CS 30700: Team 18 Project Charter

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Problem Statement

University Residences' (UR) current system for assigning duty shifts to Resident Assistants (RA) is archaic, time-consuming, and often leads to asymmetric workloads. For example, at Meredith Hall scheduling duty involves generating a randomized list of the names of the 12 RAs and using this list to assign duties to approximately 70 tie slots. Fairly and effectively assigning these slots for a given month can take time, especially when accounting for exceptions. Our goal for this project is to develop a robust, fully-featured application to address these challenges. These features include accommodation for the plurality of duties (holiday, weekday, etc...), and status of duty (lead, secondary, tertiary, desk). From the team's given availability the application will suggest a fair schedule. The specificity of these features and the ability for modification make our solution distinct from other systems on the market all while being free to use (i.e. When2Meet, SignUpGenius).

Project Objectives

- Develop a robust and efficient duty scheduling system that optimizes and increases the fairness of RA duty assignments within Purdue's University Residences, such as Meredith Hall.
- Allow users to create an account to access the calendar and role-specific information.
- Provide users with an intuitive and user-friendly web application, with features such as schedule customization, account management, availability management, and integrated messaging.

Stakeholders

- **Users**:
  Residential Assistants (RA): Has access to basic features (i.e. scheduling, selecting time slots, etc.);
  Residential Education Assistants (REA) (the direct boss of the RA's: Has access to advanced privileges (i.e. approving schedules for RA's, creating meetings with RA's, request meetings with REC's);
  Residential Education Coordinator (REC's) (the direct boss of the REA's): Has access to admin privileges with (i.e. approving schedules, creating meetings with RA's & REA's);
  University Residences (UR): Employs RA's, REA's, and REC's.
- **Developers**: Danielle Ejiogu, Daniel Fakunle, Murtuza Kagalwala, Lucas Munteanu, Jenna Rigdon, & Samson Tesfagiorgis
- **Project Manager**: Aline Carranza
- **Project Owners**: Danielle Ejiogu, Daniel Fakunle, Murtuza Kagalwala, Lucas Munteanu, Jenna Rigdon, & Samson Tesfagiorgis

Deliverables

- Develop a front-end web application using JavaScript with the React framework for an accessible user interface.
- Engineer a back-end server with Java responsible for processing all user requests seamlessly.
- Implement a robust database to store user and calendar data, while also supporting an integrated messaging/request system.
- User account creation and authorization by using the OAuth protocol.