partial data of the software will be on audit trail which are very important for the organization.

Data Currency: This software makes use of organizational data and hence works on the latest data added or updated by any employee.

Reliability: Since this software has a centralized database connecting all the departments, any loss will cost a lot to the organization. We must ensure that the software is consistent with the latest updates in the data as any inconsistency may cost the company its business, profits, employees, customers and reputation.

Recoverability: There shall be multiple backups for the organizational data to make our software stand against any data corruption.

System Availability: The system should be available to the users throughout the year, 99.99% of the time as we work on a centralized database whose uptime is 99.99%.

Fault Tolerance: The system functionalities that should be up 100% of the time are the sales module because the customers are addressed through that module. So, this module needs to be totally fault intolerant.