

Dong Yeob Lee (<u>dongyeob.lee.1@stonybrook.edu</u>) Kyu Hee Park (<u>kyuhee.park@stonybrook.edu</u>) San Hae Kim (<u>sanhae.kim@stonybrook.edu</u>)

Table of Contents

- Problems
- Solution: Main Features
- Architectural Design
 - Overview
 - UML Class Diagram
 - Classes
 - o UML Sequence Diagram
- Schedule

Problems

Original Reservation System (By paper)

- Hard to check the facility availability
- Difficult to keep records
- Unclear reservation method

Solution

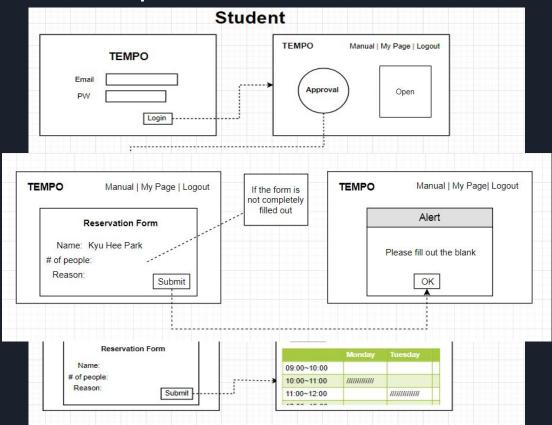
Tempo (Online Reservation System) Main Features

- Students
 - Check Facility Availability
 - Make/Cancel Reservation
 - Report
- Admin (Staff)
 - Manage Facility
 - Manage Reservation
 - Penalty

Architectural Design: Overview

- HTML 5
- CSS 3
- Javascript
- MySQL 8.0
- PHP 7.3
- GitHub & Heroku for deployment

Mock-up User Interface



Class: Facility

Facility

- +ID: int
- +Name: string
- +Category: string
- +Type: string
- +Location: string
- +Capacity: int
- +Picture: blob
- +Status: string

- Information about facility provided by admin
- Category: The building or space that facility belongs (ex. Housing A, Multi-complex)
- Status: 'Available' or 'Out of Order'

Class: Timeslot

Timeslot

- +ID: int
- +Date: date
- +Start_time: time
- +End_time: time
- +Facility_ID: int

- Information about a time slot in a reservation
- Date, Start time, and end time

Class: Reservation

Reservation

- +ID: int
- +Type: string
- +User_ID: int
- +Timeslot_ID: timeslot
- +Facility_ID: int
- +Reservation_Status: string
- +Purpose: string
- +Number: int

- Information about reservation
- Type: 'Approval' or 'Open'
- Timeslot_ID: Selected time slot for the reservation
- Reservation_Status: 'Approval', 'Pending', or 'Declined'

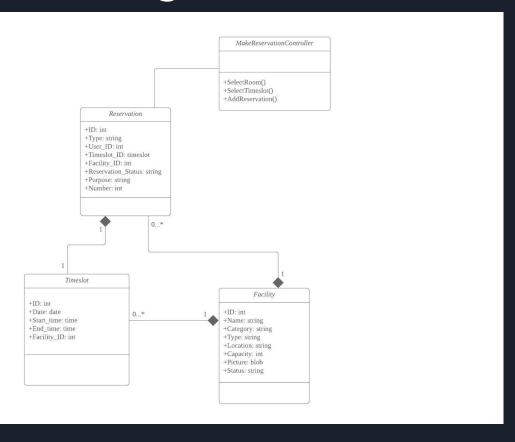
Class: MakeReservationController

MakeReservationController

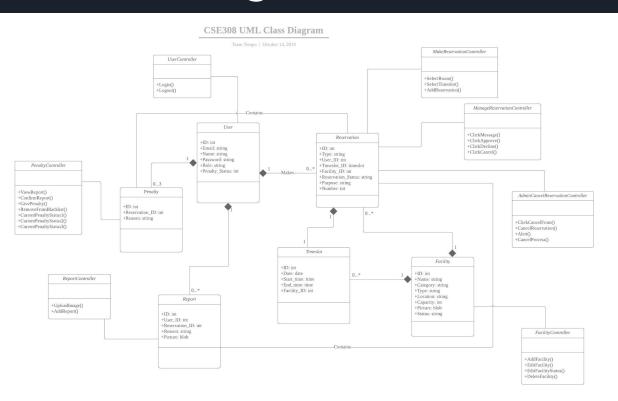
- +SelectRoom()
- +SelectTimeslot()
- +AddReservation()

- Allows users (students) to make a reservation
- SelectRoom(Facility_ID): Asks 'Timeslot' class for all objects that have passed Facility_ID
- SelectTimeslot(Date, Start_time, End_time): Asks
 'Timeslot' class to create a new object with passed values
- AddReservation(): Asks 'Reservation' class to create a new object with passed values

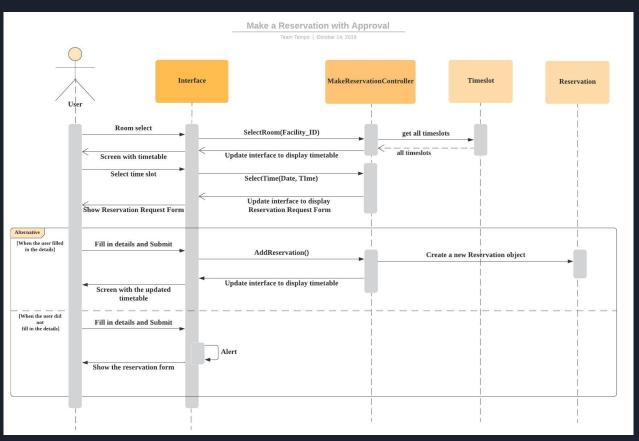
UML Class Diagram



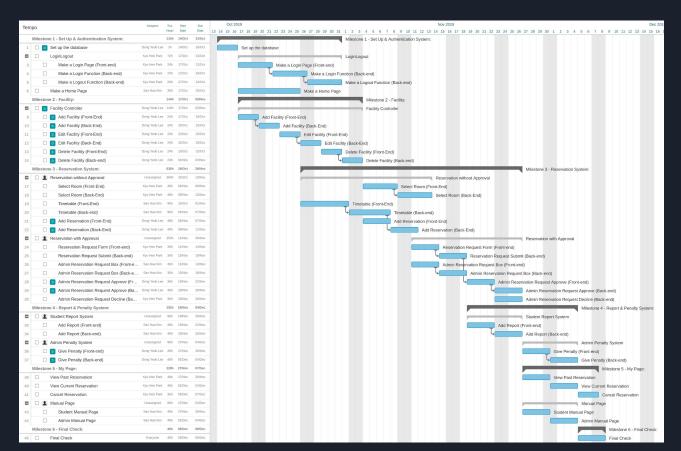
UML Class Diagram



UML Sequence Diagram



Schedule



Schedule (Summarized)

- October 30th Authentication System + Main Page
- November 6th Facility Pages + FacilityController
- November 24th Reservation System
- **December 2nd** Report & Penalty System
- **December 5th** Final Product

Thank You