**TEAM - 5THEPEOPLE**

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**OMEGA - Employee Management System**

**ABSTRACT**

Employees are the real assets of any organization who play a vital role in the successful operation of any company.

Omega is a platform for centralized employee management that focuses on easy access to the company portal. The project focuses on designing and implementing an enterprise software application to manage employee related information.

The main objective of the project is to develop a role-based system that consists of different modules such as training for employee management, project management, login module, employee-manager relationship, admin management and organization-level management.

The web pages are dynamically created for different logins based on the user id, password and Single Sign-On.

The main roles are categorized into employee, manager, Omega org, admin and owner of the company. This segregation of roles provides an enterprise hierarchy and security.

The application is developed to facilitate excellent communication or interaction between the above mentioned modules and roles.

Omega provides a dashboard driven design where the users can navigate to their corresponding sections.

Employees can login to perform the following tasks - the list of projects the employee works under as well as a learning portal which indicates the trainings that are to be completed posted by the manager.

Manager can login to perform the following tasks - post training for employees, check the status of the training, add employees to projects under him.

Common tasks for both employees and managers login will be an employee search directory, password management, view their respective profiles, a storage tab to store marksheets and certificates for quick retrieval, a notification tab informing any upcoming events or news posted by Omega Org.

Omega Org login will perform the following tasks - notify the whole organization about any upcoming events or news.

Admin will perform the following tasks - unblock the employees who have locked their accounts, maintain the webpage and can add additional tabs on the employee and manager screens.

### **AWS Tools**

1. Lambdas to run wsgi application
2. API Gateway to handle HTTP request and send them to Lambdas
3. S3 buckets for Lambda deployments and storing static files
4. CloudFront distribution for serving static files from S3 bucket
5. RDS for a database
6. VPC with subnets
7. EC2 for Security Groups
8. IAM for roles and policies
9. CloudWatch for logs

**Technologies**

* Front End : Angular 8
* Back End :

Programming - Python 3.9.0

Framework - Django, REST API, FAST API

* Authentication: OAuth2
* Automation: Jenkins
* Performance and Security: Cloudflare

**Risks**

* Inappropriate role assignments may lead to data mismanagement
* When SSO is down, access to all connected sites is stopped

**Project milestones**

* Abstract creation - 09/23
* Login module implementation - 09/29
* Employee manager relationship module - 10/05
* Integration of tools and security module - 10/15
* Admin management module - 10/24
* Organization level management module - 10/30
* Project management module - 11/05
* Testing and necessary changes - 11/25