

# Employee Scheduling & Roster Management Application

## Introduction

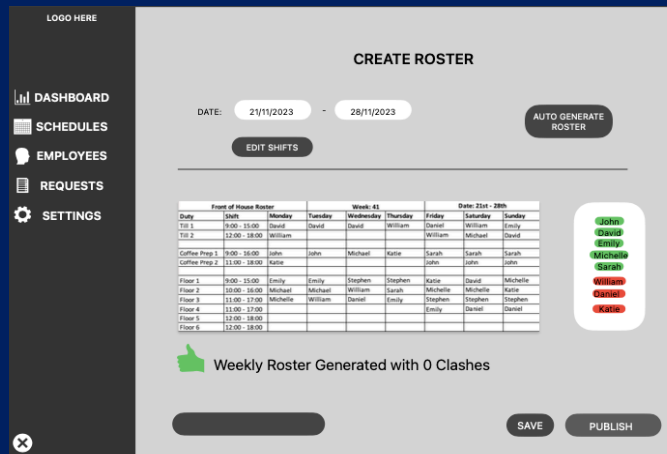
- Whether you've worked in retail, hospitality, or any other industry, you've probably come across a roster. Rosters are more than a mere schedule; they are the game plan for a business's most vital asset, its employees.
- Creating rosters can be complex due to the number of variables & constraints. Coupled with ever-changing staff requests, scheduling can quickly become a daunting task.
- Most rosters are created on paper by hand or using Excel. Requests for time off get communicated through various channels such as a conversation or a text message.

Front of House Roster		Week : 41			Date: 9 <sup>th</sup> – 15 <sup>th</sup>		
Name	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
John	9:00 - 15:00	10:00 - 16:00	OFF	OFF	11:00 - 18:00	11:00 - 18:00	11:00 - 18:00
David	9:00 - 15:00	9:00 - 15:00	9:00 - 15:00	OFF	OFF	OFF	OFF
Emily	9:00 - 15:00	9:00 - 15:00	OFF	11:00 - 17:00	11:00 - 17:00	OFF	10:00 - 16:00
Michael	10:00 - 16:00	10:00 - 16:00	10:00 - 16:00	OFF	10:00 - 16:00	10:00 - 16:00	9:00 - 15:00
Sarah	OFF	OFF	OFF	10:00 - 16:00	9:00 - 15:00	9:00 - 15:00	9:00 - 15:00

- Pictured above is a typical roster, it provides flexibility during roster creation as there are no predefined shift times or duties assigned.
- With this flexibility comes a margin for error. If errors go unnoticed, they can have consequences on business operations.
- Common issues with rosters are forgotten requests, scheduled outside of available hours, oversight leading to overstaffing/understaffing, and last-minute rosters.

## Description

- This project aims to build an application that streamlines employee scheduling and roster management, it puts all requests and leave in one place and can quickly generate a roster.
- The application, accessed through a web app will allow admin to add employees, and employees can set their availability.
- Rosters will be generated using algorithms that take into account constraints such as staff availability and time off requests.



- Preferences can be set such as as how many staff are required for a shift and selected staff for the roster period.
- Employees access the web app on a mobile device, they can view their roster and submit requests for time off.
- Employees can request to swap a shift with another employee, this is a common occurrence in the workplace.



## Functionality

### Manager/ Supervisor

- **Roster Generation:** The core functionality of this application is to generate rosters based on a set of constraints. The application will use an algorithm that the required shifts along with employee availability and approved time off requests.
- **Employee Management:** Create employees, edit their personal details, approve requests, and change their availability for when they can work.
- **Roster Management:** View and edit current and future rosters. Publish rosters for employees.

### Employee User

- **View Roster:** Employees can view published rosters, they receive an email when a new roster is released.
- **Edit Availability:** Employees can set up timeslots for when they are available to work. When they edit this, an admin must approve it.
- **Submit Requests:** Employees can submit requests for time off and to swap shifts with other employees. Requests must be approved by an admin. Employees can submit an emergency request for the current working week, this notifies the employer accompanied by a list of employees that are available for that shift.

## Precedent



- Creating rosters is a time-consuming task that should be automated, having all employee information in one place along with requests will reduce errors and miscommunication.
- Managers sometimes get frustrated with requests from employees, this is purely due to the daunting task of scheduling. Creating good rosters increases morale in a team. Having a system that handles these issues will increase job satisfaction for managers and employees.