

Book-A-Study Room

Deliverable #3

October 4th, 2018

The logo for HAXORS is displayed within a dark blue rectangular box with a light blue border. The word "HAXORS" is written in a bold, yellow, sans-serif font.

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Client organization:

Vanier College Library

Client name:

Haritos Kavallos

Table of Contents

Executive Overview.....	3-4
Summary description of client.....	4-5
Business problem.....	5-6
Description of information system.....	6-8
Appendix 1.....	8
Appendix 2.....	9
Appendix 3.....	10-11
Appendix 4.....	12
Appendix 5.....	12
Appendix 6.....	13-15
Bibliography.....	16

Executive Overview

In this document, you can find quite a few interesting pieces of information regarding use cases and UML diagrams.

Our client is Haritos Kavallos, manager of the Vanier College Library. Under the “Summary description of client” section, you learn quite a bit about Haritos’ academic/work background, based on information we found out about him by asking and getting into discussions with him about his life and accomplishments. We wanted to get to know our client, mostly because we will be working with him until the end of the semester, and it’s nice to get to know people on a personal level when you’ll be partnered up for so long.

We discovered quite a few business problems with our organization, some of which we could create a prototype for (i.e. the booking room system), and some of which we cannot solve. The primary business problem that we will be working to solve with our prototype is to allow the school to have an actual booking system for the students to book their study rooms ahead of time, and have a more organized system for the library. As it is right now, students are on a first-come-first-serve basis, and we want to implement a system that will change that, and allow the students to plan ahead of time.

The current information system in place is very simple. In this deliverable, under the “Description of information system” section, you can find an in detail description of the process being used by the library at the present moment, and the diagrams that follow in the appendices outline that in a more creative way.

In Appendix 1, you can see that there’s a system diagram that was created to represent the current information system that’s in place for the library, where a student goes up to the librarian, requests to book a room, has their ID card scanned, and then proceeds to get a key for the room. Upon leaving, they must return the key to the librarian, and they get their ID card scanned.

In Appendix 2, you can find case templates for the study rooms, with the explanation of the process in detail. We only have 2 use cases. One case describes the process of requesting a room and booking it, and another case describes the process of leaving the room and signing out.

In Appendix 3, there are 2 sequence and 2 activity diagrams that each represent one of the use cases created for the library study rooms. In case template 1, we talk about the process of booking a room. Sequence diagram #1 and activity diagram #1 are in relation to the events that occur for booking a

room. Case template #2 is about leaving the study room, and what happens when a student is done using the specific room. Sequence diagram #2 and activity diagram #2 is related to that.

In Appendix 4, you can see a statechart diagram for the process of booking a room. It includes details about what happens if the rooms are misused, what happens when you book one, etc.

In Appendix 5, you can find a copy of a class diagram that represents the entire information system currently in place for the Vanier library. In this class diagram, it outlines how a student goes to see a librarian to request a room, and they have the option of booking 5 different rooms, 4 of which are study rooms, and one of which is a music room.

In Appendix 6, we have a copy of the documents that the client uses when a study room is booked by a student. Basically, the document states the policies and rules to follow when using the study rooms, and it lists a bunch of rules that the students must follow when using the rooms. The student has to sign the document in agreement and return it to the librarian.

Summary description of client

Our client goes by the name of Haritos Kavallos. He works at Vanier College, the institution/organization where our library booking rooms are. Haritos has accomplished quite a long list of things in such a short period of time; his CV is extremely diversified. He's studied in many different programs, as well as been employed at many different places/positions.

To vaguely summarize Haritos' educational/career background, he started college in 2004 and completed his DEC in Computer Science Technology in 2008. Following that, from 2008 – 2017, he spent 9 years studying to get a computer science degree, an educational degree, and a business degree. He is currently still in school at McGill, further pursuing a communications degree. He has worked as a software developer, a teaching assistant, and a tutor, all in different academic institutes. He is now currently the Learning Commons coordinator at Vanier College, which includes departments such as the library, the Tutoring and Academic Success Centre and the Science, Technology, Engineering and Mathematics Centre. He is responsible for any planning, organizing, coordination, supervision and evaluation concerning those departments.

We are working alongside him to develop our prototype system for the library's booking rooms. The librarians keep track of information regarding the rooms,

but Haritos is the manager who has all the access, so we deal with him primarily.

Business problem

As established previously, the students who wish to book a study room are not allowed to book that room in advance. So, for example, if a student knows they have an exam in 2 weeks from today, and they want to have sufficient time to plan study sessions, they are not able to do so, because they can't book themselves a study room weeks prior to that exam. They may only book a specific room the day of. So, in other words, if a student's exam is on the 11th of October at 2pm, they can go see the librarians and book a study room on the 11th of October, as early as 7:45am, when they open, but no sooner than that day.

The process is as follows; a student would go up to the counter of the librarians, and the librarian scans their student ID card. They are then given a key to the specific booking room. The person whose ID was scanned is now in charge of going back to see the librarian to check out and give them the key.

The study rooms evidently get extremely busy around midterm/final season, and are typically busier in the afternoon, between 11am and 2pm. Not being able to book in advance is a big problem for some students, especially if they don't anticipate not finding a room. A student can gather his/her group of friends and decide to go together to book one of the rooms for studying. They'll have no way of knowing whether or not the room is booked, until they get there, and that's an inconvenience, because then that group is stuck trying to find a back up plan to study for their exam.

A student who loves planning ahead won't be able to. It's also a problem for students who prefer studying in their academic environment, as opposed to at home. Some people get too distracted at home, and therefore prefer a library or their academic facility. Since the Vanier study rooms don't offer advanced booking, and you won't be able to know if the rooms are full before arriving there, it may lead to student frustration.

Teachers also run into problems with the study rooms, because sometimes, they like to use them for group projects/events with their students. For example, a teacher tells his/her students in his/her previous lecture that they will be doing a group activity. That teacher intends on going to book one of the study rooms. They'll attempt to ask the librarians, or the staff in charge of the bookings, if they could guarantee them a spot, but they can't. The teacher then takes a risk by going up to the room with his/her students, and could possibly

face the challenge of having all the rooms booked. At that point, they're stuck trying to find somewhere else to go, and that's another inconvenience for them.

It could also cause Vanier to have a lot of competition, because if a student could book a study room in another institution, like a library in their area, or another academic building that offers their rooms to any student that wants to book one, well Vanier then loses the opportunity to have their students use the services they provide.

Their process is a bit unorganized and inconvenient, and we believe that it would benefit the students, the teachers, as well as the staff, to implement a system that would allow people to book these study rooms ahead of time, and keep track of how many rooms are booked, during what time they are booked, and for how long they're booked. The idea is to create a system that management, librarians, and support staff could access, to allow the students/teachers to book in advance, and to let the staff see the activity happening with their booking rooms. All those things, and more, would facilitate the lives of students, teachers and staff.

Description of information system

The current system that's in place is not very complex. In order to book a study room at Vanier, the process is very simple. The students require having a valid student ID, and that's pretty much it. The way it works is that one single student from a group of minimum 3 people will go see a librarian and request to book a study room. They may not book days in advance, but only day of. They ask for available rooms, and if one is free, the librarian will scan that person's ID, have the group fill out the form, and will then proceed to give them the key to the specific room. The students may then go use their study room for the maximum allotted time of 3 hours. After that, the student whose ID was scanned must go sign out with the librarian and return the key, otherwise could be charged a fee.

Appendix 1 has the system diagram that outlines everything that was just mentioned in the above paragraph. In this diagram design, you can see the functionality of the process, and how each previous step relates to one another. The diagram begins by showing the student requesting a study room from a librarian. The librarian will start by verifying if there are any rooms available, and will then proceed to take the student's valid ID to check them in, and give them a key. Following that, the student and his/her group will go into the study room and fulfill their purpose. Upon leaving the room, they head back to the librarian, they return the key, they check out, and the process is over.

Appendix 2 contains the use case templates for our Vanier library study rooms. A use case is a list of event steps used when trying to develop a software/prototype. A lot of programmers and business developers use them to be organized. Our first use case template describes the process of booking the actual room. A student must go see someone at the library to request the room, where they are then asked to fill out an agreement form, upon the vacancy of any of the 4 study rooms, or the single music room. The second case template is the process of leaving the room, where the student has to go back to the librarian to sign out and return the key, or will be fined a fee.

Appendix 3 is the representation of the case templates in diagrams. For each template, there is one sequence and one activity diagram, each illustrating their specific template. A sequence diagram represents object collaboration, whereas an activity diagram represents the dynamic aspects of a use case. For case template #1, where we talk about the process of booking a study room, you have the sequence diagram that shows how each object/person that relates to the case connects with one another, and the activity diagram shows how one activity flows/connects to another. In case template 2, it's the exact same concept, but this time, for the process of leaving the study room. The sequence diagram shows how each object/person connects, and the activity diagram outlines how each activity connects, but for the leaving process instead.

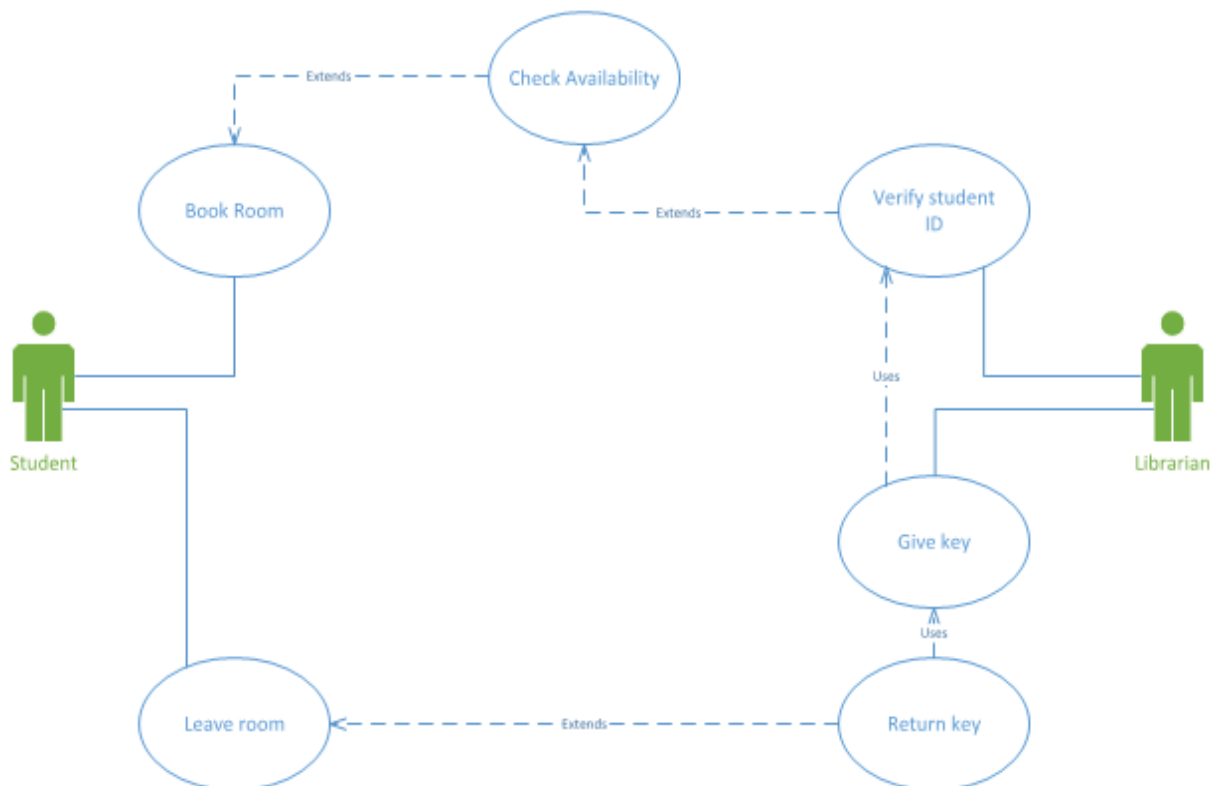
Appendix 4 is where the statechart diagram for the process of booking a room is represented. This diagram includes the details of booking a room, what happens when you're granted a room, and what happens when you misuse the service of the room. For starters, you have the student who wishes to book a room. One of two things could happen, either the rooms are booked and they will have to come later on in the day to try again, or they will be granted permission to book a room because they aren't all full. In the event they aren't full and the student gets to book on the spot, then they have to fill out the permission form. After filling out the permission form, the student will then have their ID card scanned by the librarian, they'll be given the key to the room, and they may proceed to the study room. A couple of conditions are attached to this event. If a student fails to comply with the rules of the study rooms, they will pay a fee that could be as large as \$100. If they fail to check out, they get lead to the same fate. If all goes well, after finishing with the room, they scan their ID, return the key, and that's the end of the process.

Appendix 5 is a class diagram that illustrates the process a student must follow in order to book the specific room they want. The library offers 5 different types of study rooms. Four of the rooms are regular study rooms, where you can enter the rooms and study as you wish with your friends. The

fifth room is known as a music room, where you can go with your friend to listen to music and unwind. In the diagram, you can see a student going up to the librarian to book a room, where you then get the option to choose which room you want to book, all provided that it's empty.

Appendix 6 shows a contract template that the students must read and sign before utilizing the study rooms. The client uses this form to ensure that the students are not taking advantage of the free service Vanier offers, and it also forces the students to understand that a potential fine could be charged if they misuse the rooms, or disobey the rules. Once they sign that form, they must return it to the one responsible.

Appendix 1



Appendix 2

CASE 1:

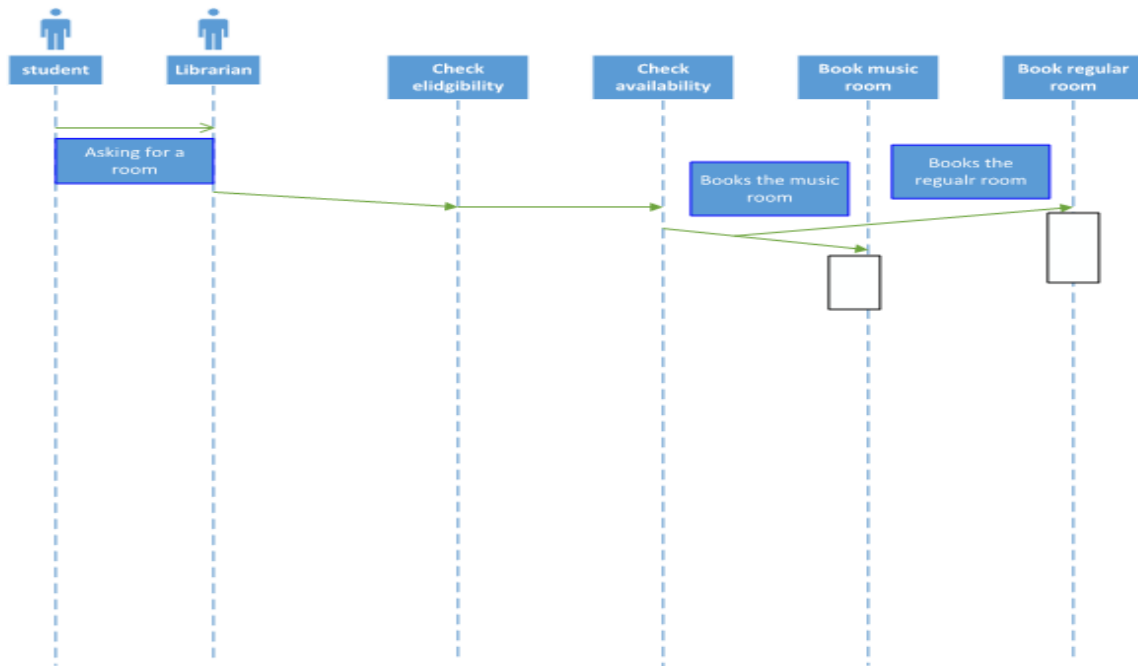
	A	B	C	D	E	F	G	H	I	J
1	Use Case ID:	St-ADD-ROOM								
2	Use Case Name:	Book a Room								
3	Created By:	Kevin Hirsh		Last Updated By:	10/03/18					
4	Date Created:	10/03/18		Last Revision Date	10/03/18					
5	Actors:	Student (Primary), Librarian								
6	Description:	Reserve a study room for use immediately								
7	Trigger:	Student wishes to book a room for use								
8	Preconditions:	1. Student fills out acceptable use form if it is his/her first time using the system.								
9	Postconditions:	1. Student has access to study room								
10	Normal Flow:	1. Student asks librarian for study room availability								
11		2. Librarian checks availability								
12		3. Librarian scans student ID card								
13		4. Librarian gives key card to permit access to the study room								
14	Alternative Flows:	1a. Student asks for music room availability.								
15		Only a maximum of two students are permitted access.								
16		Resume flow.								
17	Exceptions:	2a. In step 2 of the normal flow, if there are no rooms available,								
18		1. End the process without giving key card								
19		3a. In step 3 of the normal flow, if the studentId is unavailable or invalide,								
20		1. End the process without giving key card								
21		1ab. In step 1 of the alt flow, if the group of student are greater than 2,								
22		1. End the process without giving key card								
23	Includes:	Not available								
24	Frequency of use:	On Demand								
25	Special Requirements:	Be a student of the school								
26	Assumptions:	Student is able to fill out acceptable use form for their first time using the rooms								
27	Notes and Issues:	Not available								

CASE 2:

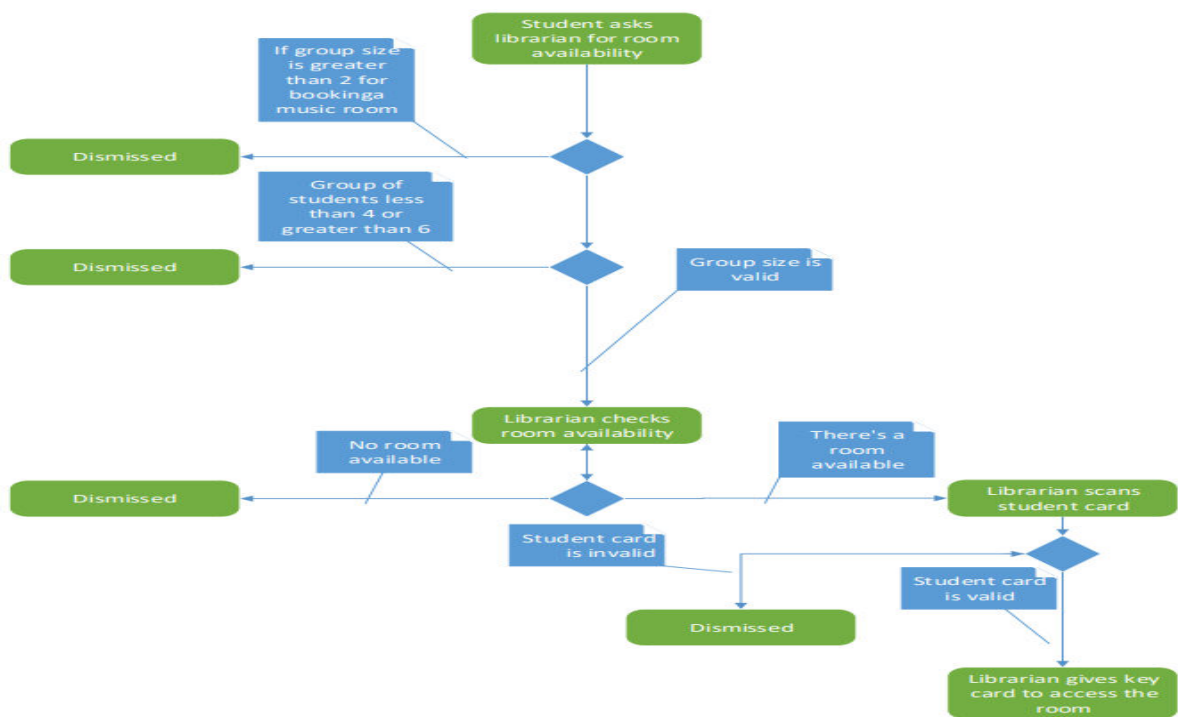
	A	B	C	D	E	F	G	H	I	J
1	Use Case ID:		St-LEAVE-ROOM							
2	Use Case Name:		Book a Room							
3	Created By:		Kevin Hirsh		Last Updated By:		10/03/18			
4	Date Created:		10/03/18		Last Revision Date:		10/03/18			
5	Actors:		Student (Primary), Librarian							
6	Description:		Leave room for other students to use							
7	Trigger:		Student's allotted time is up/student no longer needs to use the study room.							
8	Preconditions:		Student is using Study room							
9	Postconditions:		1. Student has left premises							
10	Normal Flow:		1. Student takes all belongings							
11			2. Student leaves and shuts study room door							
12			3. Librarian verifies the return of the keycard							
13			4. Student leaves the library							
14	Alternative Flows:		3a. Student leaves without returning keycard at step 3 with a allotted							
15			15min grace.							
16			Librarian fines the student up to 100\$.							
17			Resume flow.							
18	Exceptions:		Not available							
19	Includes:		Not available							
20	Frequency of use:		On Demand							
21	Special Requirement		Be a student of the school							
22	Assumptions:		Student has left at or after allotted time has been completed.							
23	Notes and Issues:		Librarians are not always able to verify the return of the keycard as students							
24			leave before the full expiry of the time allotted.							

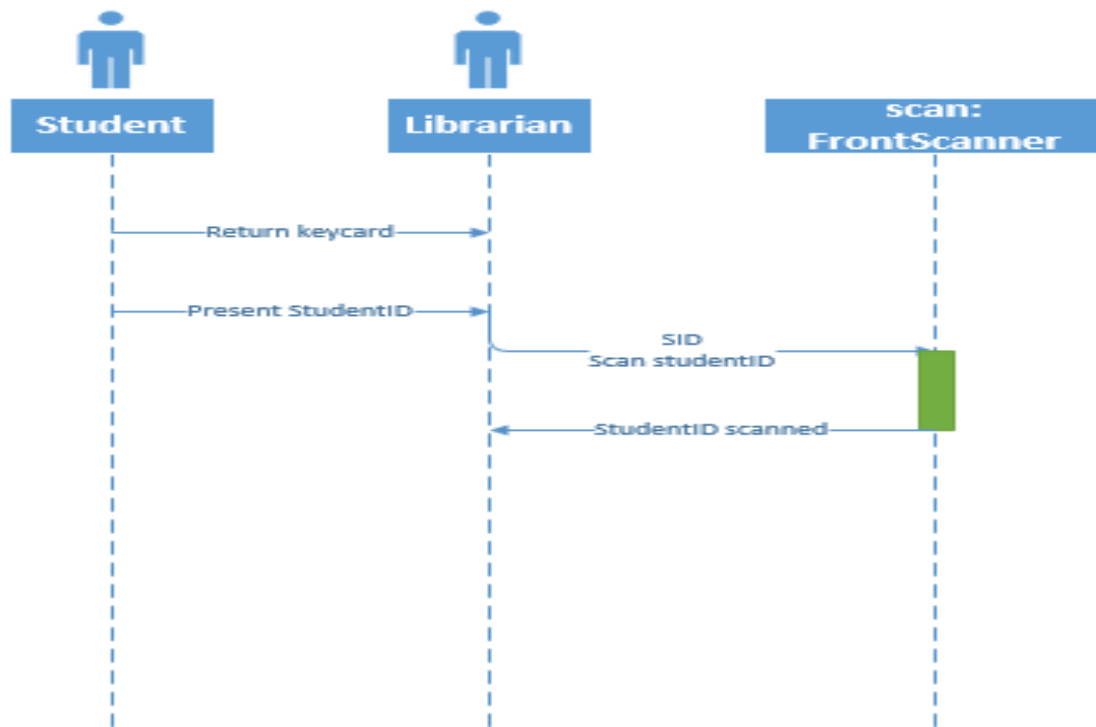
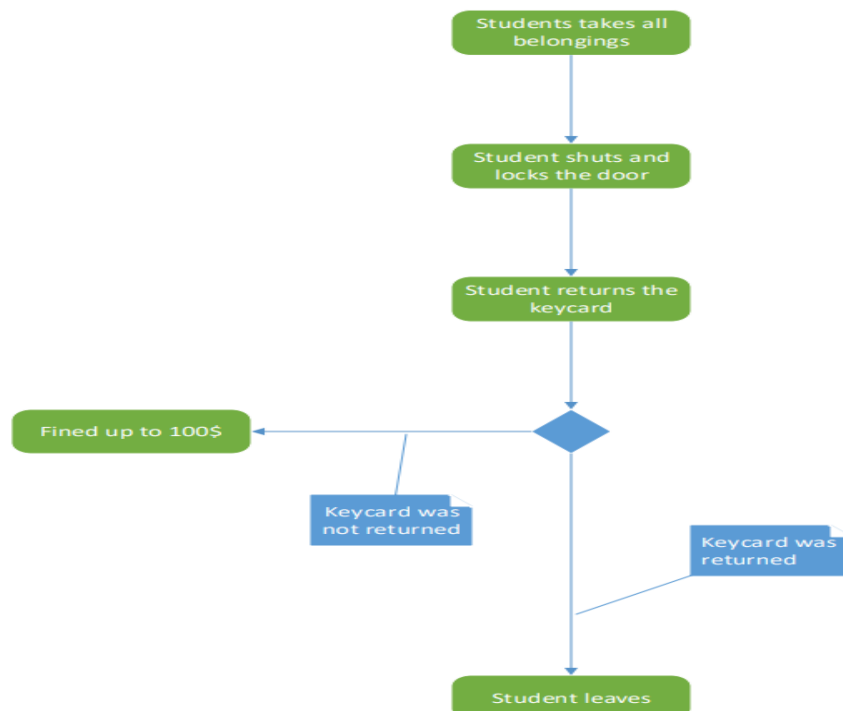
Appendix 3

CASE 1 SEQUENCE DIAGRAM:

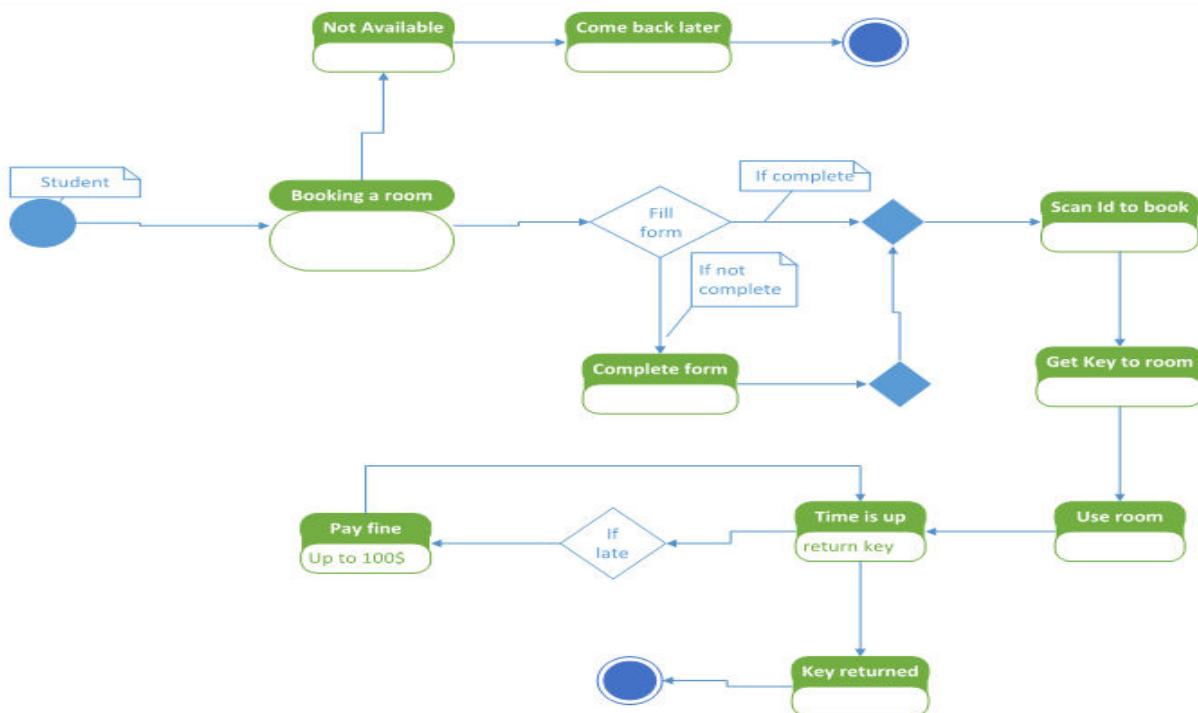


CASE 1 ACTIVITY DIAGRAM:

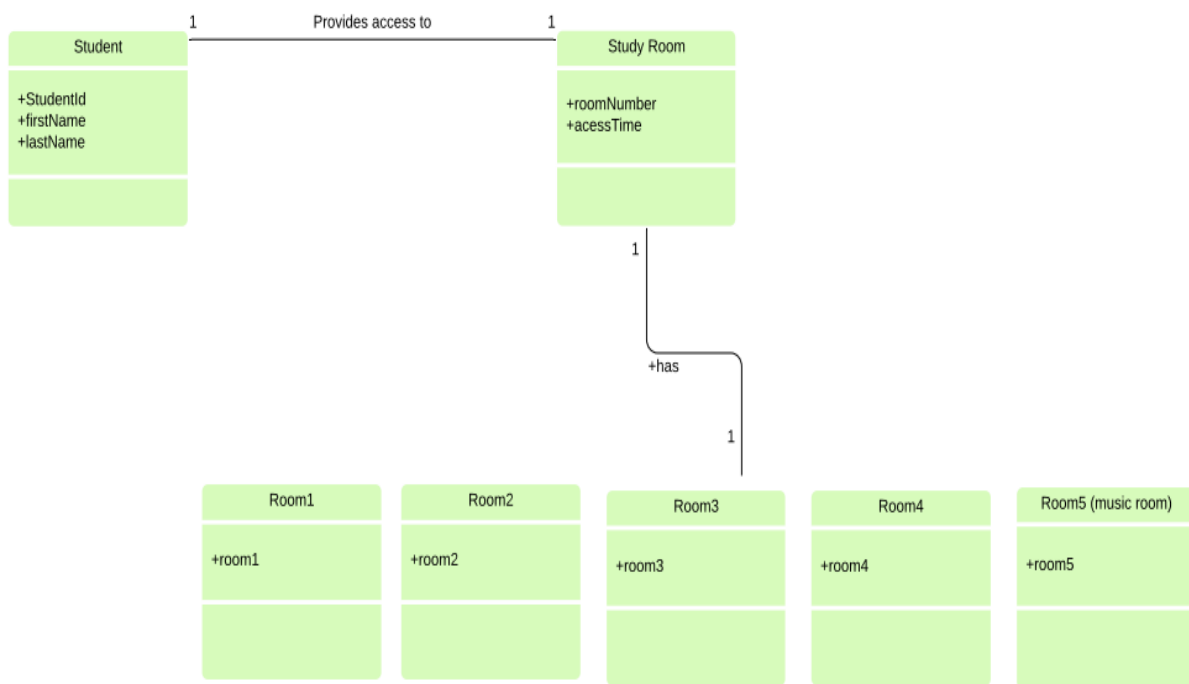


CASE 2 SEQUENCE DIAGRAM:**CASE 2 ACTIVITY DIAGRAM:**

Appendix 4



Appendix 5



Appendix 6

VANIER COLLEGE LIBRARY STUDY ROOM LOAN POLICY

The Vanier College Library has four (4) group study rooms and one music listening room (1) available for short-term loan to Vanier College students. The keys and cards are available at the Circulation Desk. Following is the group room policy for this service.

Eligible Borrowers: Current Vanier students; staff and teachers with students.

Identification: Current Vanier ID Card, the only card accepted.

Circulation Procedures

Group study rooms will be available on a first-come, first-serve basis and cannot be reserved in advance. Only one room will be loaned at a time. To borrow one, students must present a valid and active Vanier ID card at the Circulation Desk and be in good standing with the College. Students who do not meet these requirements will not be allowed to borrow a room – no exceptions. Every qualified borrower must sign a first-time agreement form. Staff will inspect the room before students enter at the beginning of the session. Keys and cards must be returned in-person (original borrower must return the key) to the Circulation Desk staff. Students will not be allowed to renew the room. Borrowers may be required to wait until a staff member verifies that the study room is in good condition when it is returned.

Vanier College Library Group Room Loan Policy Frequently Asked Questions (FAQs)

Who is eligible to borrow a Vanier Library group study or music listening room?

Only current Vanier students, (staff and teachers with students only) whose Library accounts are in good standing may borrow a room. A valid Vanier ID card is required.

Where do I go to check out a group study or music listening room?

Vanier Library Circulation Desk on the 3rd floor, F300 (Telephone: 514-744-7500 X7539)

How many students can be in each room?

Only three to six students can use study rooms 1, 2, 3 and 5. Only two students per listening station in the music room (total of four students). Regular classes cannot be held in these rooms.

How long can I use the study room?

Rooms can be used for a maximum of two hours and are available on a first come first served basis.

What hours are the study rooms available?

Rooms are available whenever the F500 area of the Library is open (F500 closes before the rest of the library). Please check the Library's hours at: <http://www.vaniercollege.qc.ca/library>. Failure to return the keys and cards by the library closing at the end of the day will be considered a loss by Vanier College and the borrower will be charged a replacement fee of \$100.00, and will lose the privilege to borrow them.

What responsibilities do I have for a study room?

Study rooms must not be left unattended at any time and you are responsible for asking your group members to abide by the library's regulations. Vanier Library staff observing an unattended room or misuse will ask your group to immediately vacate the room and take the key and cards to the Circulation Desk. You may lose the ability to check out a room for a semester.

If there is an emergency evacuation of the building, carry the key and card with you outside and search for a Library staff member or return it to the circulation desk once you are permitted to re-enter the building.

You must immediately report any loss or damage to the Circulation Desk staff. You could be charged up to \$100.00 or more if anything is stolen or damaged from the room charged out to you. A hold could be placed on your Vanier student account (preventing future registration or issuing of transcripts) until arrangements are made to pay the replacement cost.

Do I have to listen to the Vanier College music collection to use the music room?

Yes. You must also use headphones if two groups are using the room.

Can I book a room in advance?

Advance bookings/holds for study rooms are not allowed.

Are there power outlets available in the Library rooms for using the laptop?

Yes, there are electrical outlets in every room. Do not unplug library equipment.

May I eat food or drink beverages while using the laptops, or hold cell phone conversations?

No. In accordance with the Vanier College Library Food Regulation and Cell Phone Regulation, you may not eat or drink or hold cell phone conversations while using any of our rooms.

What else should I know?

You must comply with all Vanier College policies, including the Code of Conduct.

VANIER COLLEGE LIBRARY STUDY ROOM BORROWER AGREEMENT FORM

Library Study Rooms (including the music listening room) are the property of Vanier College and certain regulations apply. Food and/or cell phone conversations are not allowed. Noise must be kept to a minimum. You may be asked to fill out a form requiring the names of students in the group, course number, and teacher's name by Circulation Desk staff member.

Please **READ** and **INITIAL** each policy statement **CAREFULLY**:

_____ I agree to follow these regulations. If I refuse to respect the regulations (have food, hold cell phone conversations, do not study, have my feet on the tables, sit or sleep on the floor, or misbehave), I understand that a \$25.00 fine will be charged to my account and I will no longer have access to the study rooms for an entire semester. I may also have to meet with the disciplinary officer for the College.

_____ I will not add or change group members (You will be asked to leave the room if you add or change group members to hold the room). I will not switch rooms with another group.

_____ I understand that study rooms are available on a first-come, first-served basis and can be used for a maximum of 2 hours each day per group. A study room cannot be renewed or reserved in advance.

_____ I will not leave the room unattended at any time and I will not give the key to anyone else. (If you leave the room unattended or give the key to someone else, you will lose the ability to borrow a room for one semester and receive a fine of \$10.00).

_____ I agree to pay an overdue fee if the checked-out key and card is not returned at the end of the two-hour borrowing period (15-minute grace period). The maximum fee will be \$100.00.

_____ I will be responsible for full replacement costs if the anything in the room is damaged. (\$100.00 or more)

_____ I will keep the door unlocked when I use the room and lock it when I leave the room.
(Locked/unlocked room fine: \$5.00)

_____ I will immediately report any loss or damage to the room to the Vanier College Library Circulation Desk staff (514.744.7500 X7539).

I have read and I understand the Vanier College Library Study Room Borrowing Policy, and I agree to abide by it in full.

Print name: _____ Student Number: _____

Signature: _____

Date: _____ Staff member: _____

The screenshots above are from the specific document the client uses for the booking rooms. This document is not a document used to book the actual rooms, but rather a document of policies, and rules that the students have to follow when utilizing them. The student must be aware of these policies, as they are important to know if they want to be allowed in the rooms.

First time users must read and sign the borrowing agreement form, and give it back to the one in charge at the present moment of booking, understanding the rules, and not disobeying them.

Works Cited

- No references used in the process of writing this deliverable. N/A