

Project Requirements

Version 1.9

Residence Room Availability System

Group 11

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Document History

Version	When	Who	What
1.0	October 19th	Amir	Document initialization + outline
1.1	October 20th	Amir	Use case #1 added
1.2	October 20th	Amir	Use case #2 added
1.3	October 21st	Myles	Add requirements
1.4	October 21st	Sebastian	Add/improve requirements and rules
1.5	October 21st	Merrick	Added User Requirements, a non-functional requirement, a functional requirement, and a business requirement
1.6	October 21st	Sebastian	New use case #1 added, shifting previous use cases #1, #2 to #2, #3
1.7	October 21st	Sebastian	Table of contents + general re-formatting
1.8	October 22nd	Merrick and Myles	User case #4
1.9	October 22nd	Merrick	Proofreading/edits

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Requirements Overview

Type of Requirements	Requirements		
Business Requirements	1	Requirement:	The system should display available rooms, providing information on the room types, buildings, and student eligibility.
		User Story:	As a student and prospective inhabitant of UVic residences, I would like to be able to browse available rooms, seeing which rooms I am eligible for and which rooms suit my needs.
	2	Requirement:	The system should provide an online method to book rooms in UVic's residence.
		User Story:	As a student, I want to be able to book my preferred room online in order to conveniently obtain a dorm room.
	3	Requirement:	The system should integrate with UVic's Netlink login so that reserved rooms are properly assigned to the students.
		User Story:	As a student, I want my pre-existing Netlink ID to be used to verify my identity. I should not have to create another account to reduce complications.
	4	Requirement:	The system should charge a student security deposit and acceptance fee but the dorm payments should be passed to the student's finances page.
		User Story:	As the business, I want to ensure the proper payments are made when booking a dorm and when the student is residing in the dorm.
Business Rules	1	Requirement:	The system should only be viewable to UVic students with active NetlinkID login credentials
		User Story:	As the business, allowing access to the general public should not be possible. This website is to be exclusively for the Uvic community, limiting traffic and protecting information.

	2	Requirement:	The system should ensure that each room can only be booked by a student meeting the specific criteria; year-standing, graduate vs, undergraduate, gender so they receive an appropriate room.
		User Story:	As a male student, the system should not allow me to book a room on a single-gender female floor.
User Requirements	1	Requirement:	The system should allow users to coordinate with another user in order to book double rooms or cluster housing.
		User Story:	As a student, I want to ensure that I book a double room to share with my friend and not a student I don't know.
	2	Requirement:	The system should enable users to filter and search rooms by attributes such as room type, room size, bathroom type, building, elevation, etc.
		User Story:	As a student, I want to easily find a room that meets my specific requirements for living.
Functional Requirements	1	Requirement:	The site should always mark a room as "unavailable" for 10 minutes if a user is in the process of booking that room.
		User Story:	As a user, I do not want to have my room taken by someone else before I have the chance to confirm my booking.
	2	Requirement:	The system should email the student when they book a residence room confirming the booking.
		User Story:	As a user, I want to be ensured that my booking has been confirmed so I can have peace of mind when booking my dorm room.
	3	Requirement:	The information provided by the system should always be accurate and up-to-date
		User Story:	As a user, it is critical that the information I receive on room availability is accurate and frequently updated so I can book the best room possible.
Non-Functional Requirements	1	Requirement:	The website/app should always be responsive to the user during site navigation.
		User Story:	As a user, I do not want to experience any slowdown

			while I am booking my room.
	2	Requirement:	The website/app should be accessible on any platform which already supports UVic's other online tools.
		User Story:	As a user, I want to be able to access this information on my phone, laptop, or PC for ease of use.
	3	Requirement:	The website should be able to be updated and scaled once new residence buildings are built or existing residence buildings are changed.
		User Story:	As a user, I want to be able to view the rooms of UVic's current and up-to-date housing infrastructure to make the best possible decision when selecting living accommodations.

Use Cases

1. Use Case 1 : (Check Room Availability)

Name	Check Room Availability
Participating Actors	Students, UVic Residence Services Office
Goals	To provide up-to-date information on the current availability of residence rooms
Triggers	The user logs into the Residence Room Availability System
Pre-Condition	User has successfully logged in with Netlink ID
Post-Condition	The user will know which rooms are available, and of those, which rooms they are eligible for
Basic Flow	<ol style="list-style-type: none">1. The user will land on the Residence Room Availability System login page, either through a link on the UVIC site, or directly from a search result2. The user will log in with their NetlinkID credentials3. The user is presented with a graphic interface, displaying options for room types, buildings, communities, LLCs and terms4. The user selects preferred options, filtering through the database of residence rooms5. The user will select different rooms, checking the room's availability and user eligibility6. The user will have the option to read additional details on each room, including information on building amenities, room layouts, building location, community details
Alternate Flows	<ol style="list-style-type: none">1. At step 4, the user has the option to not set any preferences, which allows them to view all rooms, including those currently unavailable.2. At any point after step 4, the user has the option to go back and reselect preferred options

2. Use Case 2 : (Select Room)

Name	Select Room
Participating Actors	Students, UVic Residence Services Office
Goals	To allow a student to select a room.
Triggers	The student selects the room which they intend to book for the chosen term.
Pre-Condition	1- The student has a UVic residence account linked to their NetLinkid (UVic username). 2- The registration opening date has passed.
Post-Condition	1- The room will be unavailable for other people to select for 10 minutes. 2- The student will be redirected to the payment page.
Basic Flow	<ol style="list-style-type: none">1. The student will click on the room they've decided to book for a full term.2. The system will present the information related to that room including estimated cost for a term, building name, room number, and type of room.3. The user will confirm the selected room's information.4. The system will present the amount that the student will be charged for security deposit (payment has to be made in order to finalize the booking process.)5. The user will confirm that the order information is accurate.6. The system will redirect the student to the payment page.7. The payment process will begin (different use case)
Alternate Flows	<p>At step 3:</p> <p>The user will decide to change the selected room and press the 'back' button to get back to the room selection page.</p> <p>At step 5:</p> <p>The user will decide to change the selected room and press the 'back' button to get back to the room selection page.</p>
Exceptions	If the server is overloaded (there are too many users active on the website at the same time), the user will be redirected to a page that tells the user about the situation. There will be a 'check website availability' button on the page that allows the users to get back to the step where they got disconnected from the website. This can happen during any of the given steps whenever the user clicks a new button.

3. Use Case 3 : (Finalize Booking)

Name	Finalize Booking
Participating Actors	Students, UVic Residence Services Office, Credit card Companies, Other payment companies
Goals	To allow a previously selected room to be fully booked
Triggers	After selecting and confirming the selection of a room, the payment page is loaded.
Pre-Condition	1- The room has been selected & confirmed in the past 10 minutes.
Post-Condition	1- UVic residence receives the security deposit payment 2- UVic residence receives either the acceptance fee or room change fee (whichever is applicable) 3- The booking process is finalized and no one else will be able to select the booked room. 4- The student will receive an email with information regarding their room application.
Basic Flow	<ol style="list-style-type: none">1. The payment page is loaded for the user.2. The user enters their credit card/other type of payment method information.3. The transaction is processed & confirmed once the user presses the 'process-transaction' button4. The system will redirect the student to the booking confirmation page where they can see the full information of their application.5. The user will receive an email regarding the confirmation of residence application from UVic residence.
Alternate Flows	<ol style="list-style-type: none">1. At step 1 or 2 of the Basic flow, the user might change their mind and cancel the payment.2. The room won't be selectable by other students for 10 minutes and the payment page remains accessible for the applicant until 10 minutes after they cancel the payment.3. After 10 minutes, the room will get back to the normal 'selectable' state and the user will receive an email regarding the cancellation of their application.
Exceptions	<ol style="list-style-type: none">1. If the user doesn't have sufficient funds in their card, they may try other cards/payment methods during the 10 minutes that they have left, otherwise, the alternate flow will be applied and the application gets canceled.

Use Case 4 : (Change Booking)

Name	Change Booking
Participating Actors	Students, UVic Residence Services Office, Credit card Companies, Other payment companies
Goals	To allow a student to change their reserved room to a different unbooked room, after having paid the security deposit and acceptance fee payments.
Triggers	The student selects the new room which they intend to book, and they confirm their change by selecting “confirm”, and by paying the difference in deposit fee if the new room’s deposit is higher than the previous room’s deposit. If the new room’s fee is lower, the student will be automatically refunded the difference.
Pre-Condition	1- The student has already reserved a room and paid their security deposit and acceptance fee. 2- There is a separate available room which the student has selected as their new room.
Post-Condition	1- UVic residence receives the new security deposit payment (if applicable). 2- UVic residence receives a room change fee. 3- The booking process is finalized and the new room becomes marked as “reserved”. The previous room’s availability is changed from “reserved” to “available”. 4- The student will receive an email with information regarding their new reserved room.
Basic Flow	<ol style="list-style-type: none">1. The student will select the available room they want to switch to.2. The system will present the information related to that room including estimated cost for a term, building name, room number, and type of room as well as the information of their current room.3. The user will confirm the selected room’s information.4. The system will present the amount that the student will be charged or refunded (this represents any cost difference between the previously booked room and the new room).5. The system will also present the amount that the student will be charged as a fee to change rooms .6. The user will confirm that the order information is accurate.7. The system will redirect the student to the payment page.8. The payment process will begin (different use case)
Alternate Flows	At step 3: The user will decide to change the selected room and press the ‘back’ button to get back to the room selection page.

	<p>At step 6:</p> <p>The user will decide to change the selected room and press the 'back' button to get back to the room selection page.</p>
Exceptions	<ol style="list-style-type: none"> 1. If a student wants to outright cancel their residence dorm rather than switching, this must be taken up with the residence office rather than an automated system. 2. If the system has too much traffic and is overloaded, the system will direct the user to a site busy page which explains why they have been redirected and provides a 'check website availability'. This can occur at the beginning of any step of the process.