

Assignment: Use Case, Scenario, & Interaction Design

Objectives:

- Practice creating use case models for a real-world software product.
- Practice using Visio to create use case diagrams.
- Practice writing use case description, a.k.a. scenarios.
- Practice using Interaction Design Principles to evaluate a real-world software product.

Preparation:

For Windows users, please follow the instructions below and install Visio 2016/2019, and use it to model software processes (in the format of activity diagram).

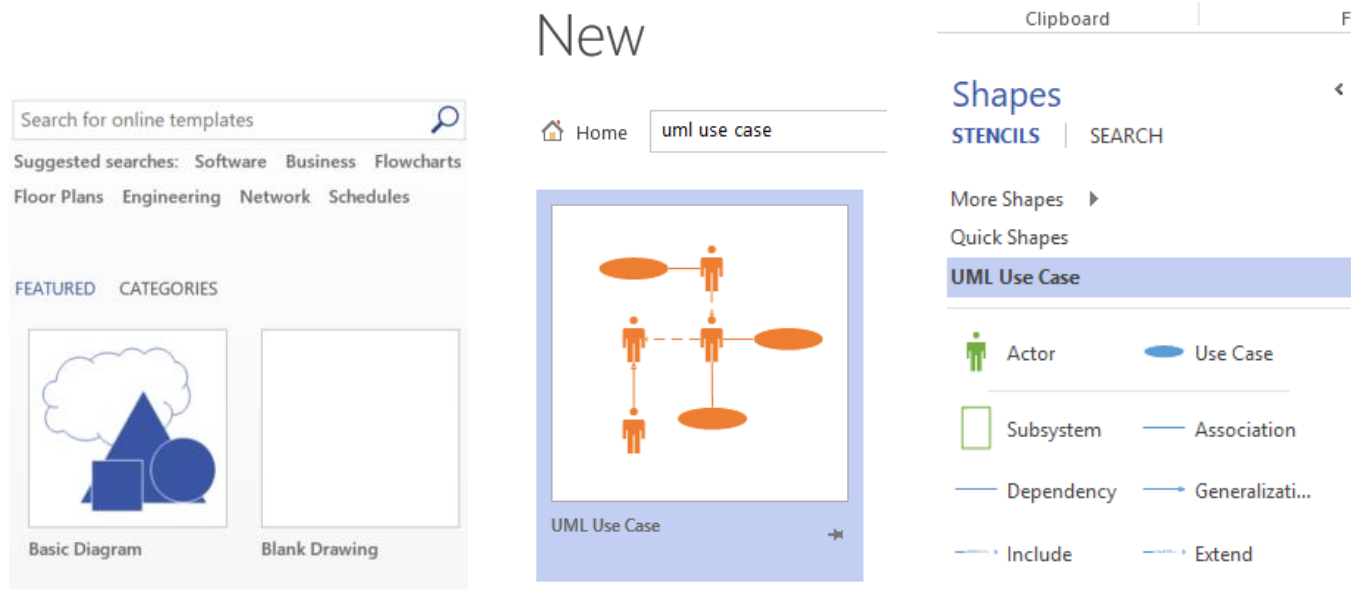
For Mac users, you may use Omnigraffle if you have it installed already, or you may use any Windows lab machine at Riverside Hall to complete this assignment.

Visio 2016/2019 Installation:

Please refer to “*Instructions on how to download Visio 2016.pdf*” posted in the assignment instructions in Canvas.

Using Visio 2016/2019

Launch Visio 2016/2019, and you will see the following screen:



In the top search bar, search for “uml use case”, then you will see the corresponding template. Once you select the template, the basic elements of a use case diagram will be available on the left menu. Note that there may be some missing elements, for example, “other system”. You may search for those elements in Visio, or use basic shapes that are available under tab “Quick Shapes” to represent them.


Part I: Use Case (40 pts)

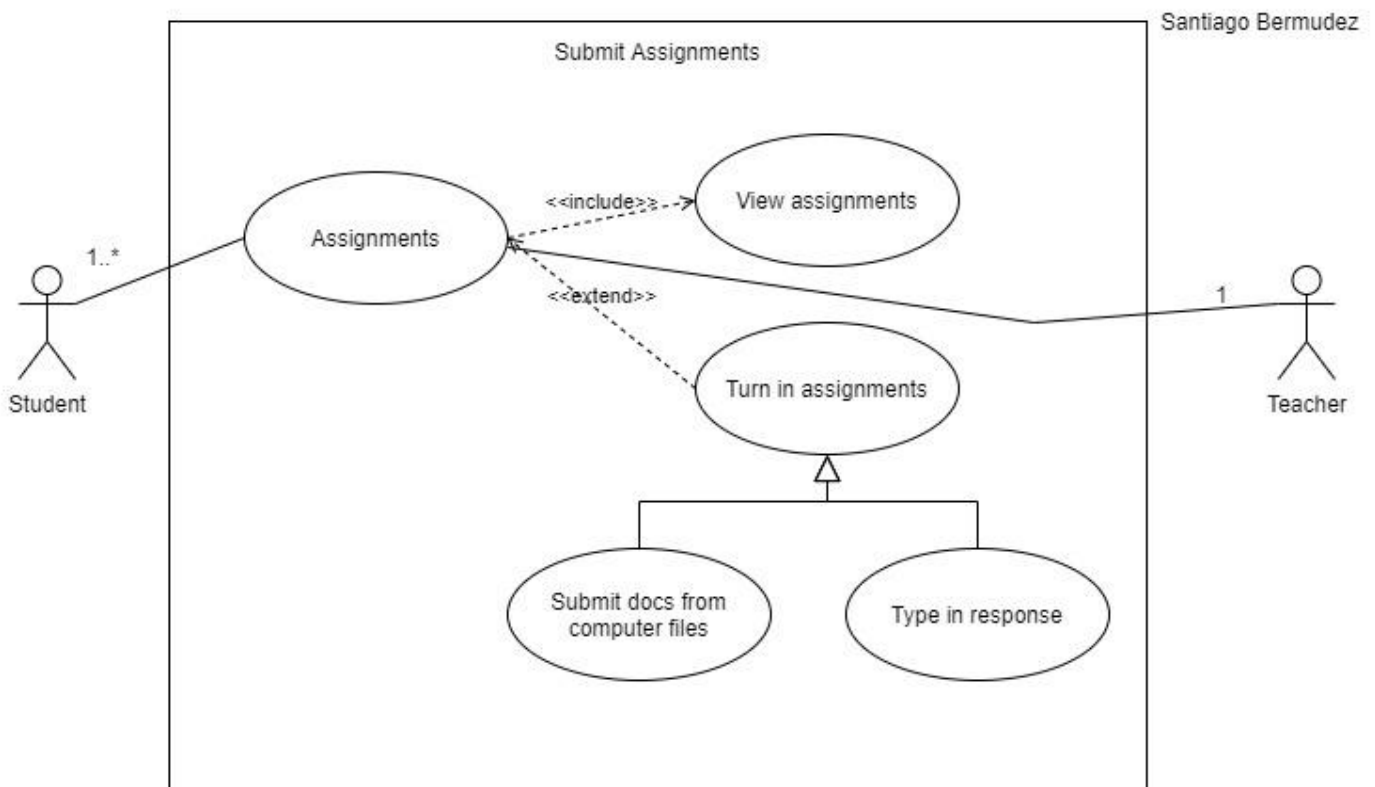
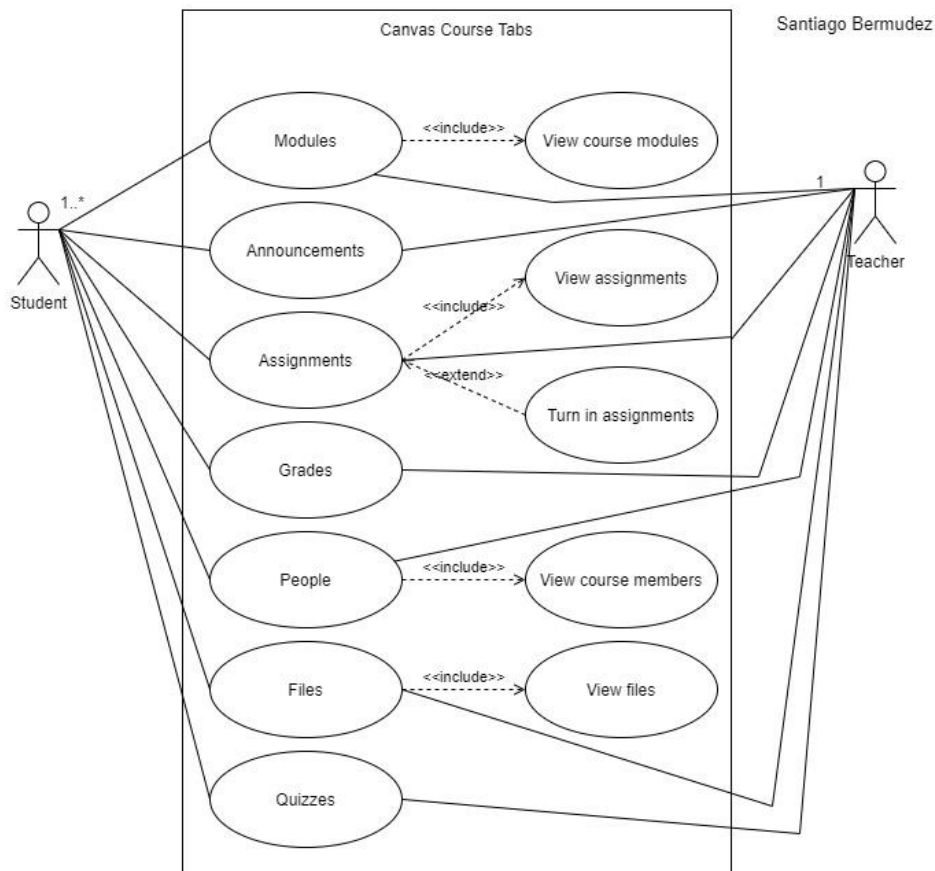
Please refer to the use case diagrams of ATM Machine and POS Terminal we learned in class. Create two use case diagrams **A** and **B** to model Canvas (as the system to be implemented) that satisfy the following requirements:

1. Use one use case diagram **A** to model Canvas at the system-level.
2. Use the other use case diagram **B** to model the use case “Submit Assignments”.

Hints:

- a. Who is/are the actor(s)?
- b. What can they do? You may refer to the course menu on the right →
- c. Is there any other system involved? If so, what is it?
- d. Use proper links to represent association/dependence.
- e. Do NOT forget to specify multiplicity.

	CSC 131-01
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<i>Spring 2019</i>	
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Part II: Use Case Description – Scenario (20 pts)

Pick a use case in your use case diagram A (created in Part I), and make a use case description for it using the template which is given below.

- *Use Case Name:* To identify the use case
- *Actors:* The agents participating in the use case
- *Stakeholders and Needs:* What this use case does to meet stakeholder needs
- *Preconditions:* What must be true before this use case begins
- *Post conditions:* What will be true when this use case ends
- *Trigger:* The event that causes this use case to begin
- *Basic Flow:* The steps in a typical successful instance of this use case
- *Extensions:* The steps in alternative instances of this use case occurring either because of variations in the normal flow or because of errors.

Use Case Name: Canvas Course Tabs

Actors:

-Primary Actors: Student

-Secondary Actors: Teacher

Stakeholders and Needs:

-Teacher: To post course content and have educational material ready for students.

Preconditions: The student must be a member of the class.

Post conditions: The student must be able to access all the course content and material at any time.

Trigger: The student successfully registers for a class.

Basic flow:

1. The student signs up for a class.
2. The student gets successfully registered for a class.
3. The teacher adds the student on Canvas and posts all of the course content.

Extensions:

- 2.1 The student does not register for the class successfully.
- 3.1 The professor does not add the student on Canvas.

Part III: Interaction Design Principles (40 pts)

Please refer to the *Interaction Design Principles* we learned in class (**SAC**, **CAP**, **FeVER**). Use them to evaluate the interaction design of Canvas. For each design principle, please give a brief explanation to your evaluation result. Feel free to include screen shots if needed.

Note: This is NOT a usability test yet, but hopefully you can get a little flavor of how to evaluate the UI design of a product.

SAC:

Simplicity:

The screenshot displays the Canvas LMS interface. On the left, a vertical sidebar contains a hamburger menu icon at the top, followed by a series of icons for navigation (home, calendar, people, etc.). The main content area is titled 'Dashboard' and features a grid of course tiles. Each tile represents a course, such as 'CSC131 Computer Software Engr...', 'MATH100 Applied Linear Algebra...', and 'PHIL103 Business+Computer Ethi...'. The tiles are color-coded and include icons for notifications, documents, and folders. On the right side, a 'To Do' list is visible, showing upcoming assignments and deadlines, such as 'Assignment missing gr...', 'ECS Tutoring', and 'In-class activity graded!'. The interface is clean and organized, with a clear hierarchy of information.

The interaction design of Canvas is rather simple as there is a hamburger menu on the upper left and the tabs tend to be lined up vertically on the left, which makes it relatively easy to access things while in Canvas. Also, everything is

structured such that the most common interactions are emphasized (*like going into a class). Rarer tasks are made smaller by comparison.

Accessibility:

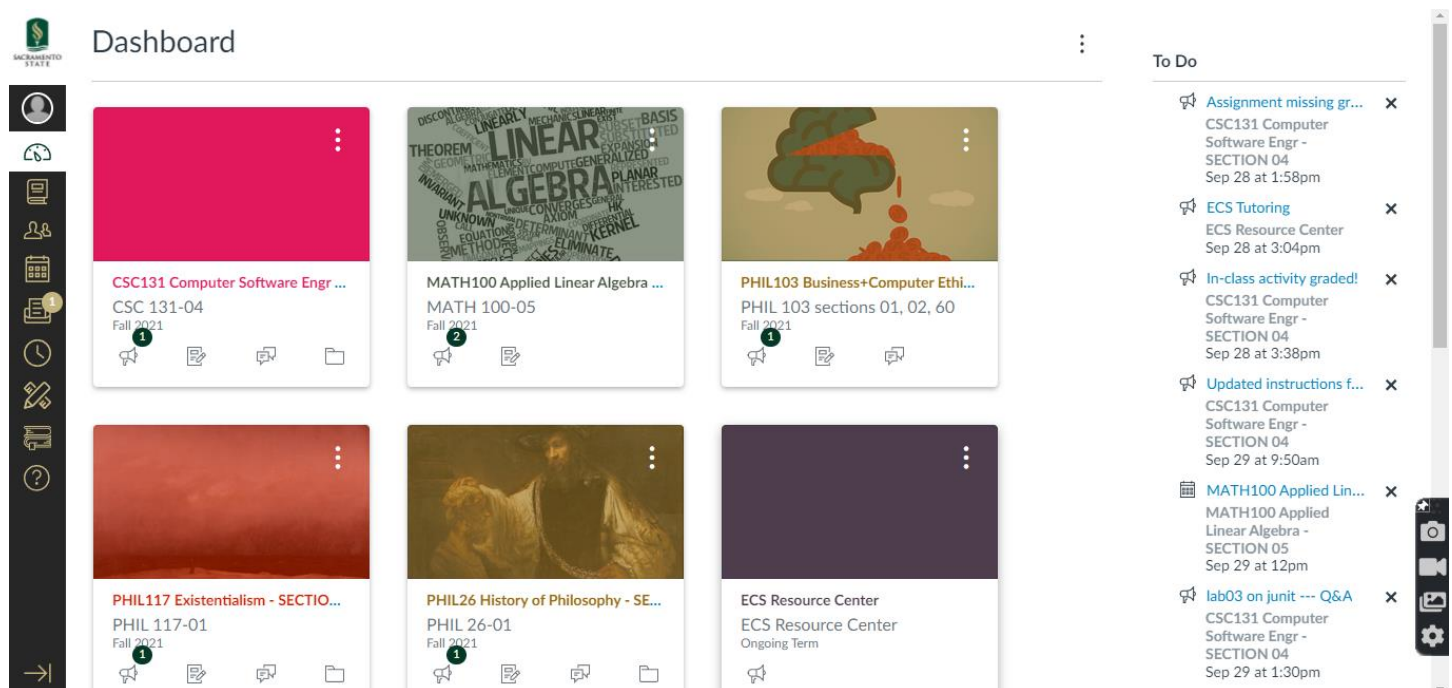
The interaction design of Canvas could be more accessible to people with colorblindness, as there is no option to adjust the display of the content to suit colorblind people. Also, there is no font size changing option for those who may have difficulty reading small fonts.

Consistency:

The interaction design on Canvas is fairly consistent as there will always be tabs on the left even you click on one of them. The pages do not change significantly in terms of style when you navigate, so I would say the design is fairly consistent. The fonts, colors, and layout pretty much remain the same with a few iterations necessary to their purpose.

CAP:

Contrast:



In terms of contrast, some things are easy to contrast, like the courses that are highlighted by different colors. There is also a structured organization of tasks that the user may want to perform, where miscellaneous tasks are on the left, courses in the middle, and reminders on the right. Other pages follow a similar style.

Alignment:

The alignment is fairly solid as some of the material is sorted in a grid and things do not appear to be scattered or spread all over the place.

Proximity:

The proximity is excellent as related items are placed closer together spatially with different elements being more separated, like between the course tabs and the To Do list.

FeVER:**Feedback:**

https://csus.instructure.com/courses/79818/assignments/1199810

CSC 131-04 > Assignments > In-Class Activity 02 (Processes)

Fall 2021

In-Class Activity 02 (Processes)

New Attempt

Submission

✓ **Submitted!**
 Sep 20 at 2:06pm
[Submission Details](#)
[Download In-Class Activity 1_Processes \(1\).pdf](#)

Grade: 100 (100 pts possible)
 Graded Anonymously: no

Comments:
 No Comments

Due Sep 21 by 11:59pm **Points** 100 **Submitting** a file upload **File Types** pdf

Available until Dec 3 at 11:59pm

This is an individual assignment. However you may work with others - write everyone's names on top page and make sure only one student submits.

Please complete the worksheet and submit a PDF version of it through Canvas. Though it was planned in-class, this work can be done at home as we are doing classes online.

Worksheet: [Activity-01_Processes.docx](#) ↓

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https://csus.instructure.com/courses/79818/grades

Fall 2021

Grades for Santiago Bermudez

Course CSC131 Computer Softwai **Arrange By** Due Date **Apply**

Name	Due	Status	Score	Out of
One Picture, One Paragraph Homework	Sep 2 by 11:59pm		25	25
CodingBat-1 (AP-1) Homework	Sep 10 by 11:59pm	LATE	50	50
In-Class Activity 01 on Introduction (Overview) Chapter Labs + In-Class Activities (mandatory)	Sep 14 by 11:59pm		25	25
Lab-FOUNDN-01-Using the Debugger Labs + In-Class Activities (mandatory)	Sep 14 by 11:59pm		100	100
CodingBat - 2 (String-3) Homework	Sep 15 by 11:59pm		50	50

Total: 100%

☒ Show Saved "What-If" Scores

[Show All Details](#)

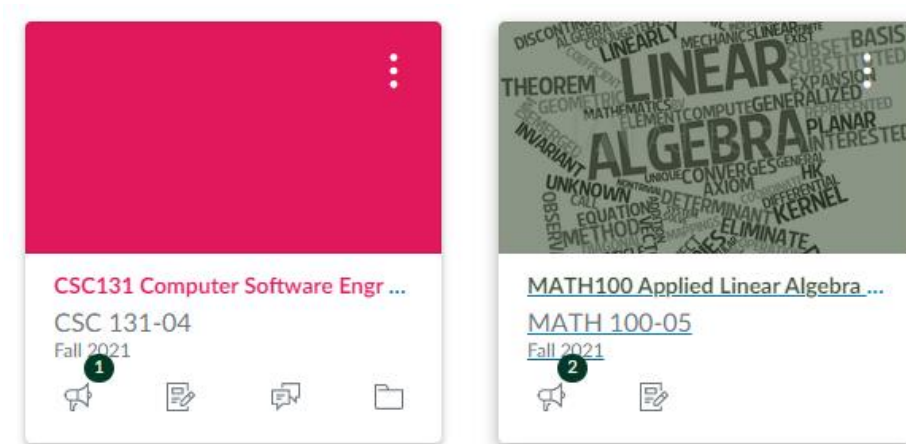
Assignments are weighted by group:

Group	Weight
QUIZZES BASIC FOUNDATION	5%
(**OPTIONAL**) BONUS POINT QUIZZES ON MODERNIZATION -- ENGINEERING SOFTWARE PRODUCTS	2%
Mid Term	20%
Homework	15%
Labs + In-Class Activities (mandatory)	10%
Project	30%

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 Zoom
 Labster Dashboard

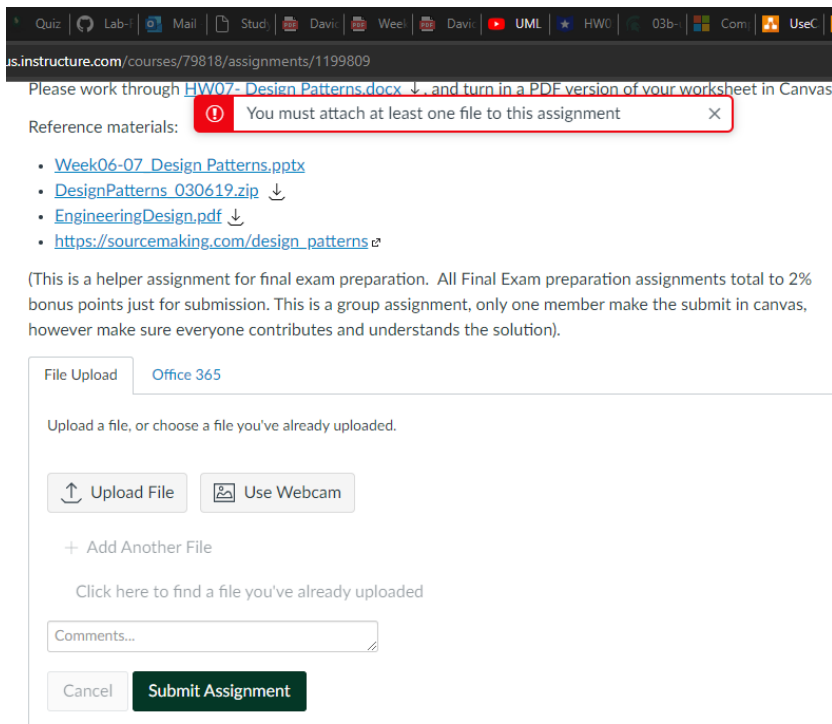
In terms of feedback, students can see when their assignments are submitted as shown above. Students can also see their grades to know if they are on track.

Visibility:



There is some visibility as things you are about to click or hover your mouse over are highlighted or underlined, like in the screenshot above. However, I believe the visibility aspect could use some work as the math class card does not darken or change color when you hover your mouse over it.

Error Prevention:



The interaction design of Canvas does include some error prevention as when you try to submit nothing for an assignment, you will receive a notification on top of the page, reminding you to upload a document.

Recovery:

There is some error recovery in Canvas, but only a minor amount. For example, in a discussion assignment, if you type something but leave the page, when you return you will see a prompt that asks if you want to continue from the content you had typed. ***I would provide a screenshot, but I currently am not in a discussion assignment. I just remembered this from working on a discussion assignment.** Also, Canvas lets you resubmit some assignments before the deadline if you did something wrong on the first submission.