

# Event staff manager

- Sam Depauw
- Viktor Walravens
- Xander Vanderhaeghe
- Louis De Veirman
- Casper De Meester

Groep 30



# Agenda

---

Situation & problem

---

User roles

---

Our features

---

Demonstration

---

Questions





# Situation & Problem

---



# User Journey - Manager

---



LOG IN



NEW EVENT



ACCEPT/REFUS  
E



CALENDAR  
OVERVIEW



STATISTICS





# User Journey – Employee

---



LOG IN



AVAILABILITY



APPLICATION



CALENDAR  
OVERVIEW



# Our Features

---

- Statistics
- Ical
- ...



# Our Algorithm

## Hard Constraints:

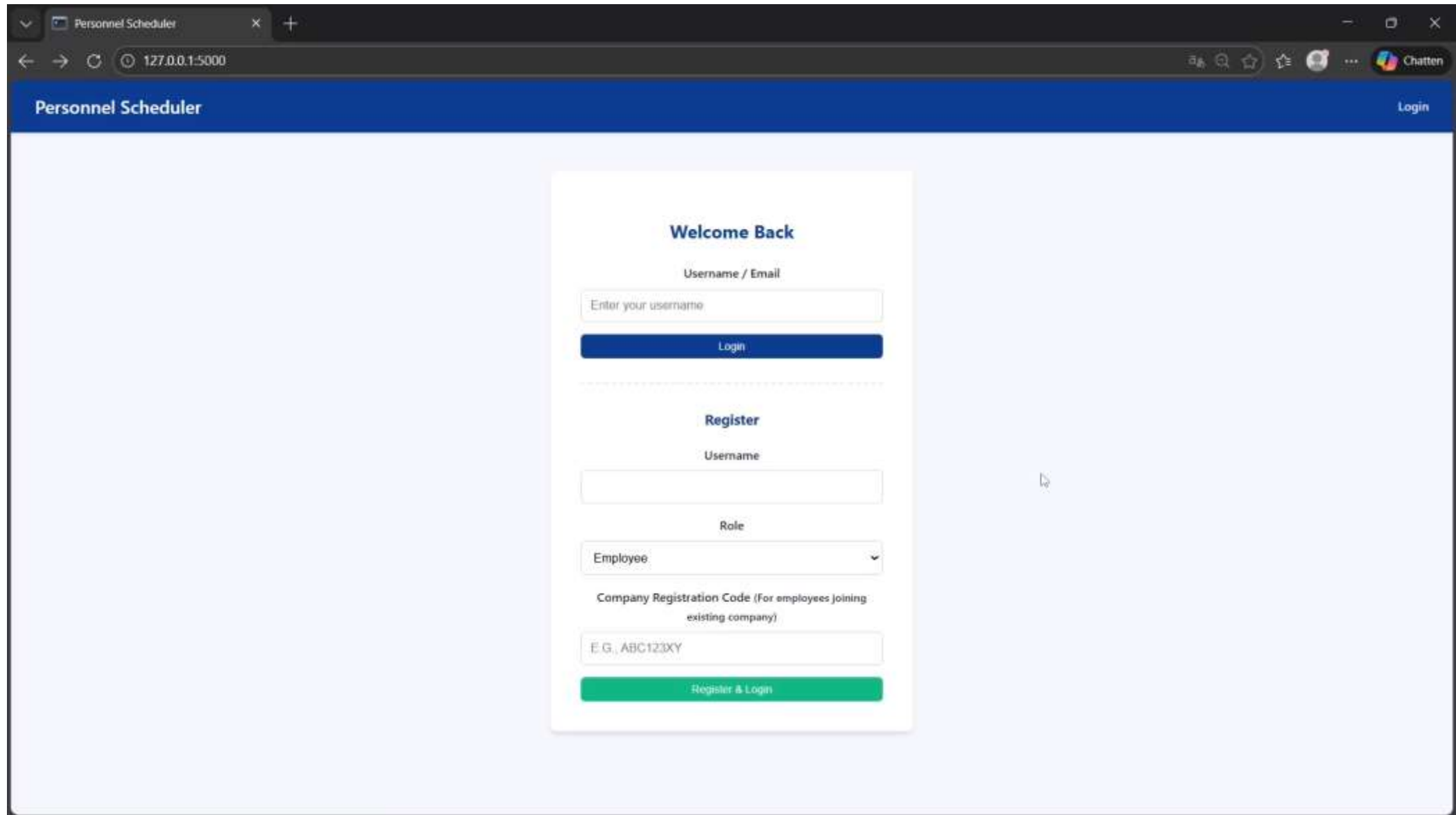
1. No overlapping shifts per employee
2. Minimum 1-hour break between shifts
3. Maximum 12 hours per employee per day
4. Availability window constraints
5. Shift capacity must be met

## Soft Constraints:

1. Fairness: even hour distribution (60% weight)
2. Availability match: shifts in preferred windows (40% weight)

```
= HARD CONSTRAINTS =====  
  
def overlap_constraint(employee_id: str,  
                        shift: Dict,  
                        current_assignments: Dict[str, List[str]],  
                        all_events: List[Dict]) -> Tuple[bool, Optional[str]]:  
    """Constraint 1: Employee cannot work overlapping shifts  
    """  
    is_valid, error_message = validate_shift_assignment(  
        employee_id, shift, current_assignments, all_events,  
        min_break_hours=1.0)  
    return (is_valid, error_message)  
  
def min_break_constraint(employee_id: str,  
                          shift: Dict,  
                          current_assignments: Dict[str, List[str]],  
                          all_events: List[Dict],  
                          min_break_hours: float = 1.0) -> Tuple[bool, Optional[str]]:  
    """Constraint 2: Minimum break time between shifts (default 1 hour)  
    """  
    is_valid, error_message = validate_min_break(  
        employee_id, shift, current_assignments, all_events, min_break_hours)  
    return (is_valid, error_message)
```

# Demonstration



The screenshot shows a web browser window with the title "Personnel Scheduler". The address bar displays "127.0.0.1:5000". The browser's toolbar includes navigation buttons (back, forward, refresh), a search icon, and a "Chatten" button. The application's header is a dark blue bar with the text "Personnel Scheduler" on the left and a "Login" link on the right.

The main content area features a central white card with a light blue border. The card is divided into two sections by a dashed line. The top section is titled "Welcome Back" and contains a "Username / Email" label, a text input field with the placeholder "Enter your username", and a blue "Login" button. The bottom section is titled "Register" and contains a "Username" label, a text input field, a "Role" label, a dropdown menu with "Employee" selected, a "Company Registration Code (For employees joining existing company)" label, a text input field with the placeholder "E.G., ABC123XY", and a green "Register & Login" button.





Questions?

---

