Workload Management System

15th October 2021

OVERVIEW

Build a Web application that generates a **workload sheet** for each academic staff in the University. A workload sheet integrates four components, including the **teaching** load, the **research** load, the **administrative** load and the community engagement load. The weight of each component into the workload sheet should be defined in a configuration at runtime.

GOALS

1. Build a functional web app.
2. Implement a robust 3rd party Authentication.
3. Build an auth module that handles permissions of users in the system based on their roles.

SPECIFICATIONS

Programming Frameworks & Databases

1. Laravel 8 for backend and api
2. Bootstrap 4 for frontend
3. MySQL

User Interface

1. The Interface should be built with NUST themes in mind and responsive.
2. Sidebar and navbar components.

Staff Dashboard

1. View My Workloads.
2. View My Projects.
3. View My Administrative tasks.
4. View My Profile and Workload Summary.
5. View Students I am supervising.

HOD Dashboard

1. View My Workloads.
2. Assign Workloads
3. View My Projects.
4. Assign Supervisors to students.
5. View My Administrative tasks.
6. View My Profile and Workload Summary.
7. View Students I am supervising.

Dean Dashboard

1. View My Workloads.
2. Assign Workloads
3. View My Projects.
4. Confirm Supervisors to students.
5. View My Administrative tasks.
6. View My Profile and Workload Summary.
7. View Students I am supervising.

DVC Dashboard

1. View My Workloads.
2. Assign Workloads
3. View My Projects.
4. View My Administrative tasks.
5. View My Profile and Workload Summary.
6. View Students I am supervising.
7. View All Staff,HOD,DVC's within Faculty.

Components

Teaching Load Component

The teaching load component depends mainly on the courses allocated to the staff. A course allocation for a staff member further details whether he/she is coordinating the course, whether he/she is teaching the course for the first time (the institution introduces a nuance between teaching a course for the very first time or just the first time within the institution), if he/she is teaching theory sessions or practical sessions and the number of groups in the latter case. Moreover, Honours student research supervision counts in the teaching load. Note that these various pieces involve input from the HoD and the staff member.

Administrative Load Component

In the Administrative load component, the administrative duties assigned to the staff are listed and validated.

Research Load Component

For the research load, the staff will provide a list of research projects he/she is involved in at the moment with supporting evidence as well as the list of postgraduate students that he/she is currently supervising.

Community Engagement Component

Finally, the community engagement component consists of a list of outreach activities to the community that the staff is involved in. Note that there must be evidence for those activities.

DEPLOYMENT

Cloud Platform for deployment

We are looking into using linode or either heroku as our cloud platform for deploying our system.