Systems Design Report
Room Booking System
EDU 779

Team 5

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Project Manager: Madeline Simpson

Project Proposal

This proposal covers a room booking system that will allow users to sign up for common spaces at Romona Elementary. This system will allow teachers, support staff, administration, and office staff the ability to reserve common spaces (such as conference rooms, meeting rooms, different spaces in a school library, a tech lab, and small group rooms). This system is designed to eliminate the risk of double booking a room, improve the communication between school staff members, and make reserving a room simpler.

Currently, Romona Elementary does not have an effective room reservation system. The lack of an effective system creates unneeded anxiety and stress for school employees. Under the current system, common spaces are double-booked, room availability is not easily communicated or always accurate, recurring reservations are not easily made, troubleshooting is tedious, and the room booking process is difficult and unclear.

Our proposed system will streamline the room booking process, allowing for singular and recurring reservations to be easily made. Also, the system will provide accurate and up-to-date information, ensuring that school staff know what rooms are available and if a room will be in use during desired time. This system will be web-based and easily accessible by staff with valid employee IDs. The streamlined booking process, room reservation accuracy, and web accessibility allows for non-verbal communication to take place, creating more time for staff to take care of other duties. The room booking system will be easy to use, and will allow users to easily book the rooms they need, when they need them, leaving more time for teaching, learning, creating, and growing.

Project Management

This project management plan lays out the different steps needed in order to create our system. In addition, it specifies the order in which the different steps need to happen in relation to one another, and if any steps are able to overlap. This plan also maps out what prerequisites are needed to complete the different steps, and any resources that are required. Creating a Gnatt chart like the one below is a really helpful step to take when planning a project, because it is a great visual aid to keep track of what needs to be done, what has already been done, and who is able to take on the responsibilities based on their skills, knowledge, and resources available to them. The Gantt chart that is created below shows that the room booking system we have created should take about 10 weeks to complete.

Task Name	Estimated Effort	Start Date	Projected End Date	Requirements	Resources	Status	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Inventory	2 weeks	Week 1	Week 3													
Write a list of all available rooms	1 week	Week 1	Week 2	access to building	access to building											
Take photos of all rooms to use on signup	1 week	Week 2	Week 3	access to building	access to building											
Staff Involvement	4 Weeks	Week 1	Week 11													
Create staff survey for feedback	1 week	Week 1	Week 2	Questions created	Google Forms and Wifi access											
Adminster staff survey for feedback	1 week	Week 2	Week 3	Staff meeting time	Staff meeting time											
Staff PD on using the system	2 weeks	Week 9	Week 11	Staff meeting time	Staff meeting time											
Software	6 Weeks	Week 3	Week 9													
Create system software	4 Weeks	Week 3	Week 7	Inventory done	Internet access											
Test Software	1 week	Week 7	Week 8	Inventory and software build done	Internet access											
Rectify Software Issues	1 week	Week 8	Week 9	Staff survey feedback	Internet access											

Systems Thinking

Systems thinking is a problem-solving approach that considers the interdependence of various components within a system. It helps when understanding relationships between different components, to reveal hidden patterns and feedback loops, and identify potential issues or areas for improvement, and allows for the development of possible solutions. Systems thinking is a powerful tool that can help organizations better understand complex systems and make more informed decisions.When applied to the room reservation system at Romona Elementary School, systems thinking provides a framework for comprehending the relationships between different components and actors of the system, such as users, managing staff, and available rooms, as well as the technical intricacies of the system.

The stakeholders of the room reservation system at Romona Elementary School comprise teachers (classroom teachers, coaches, and differentiation support teachers), administrators, office staff, and volunteers who use common spaces for enrichment activities throughout the day. Like many large organizations, Romona staff face communication challenges between booking parties. The implementation of a centralized system that tracks room availability and scheduling, would enable direct and seamless communication among stakeholders. While Romona school staff are open to change that addresses existing problems and are open to training to use the new system, some staff may be reluctant to adopt the system fully due to previous commitments, such as having already reserved spaces for the entire school year on the previous document. This obstacle can be overcome by dedicating time during staff meetings to introduce and train teachers on the new system and reserving any spaces required for the remainder of the year, ensuring a smooth transition without the potential for double-booking.

The current room reservation process at Romona Elementary School is complicated and involves multiple steps, which often leads to double-booking and confusion among school staff. Additionally, some staff require recurring spaces for groups that meet daily or weekly at a specific time. The new system will offer both single-day and recurring reservations, making the process easier and more efficient. As student grouping becomes more necessary, activities will require more space. So, it is an ideal time to implement the new system.

Measurable quantities for the new system will include a reduction in the number of double-booked rooms, overall room usage, staff's disposition towards booking rooms, and the time spent on the booking process. A survey will also be administered to staff to gauge their perceptions of the booking system before and after implementation, enabling further improvements.

The new room reservation system will relieve teachers and administrators of the burden of logistical issues concerning room scheduling and double-booking. Ultimately, the new system will reduce stress and allow staff to focus on student instruction, lesson planning, and other duties. The new system will save time, eliminate double-booking, be more user-friendly, and contribute to a more positive work environment.

Requirements Gathering

Requirements gathering is a necessary step to take when creating a new system. In this visual, one is able to see the different use cases of the system, who would be the main actors in that use case (the person/people who trigger that use case), and the steps that they would follow to do so. In creating these charts, it is clear how the system will be used and can help the creator to think of new scenarios that were not originally a part of the plan. Another key part of these

use case charts is the “alternate course” plans. These alternate course plans help the creators to think of what could go wrong, and how that user would rectify the situation. In our requirements gathering tables below, we have planned out how rooms would be booked for a singular use, how rooms would be booked for recurring uses, how an administrator or office staff member would pull a list of all the rooms that have been booked, and how a user could cancel their current reservation.

Project Goals and Use Cases

- Provide a system for teachers and administrators to reserve learning and meeting spaces for individual meeting sessions
- Provide a system for teachers and administrators to reserve learning and meeting spaces for recurring blocks of time (weekly, monthly, quarterly, yearly)
- Provide a system for administrators and office personnel to view who has signed up for the different meeting and learning spaces throughout the building
- Provide a system for teachers and administrators to cancel their own previously reserved spaces

Author	Madeline Simpson & Kalon Ridley
Date	April 5, 2023
Version	1.0
Use-case name	Teacher or Administrator Books a Singular Reservation
Use-case number	Unspecified
Priority	Unspecified
Source	Unspecified
Primary business actor **Person that triggers use case**	Teachers and administrators
Other participating actors	Office staff
Interested stakeholders	Students, Teachers, Administration, and other school staff

Description	This use case allows teachers and administrators to book a needed room. The actors are teachers, school administration, and other school staff. School staff will enter their employee ID number to gain access to the booking system. The system and user will check for room availability, and the user will reserve the needed room.
Typical course of events	1. Teacher/administrator opens software and inputs employee ID 2. Teacher/administrator searches for needed room 3. Teacher/administrator selects day and time needed 4. System confirms rooms and date 5. Teacher/administrator reserves room 6. Teacher/administrator and class or meeting partner show up at assigned time
Alternate courses	Room Not Available when teacher needs it 1. Teacher opens software 2. Teacher searches for needed room 3. Teachers needed day and time is already booked 4. Teacher searches for opening during a specific time If a room is available: If a room is not available: 5. Reserves open room 5. Teachers uses classroom 6. Shows up at assigned time Teacher selects wrong days 1.Repeat 1-4 of typical course of events 2. Teacher does not reserve room 3. System takes teacher back to selection page 4. 3-6 of typical course are then followed Teacher selects wrong room 1. 1-3 from Teacher selects wrong days 2. Teacher goes back to room selection 3. 2-6 of typical course of events
Conclusion	Teacher books needed room without any conflicts or double-booking
Post-condition	Teacher will leave room at appropriate time
Business rules	Teachers must share spaces fairly with their colleagues so that everyone has equal opportunity to use the common spaces. Teachers must clean up the spaces when they're done and put them back in the condition they were found in.

Implementation constraints and specifications	Users must have a valid employee ID number. Users must be on Wi-Fi to access the software.
Assumptions	Users cannot cancel another user's reservation so that they can book a room. User is school building/district staff with an employee ID.
Open issues	What happens if teachers want to book rooms for the following school year? What happens if rooms are booked for the following year but that teacher leaves the school?

Author	Madeline Simpson & Kalon Ridley
Date	April 5, 2023
Version	1.0
Use-case name	Teacher or Administrator Books a Recurring Reservation
Use-case number	Unspecified
Priority	Unspecified
Source	Unspecified
Primary business actor **Person that triggers use case**	Teachers and administrators
Other participating actors	Office staff
Interested stakeholders	Students, Teachers, Administration, and other school staff

Description	This use case allows teachers and administrators to book a needed room for a recurring meeting/small group/class. This could be a recurring reservation for a weekly, monthly, quarterly, or yearly booking. The actors are teachers, school administration, and other school staff. School staff will enter their employee ID number to gain access to the booking system. The system and user will check for room availability, and the user will reserve the needed room.
Typical course of events	1. Teacher/administrator opens software and inputs employee ID 2. Teacher/administrator searches for needed room 3. Teacher/administrator selects days and times needed and the frequency of booking 4. System confirms rooms and dates 5. Teacher/administrator reserves room 6. Teacher/administrator and class or meeting partner show up at assigned times
Alternate courses	Room Not Available when teacher needs it 1. Teacher opens software 2. Teacher searches for needed room 3. One of the needed days/times is already booked 4. The teacher/administrator can see who has booked during that time slot and can: A: Talk with that teacher about changing their reservation B: Continue to reserve rooms for the recurring block with the exception of the already booked date C: Cancel reservation request and find different recurring date/time or room to book Teacher/administrator selects wrong days 1.Repeat 1-4 of typical course of events 2. Teacher does not reserve room 3. System takes teacher back to selection page 4. 3-6 of typical course are then followed Teacher selects wrong room 1. 1-3 from Teacher selects wrong days 2. Teacher goes back to room selection 3. 2-6 of typical course of events
Conclusion	Teacher/administrator books recurring room reservation without any conflicts or double-booking
Post-condition	Teacher/administrator will leave room at appropriate time

Business rules	Teachers must share spaces fairly with their colleagues so that everyone has equal opportunity to use the common spaces. Teachers must clean up the spaces when they're done and put them back in the condition they were found in.
Implementation constraints and specifications	Users must have a valid employee ID number. Users must be on Wi-Fi to access the software.
Assumptions	Users cannot cancel another user's reservation so that they can book a room. User is school building/district staff with an employee ID.
Open issues	What happens if teachers want to book rooms for the following school year? What happens if rooms are booked for the following year but that teacher leaves the school?

Author	Madeline Simpson & Kalon Ridley
Date	April 5, 2023
Version	1.0
Use-case name	Administrator or office staff pulls list of room reservations
Use-case number	Unspecified
Priority	Unspecified
Source	Unspecified
Primary business actor **Person that triggers use case**	Office staff and administrators
Other participating actors	Teachers
Interested stakeholders	Students, Teachers, Administration, and other school staff

Description	This use case allows office staff and administrators to see who has reserved rooms and at what time. This will allow them to know where everyone is throughout the building as well as see which rooms are available at different times of the day.
Typical course of events	1. Office staff/administrator opens software and inputs employee ID 2. Office staff/administrator selects which room they want to see a list of bookings for or they can select all 3. Office staff/administrator selects which days they want a list of bookings for 4. System pulls list rooms and date 5. Office staff/administrators view list
Alternate courses	Teachers might be reserving rooms at the same time that the office staff/administrators are pulling the list of room reservations. If this happens, the office staff/administrators might need to restart the process to get the most up-to-date information.
Conclusion	Office staff/administrators pull a list of room reservations for the desired times
Post-condition	Office staff/administrators can see who has reserved what rooms and for what amount of time
Business rules	Office staff and administrators cannot alter room reservations without contacting the teacher who booked them.
Implementation constraints and specifications	Users must have a valid employee ID number. Users must be on Wi-Fi to access the software.
Assumptions	Users cannot cancel another user's reservation so that they can book a room. User is school building/district staff with an employee ID.
Open issues	What happens if teachers make edits after the office staff or administrators pull the list? Is the list updating live or do they need to re-download?

Author	Madeline Simpson & Kalon Ridley
Date	April 5, 2023

Version	1.0
Use-case name	Teacher or Administrator Cancels a Previously Booked Room Reservation
Use-case number	Unspecified
Priority	Unspecified
Source	Unspecified
Primary business actor **Person that triggers use case**	Teachers and administrators
Other participating actors	Office staff
Interested stakeholders	Students, Teachers, Administration, and other school staff
Description	This use case allows teachers and administrators to cancel a previously booked room. The actors are teachers, school administration, and other school staff. School staff will enter their employee ID number to gain access to the booking system. The system and user will check for current bookings and the user will cancel the necessary reservations.
Typical course of events	1. Teacher/administrator opens software and inputs employee ID 2. Teacher/administrator searches for current room reservations 3. Teacher/administrator selects day and time needed for cancellation 4. System confirms rooms and date booking cancellation
Alternate courses	Teachers/administrators might need to cancel more than one booking. If the canceled reservation is from a recurring reservation, they can cancel all at once. If the reservations to be canceled are from independent bookings, teachers/administrators will need to complete the required steps separately for each canceled booking.
Conclusion	Teacher/administrator cancels booking without any conflicts
Post-condition	Teacher/administrator will free up that space for another user to book

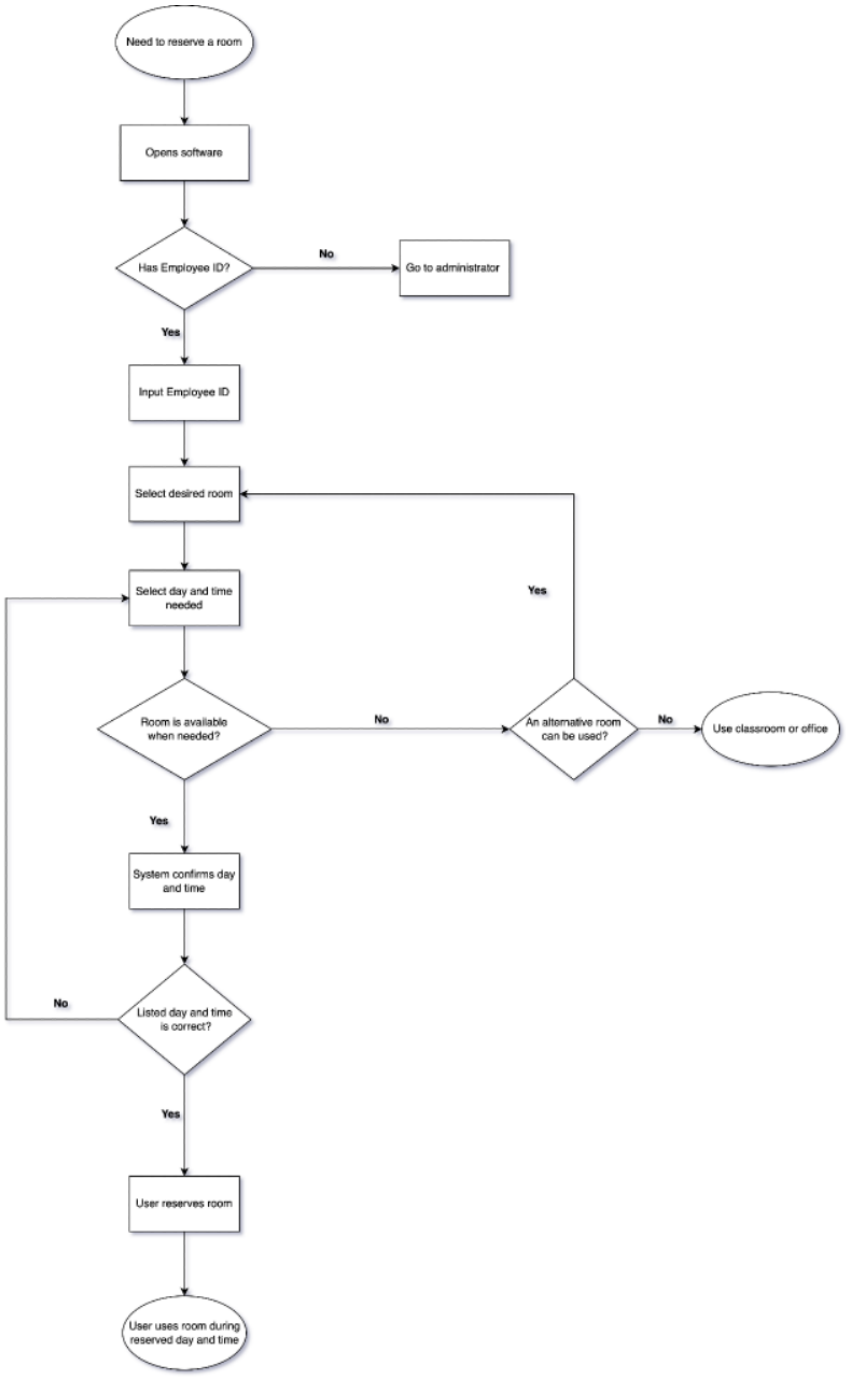
Business rules	Teachers must share spaces fairly with their colleagues so that everyone has equal opportunity to use the common spaces. Teachers must clean up the spaces when they're done and put them back in the condition they were found in.
Implementation constraints and specifications	Users must have a valid employee ID number. Users must be on Wi-Fi to access the software.
Assumptions	Users cannot cancel another user's reservation so that they can book a room. User is school building/district staff with an employee ID.
Open issues	Can co-teachers edit each other's reservations?

Process Modeling

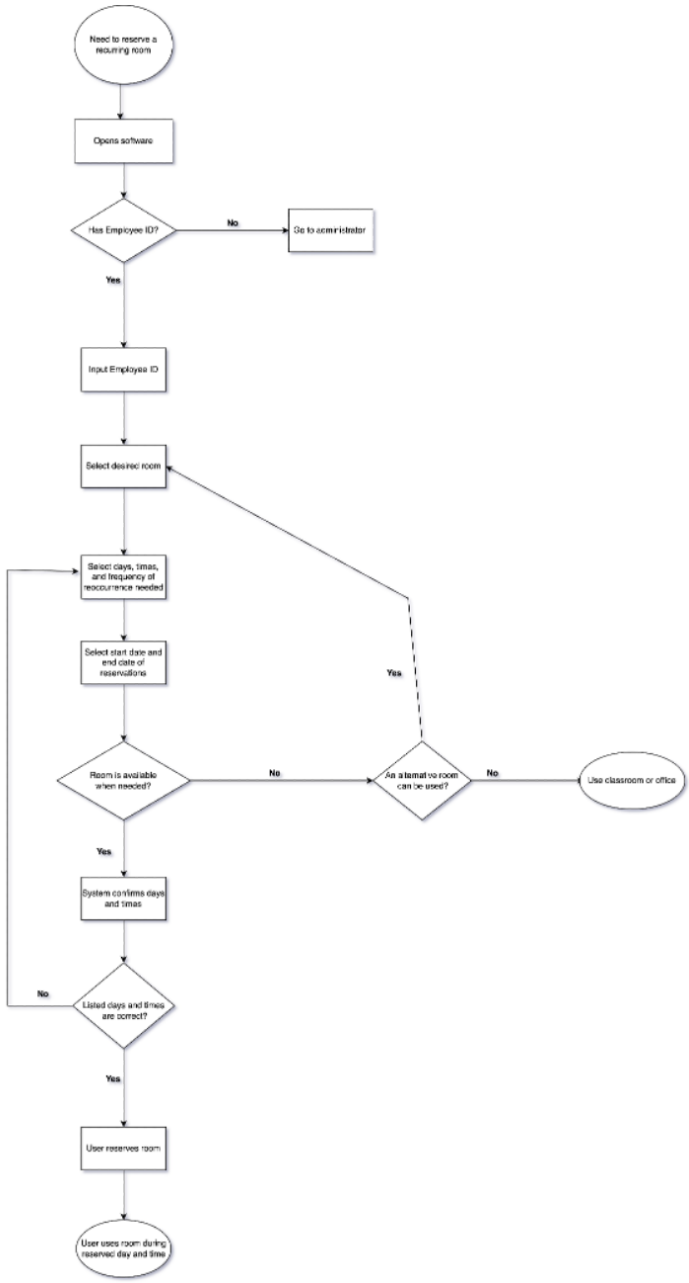
Process modeling is used to represent the activities and course of action for a system. It involves creating a visual representation of the steps involved in a process, including the inputs, outputs, decision points, and actors involved. For the proposed room booking system, three flowcharts that visually depict use cases and steps for booking a single room, booking a recurring reservation, or canceling an existing reservation were created.

The first flow chart is designed for booking a room for a single use. The user must start by entering their employee ID to gain access to the system. After entering the ID, the user selects the room, date, and time needed. The system checks for the room's availability, and if the room is available, the reservation is confirmed, and the room is made unavailable for others. If any inaccuracies arise during the reservation process, the user can go back to the room selection screen to make necessary adjustments before confirming the reservation. The second flow chart is for recurring room reservations. The process is similar to the first flow chart, but it requires selecting the frequency of recurrence and the start/end date and time. The third flow chart is for canceling a current reservation. The user must log in with their employee ID, select the reservation they want to cancel, and confirm the cancellation. This frees up the room for other users to reserve on the specific day/time. Overall, these flow charts offer a clear and efficient process for users to reserve and manage their room bookings. The flowcharts discussed can be found below.

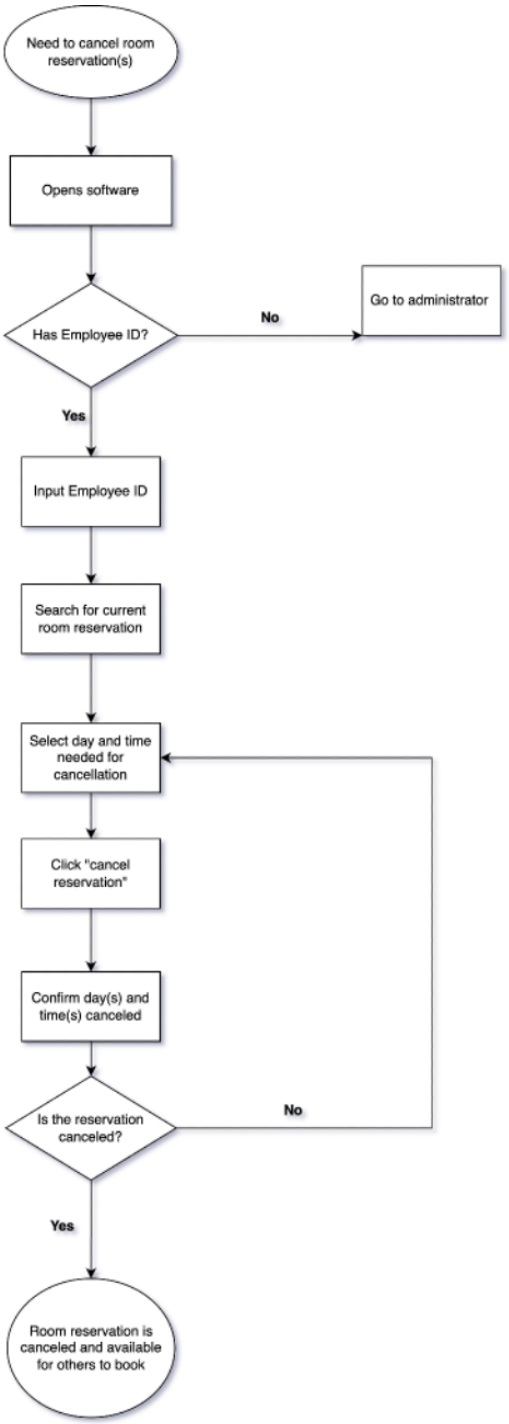
Flowchart #1


Need to reserve a room
Opens software
Has Employee ID?
No
Go to administrator
Yes
Input Employee ID
Select desired room
Select day and time needed
Yes
Room is available when needed?
No
An alternative room can be used?
No
Use classroom or office
Yes
System confirms day and time
No
Listed day and time is correct?
Yes
User reserves room
User uses room during reserved day and time

Flowchart #2


Need to reserve a recurring room
Opens software
Has Employee ID?
No
Go to administrator
Yes
Input Employee ID
Select desired room
Select days, times, and frequency of reoccurrence needed
Select start date and end date of reservations
Room is available when needed?
No
An alternative room can be used?
No
Use classroom or office
Yes
Yes
System confirms days and times
No
Listed days and times are correct?
Yes
User reserves room
User uses room during reserved day and time

Flowchart #3



Madeline's Summary:

We have created three different flow charts for the three main use cases of our system. The first use case is to reserve a room for a singular use. In this flowchart, the user starts by entering their Employee ID. This will grant them access to the system that we have created. If they do not have

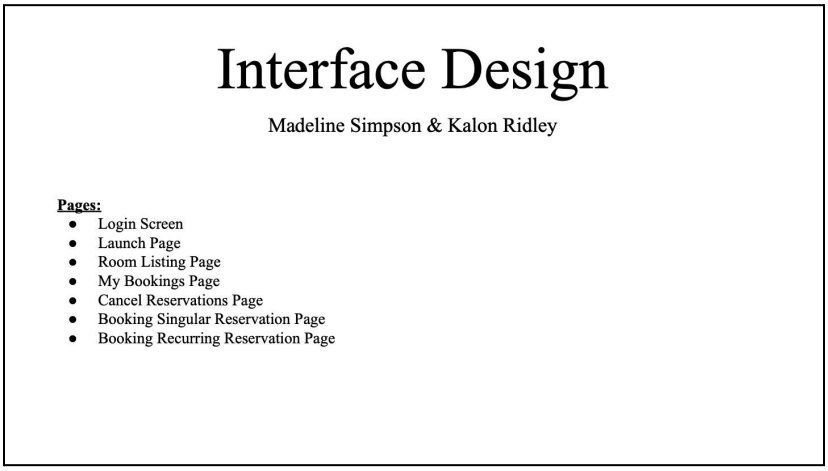
an ID, they will need to talk with their administrator and get an ID before proceeding. Once their ID has been inputted, the user will go through the steps to select the room they're looking to reserve as well as the date and time they need it for. The system will then check its availability. If that room is available on the requested day and time, the system will confirm with the user and proceed to book that room. By booking the room, the system will make it unavailable to others trying to book it on that day/time. If the reservation is inaccurate, the user will go back to the room selection and day/time selection screen to make adjustments before booking and confirming the reservation. The next flowchart we have created is for a user who needs to make a recurring room reservation. The steps for this process are very similar to the first chart, with the difference of also needing to select the frequency of recurrence as well as a start and end date and time. The last flowchart we created is for users who need to cancel a current reservation that they have. In this chart, users will login with their Employee ID as they did to book the reservation. Instead of going through the steps to book a new reservation, the user will click to find their current room reservations. From there, the user will select which of their current reservations they would like to cancel. The user will then confirm the cancellation. If the system canceled it correctly, the room will be freed up for another user to reserve on that day/time. If the system did not correctly cancel the reservation, the user will go back to their current reservations and go through the process to cancel the necessary room.

Kalon's Summary:
We created three flow charts, one for each of our use cases. The first flow chart outlines the process for booking a single room. It starts with a desire to book a room and ends with users using a room during a desired time or just using their classroom/office. It has three methods for reconciling an issue (Room not available, selecting wrong time, and not having an employee ID). Essentially, the user starts with a desire to book a room, checks availability of desired room, and if available reserves room that is desired. If not available then the user will repeat the process depending on the issue they run into. The second flow chart has similar steps and end goals as the first flow chart. The major difference is this process allows users to book recurring reservations for the same room. The process starts with a desire to book the same room multiple times. The user selects the time and date range needed, then the system and user both confirm dates, and the user uses the room when reserved. The front end of the process is heavier on the user because it asks them to select multiple times, but in the end this will allow recurring room reservation to be done in one sitting. Also, if issues (such as wrong days and times or room aren't available) arise, users can opt out of selections and repeat processes from room and date/time selection. The last flow chart is for when a user or administrator needs to cancel a room. This is an important workflow because the user may book the room in advance but may not need the room anymore or the user may be out that day. This process asks for the user to input employee ID to afford appropriate permissions and for accountability. It follows with the option to select one or multiple reservations, and ultimately leads to the cancellation of desired reservation(s). All three, place great emphasis on Employee ID as the first security measure and ensure that the proper people are able to use the room when needed.

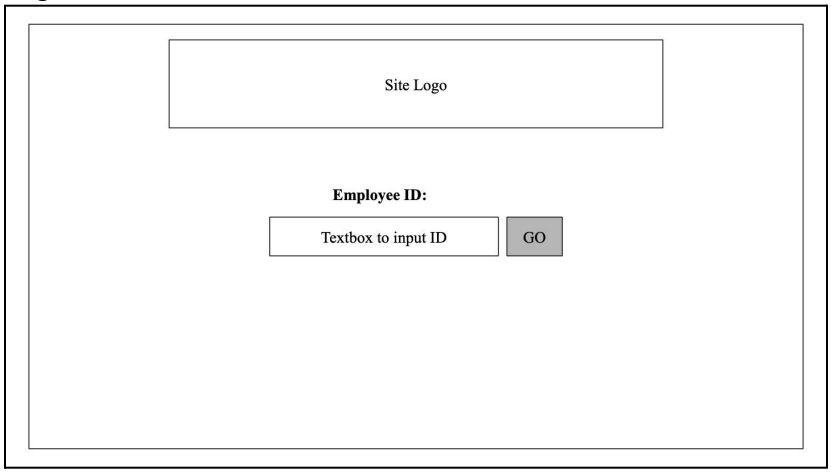
Interface Design

The interface design step of a system creation is the time where the planning can finally "come to life" more. This step is important because if there are multiple creators of the system, it

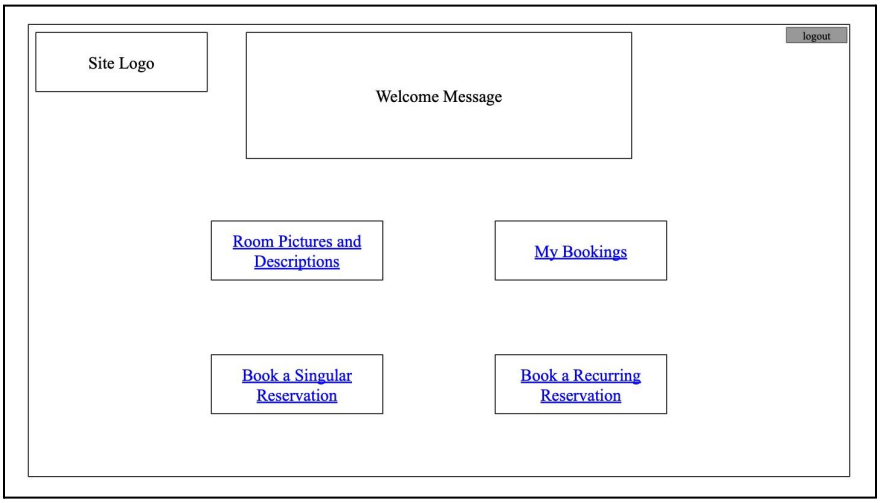
allows for everyone to be on the same page in terms of how they're picturing the system to be laid out. With these wireframes however, the creators are not getting into the details of aesthetics, but instead are worried about what will be on each page, and what the buttons on each page will do. The colors, placement, specific text, and photos on each page would come at a later time. In the wireframes that we have created for our system, a room booking system, we have created a wireframe for each of the seven pages on this current version of the system: a login screen, a launch page, a room listing page, a page to view your current bookings, a cancel reservations page, a page for booking a singular reservation, and a page for booking a recurring reservation. The wireframes for our system can be viewed below.



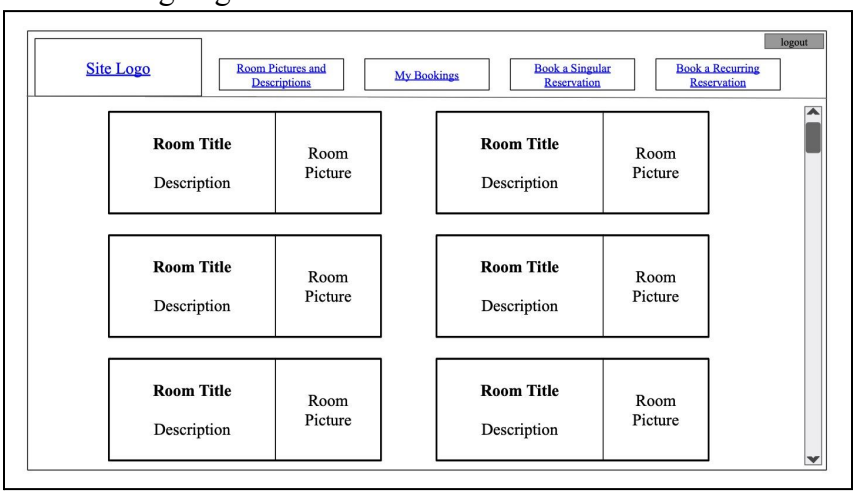
Login Screen:



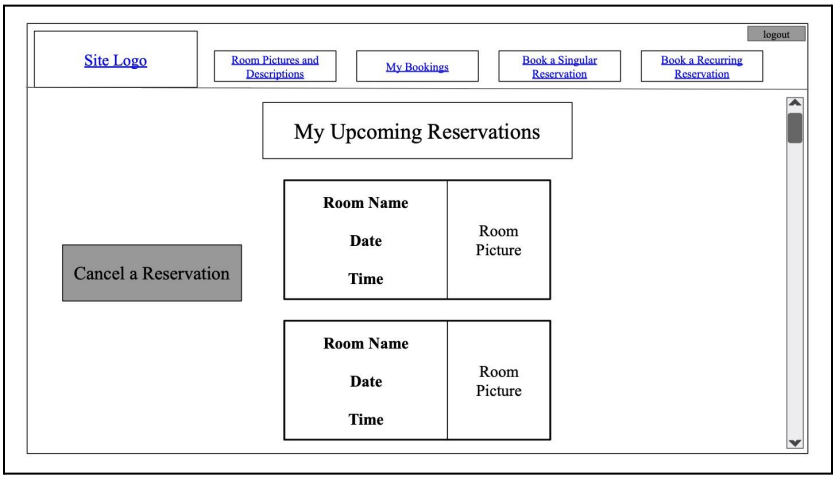
Launch Page:



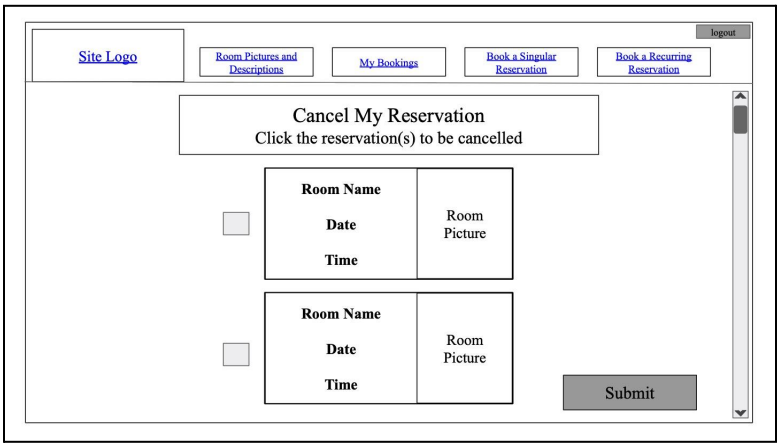
Room Listing Page:



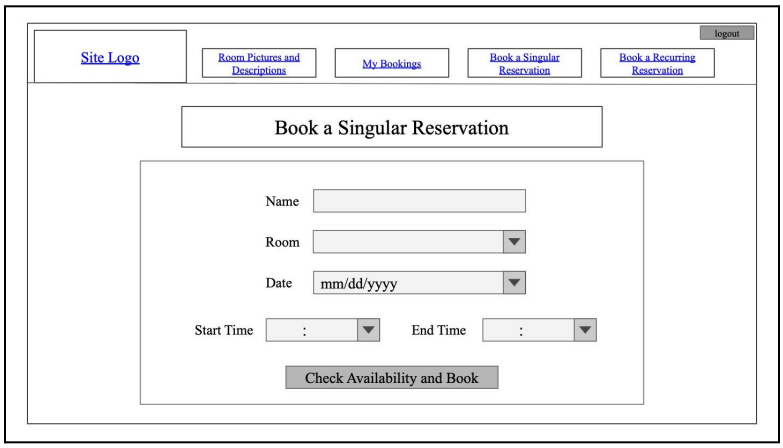
My Bookings Page:



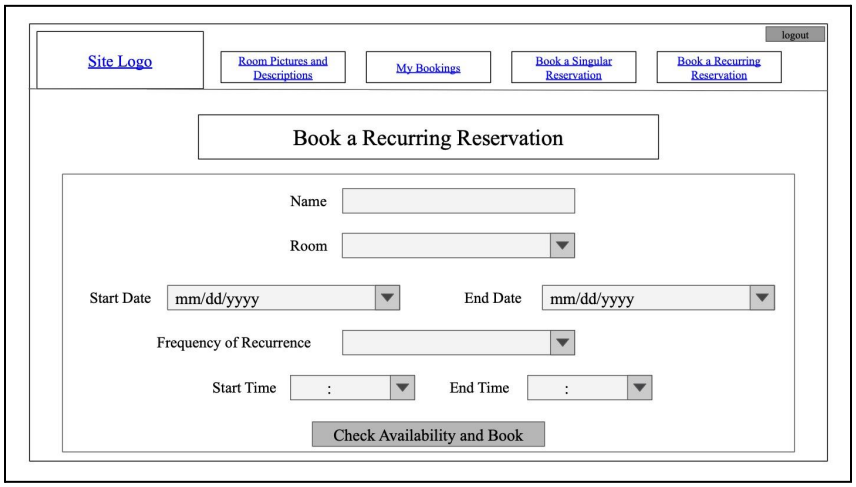
Cancel Reservations Page:



Booking Singular Reservation Page:



Booking Recurring Reservation Page:



Specification

The Software Requirements Specifications (SRS) provides a comprehensive overview of the functional and non-functional requirements of the system and its intended users. The document is divided into five sections, each covering key aspects of the room booking system.

Section 1 provides a broad outline of the SRS and the room booking system, including the intended audience, purpose of the document, and the key functionalities of the system. The system aims to simplify the room reservation process for users and managing staff, allowing users to book common spaces such as conference rooms, meeting rooms, school library spaces, and tech labs. Managing staff can create, edit, and delete room reservations.

Section 2 covers the product description and user training. To access the system, users will need their employee ID numbers and proper permissions. Once inside the system, users can book rooms on a singular or recurring basis and confirm, adjust, or cancel their reservations. The section also highlights how users will be trained to use the system effectively.

Section 3 delves into the room booking system's features, which enable managing staff to reserve a desired room for a specified time and to manage their reservations efficiently. Users can view their reservations and cancel them if needed. The section also lists the functional requirements of the system, including room reservation confirmation and availability.

Sections 4 and 5 provide details about the non-functional requirements of the system. Section 4 provides an overview of the login screen and pages for booking and canceling reservations. It also describes the room listings pages, including room pictures and descriptions. Section 5 covers critical non-functional requirements, including security measures such as requiring employee IDs to access the system. Additionally, this section outlines the system's availability, flexibility, and maintainability requirements.

The system's maintainability is essential, and managing staff will ensure accuracy in room reservations and availability. Users will maintain their scheduled reservations. Flexibility is also a significant requirement, with users and managing staff able to monitor time of room reservations depending on the workload for the day. The system should also display available rooms and times for users to book.

The functional requirements has been included below:

Priorities are as follows:

P1. Mandatory: The product will not be released until these requirements are met.

P2. Highly Desirable: The product will be released, but these requirements must be met soon thereafter.

P3. Nice to Have: The product will be released, and these requirements should be addressed as time and resources permit.

P4. Future: Not intended for this release. Assign a priority after this release is complete

Function	Exists on	Priority	Description

	Portal		
Input Room Inventory	Yes	P1	Administrators and other certified staff are able to add the rooms that are available for booking to the online system
Input Employee ID	Yes	P1	All users can input their employee ID to gain access to the system
View Room Inventory	Yes	P1	All users can view what rooms are available to book
Book Single Reservation	Yes	P1	All users can book a singular room reservation
Book Recurring Reservation	Yes	P1	All users can book a recurring room reservation
View Own Current Bookings	Yes	P1	All users can view their current room reservations
Cancel Current Booking	Yes	P1	All users can view their current room reservations. Administrators and other certified staff can cancel anyone's current reservation
View All Current Bookings	No	P3	This would be nice for teachers and staff to be able to see so that they can talk with someone if they need that space at the same time as them. Right now, only administrators are able to see this information, this can be added down the line

Security

Security is an essential part of any system. It is important to think about who has access to what, and to make sure there are measures taken so that those lines do not get crossed. The matrix below shows the security policies for the room reservation system that has been created for Romona Elementary School. The columns represent the user groups, and the rows represent the operations they will need to perform. The matrix shows which users can create (C), update (U), Delete (D), Read All (Ra), or Read their Own (Ro) entries based on their status and need. The users that are focused on in this matrix are currently the only users that will have access to the room reservation system.

	Teacher	Support Staff Members	Secretaries	Administrators	Romona Elementary IT Department
Employee ID	Ro	Ro	Ra C U	Ra C U D	Ra C U D
Single Bookings	C Ro D	C Ro	C Ra U D	Ra C U D	Ra
Recurring Bookings	C Ro D	C Ro	C Ra U D	Ra C U D	Ra
Room Inventory	Ra	Ra	C Ra U D	Ra C U D	Ra C U D
School Calendar/Time Inventory	Ra	Ra	C Ra U D	Ra C U D	Ra C U D

Implementation

Implementation of a system refers to the process of putting a new system into practice to achieve specific goals and objectives. This involves a series of planned and coordinated activities, such as designing, coding, testing, deploying, and maintaining the system. In the case of the room booking system for Romona Elementary, implementation refers to the process of developing and deploying the system to meet the school's room reservation needs.

To ensure a successful implementation, it is essential to have a thorough implementation plan that considers key aspects of the process. These key aspects include user involvement, resistance management, commitment, project planning, risks, and success factors. By taking into account these factors, a plan can be created that ensures the system meets the needs of all stakeholders/users, improves efficiency, and assists users with booking the rooms they need.

To implement the proposed room booking system at Romona Elementary, project goals must be clearly defined to ensure all stakeholders are on the same page. Next, a project team should be assembled (staff from various roles) to manage and oversee technical aspects of the system. Gathering user requirements by administering surveys to school staff will ensure that the system meets their needs. Based on the requirements, the system should be designed, wireframed, prototyped, and user interface designs created. Development and testing should follow, with any necessary adjustments made based on feedback received. Staff training should be developed, followed by a launch of the system and ongoing support to address any issues that arise during the early stages. By following these steps, a successful implementation plan can be created that meets the needs of all stakeholders/users.

Implementing a new system can be a complex process that requires careful planning and coordination to be successful. The proposed room booking system for Romona Elementary is no exception. Through careful consideration of the key elements of implementation such as user

involvement, resistance management, and commitment, the school can ensure that the system meets the needs of all users, improves room booking efficiency, and reduces the risk of double bookings. This system will greatly benefit all staff and students at Romona Elementary School.

Project Summary

This project allowed us to create a system that benefits both staff and students at Romona Elementary School. By having a system for signing up to use common spaces around the building, staff members are able to have a streamlined way of reserving spaces and are no longer booking a room they thought was free, but another teacher was using. Students at Romona are benefitting from this as well because they are able to get straight to work with their small groups instead of walking around to find a new open space when teachers have accidentally double booked a room. In addition, teachers are able to sign up for a recurring room reservation, giving that teacher and the students they work with the consistency of meeting in one particular space throughout the year. This system also benefits the administrators and office staff at Romona because they are able to easily see where everyone is in the building throughout the day. Administrators and the office staff are also able to benefit from this system's booking system to seamlessly reserve spaces for meetings. These benefits can be measured by noting the reduction in the number of rooms that are being double booked. Surveys can also be given to staff after the initial rollout in order to gain insight into the staff's disposition towards booking rooms, and the time that they have spent on the booking process. There will also be comparative questions on the survey allowing staff to document their perception on the booking system before and after implementation, enabling further improvements.

As the years go on, there will certainly be updates to the system to continue to make it the most effective and efficient way to reserve rooms at Romona. Over time, there will need to be more rooms added into the system as the small group rooms change and grow with new construction and staffing changes. While this would not involve a revamp of the system, the room inventory page and the options of which rooms someone would be able to book would need to be updated. In addition, this space can become more than just a room reservation system. As the technology that the staff have access to changes, this could become a system to reserve different technology to use with students as well. This change could be done by adding a choice when someone first logs into the system if they're looking to book a room or book technology. From there, the booking system would look similar, but would be specific for devices. A technology inventory page similar to the room inventory page would also need to be created. Lastly, this system staff professional development will need to be updated as those changes are made so that all new staff and current staff are fully trained on how to successfully use the system.