Attendance Management System - Architecture

# System architecture overview

Presentation

Controller

Service

DAO

Java Persistent API

Database

Domain

# Presentation layer

At the presentation layer, we are going to use Swagger or Postman tools to interact with the system for performing the following key functions:

1. Authentication
2. Authorization
3. CRUD operations

# Controller layer

It is a gateway to receive all requests from Swagger or Postman, publishes list of RESTful APIs for proceeding requests and return results in JSON format. We will use Spring technology.

# Service layer

This layer provides service types which are used to handle the system business logics for proceeding each request from the controller, interact with the DAO layer to perform data related operations. We will use Spring technology.

# DAO layer

This layer is used to CRUD operations via JPA

# JPA – Java Persistent API

It provides JPA Template class for persisting, updating, deleting or searching objects. This enables benefits in system portability and scalability. We will use Spring technology.

# Domain

It consists of Plain Old Java Object (POJO) objects which are used to exchange object data such as user, student, faculty, admin, course, etc.

# Database

It is used for data persistence. We will use MySQL

# Source code control

We will use GitHub to control our source code versions.