Faculty Leave Management System

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1   Introduction

The aim of the project is to develop an online centralized application to automate the workflow of leave applications and their approvals. The portal has been developed in Django 1.10 framework for Python 2.7, and MySQL has been used for managing the database.

For starting the Django server at localhost:8000, use: `python manage.py runserver`

2   Leave Management Database

The particulars of the database for the Leave Management portal are as follows:

- Engine: `django.db.backends.mysql`
- Name: `Leave_Management`
- User: `leave_admin`
- Password: `abcd1234`
- Host: `127.0.0.1`
- Port: `3306`

The following tables make up the database:

- **faculty_member**(faculty_id, password, dept_id, first_name, middle_name, last_name, designation, gender, email): Contains the details of the faculty members.

- **department**(dept_id, dept_name, faculty): Contains information about the various departments of the institute.

- **leave_info**(leave_type, leave_description, max_days, lapsable, gender_spec): Contains information about the various types of leaves available to the faculty members as well as gender specifications and whether these are lapsable or not.

- **leave_request**(leave_id, start_date, end_date, faculty_id, leave_type): The records of this table store the details of the leave requests made by the faculty members which have not been reviewed yet.

- **leave_checked**(leave_id, start_date, end_date, status, remarks, admin_id, faculty_id, leave_type): Contains information about the leave requests which have been reviewed by the administrator alongwith some optional remarks.

- **daysleft**(faculty_id, leave_type, no_days_left): For every faculty member who is allowed to take leave of any type, this table contains details about the maximum number of days he can avail the leave in the given academic year.

- **administrator**(<u>admin id</u>, password): Contains the login details of the administrator who can approve requests and register new faculty members.

3 Views in Django

The following views make up the functionality of the portal:

- **login**: Takes the ID and password of the faculty member or admin and passes them through a POST request to login the user.

- **dashboard**: This is the landing page for the faculty members after login. It provides options to make new leave requests, delete previous unreviewed requests and view the remaining leave days they have left for various leave types.

- **app_leave**: It allows the faculty member to apply for a new leave request.

- **past_app**: Lets the faculty member view the details and status of his previous leave requests.

- **del_app**: It allows the faculty member to delete the yet unreviewed leave requests made by him.

- **days_left**: It is used to display the days left for the different leave types of the faculty member.

- **leave_types**: It displays information about the different leave types in a tabular format.

- **admin_dashboard**: It is the landing page for the administrator after logging in. It provides options to view details of faculty members, approve or reject pending requests, add faculty members and update the days left for the faculty members at the beginning of the academic year.

- **faculty**: It takes an argument 'fac_id' and displays the details of the faculty member identified by 'fac_id'.

- **review**: It takes an argument 'l_id' and allows the admin to approve or reject the leave request identified by 'l_id' made by a faculty member.

- **update_max_days**: This view allows the admin to reset the days left in case of lapsable leave types and add to the days left in case of non-lapsable leaves at the start of the academic year.

- **add_faculty**: Allows the administrator to add new faculty members to the system, as well as initialize the number of days left for different leave types for them.

- **logout**: Used to log out of the portal.

4 Functionality Flow

- **Faculty Member**

  - After a user is successfully logged in, he lands on the Dashboard.
  - Here, the user has the option to view the days left for various leave types, generate new leave requests, and view and delete yet unreviewed requests made by him.
  - The user has the option to log out at any point of time.

- **Administrator**

  - After the administrator is successfully logged in, he lands on the Admin Dashboard.
  - Here, the admin can review the leave requests made by the faculty members, view the details of the faculty members, update the remaining days left, and add new faculty members.