


CSE335 (/cbowen/cse335/) Project 2: Make Me a Movie

 [INTERACT](#) for this assignment

Links added [below](#) for implementation advice, creating the compositions, and example machine factory code.

[Click here for your design certificate! \(certificate\)](#).

There was a Project 2 Information Session on Tuesday 11/17/2020 from 7-8pm via zoom.

[Video and slides from that presentation \(infosession\)](#).

Project 2 has two parts. The first is an implementation of Harold's Mousetrap Machines, where you will write a program that operates machines that you build. The second part is integration of Harold's Mousetrap Machines into the Canadian Experience project so your machines can be added to the landscape of Canada. You then must create a short movie in the system.

I consider Project 2 the single most important part of this course. It is where you bring together all you have learned and produce a complete subsystem you will add to the Canadian Experience. Part 1 is relatively light, but Part 2 has two significant development components. It is your responsibility to budget your time appropriately. During the project there will be no step assignments and only two relatively short and simple design assignment, so you are being given plenty of time. But, if you wait until the last week to start the implementation you will likely not finish it.

This is a link to the project [submission page \(submission.php\)](#).

Part 1

There one programming element due for Part 1 (a) and the Harold's Mousetrap Machines design task (b) is considered an element of Part 1. Part (b) has its own page:

- a) A Prop
- b) [Harold's Mousetrap Machines Design \(machines.php\)](#).

For (a) Add one additional graphic object that your characters can use as a prop, such as a flag, hammer, chain saw, etc. I don't care if you make it part of an actor or create a new actor for it.

Since I am providing the starter project, there is relatively little programming in part 1. The design is the *most important part*!

Part 1 includes a team participation report that must be completed by all team members. See the [submission page \(submission.php\)](#) for details.

Part 2

a) Harold's Mousetrap Machines Implementation

The [Harold's Mousetrap Machines Design \(machines.php\)](#) page details the functionality of this element. Note that there are two tasks here: getting Harold's Mousetrap Machines working in MachineDemo, and getting it working in CanadianExperience.

Tweets by [@cse335](#)

 **cse335**
[@cse335](#)

The design problem in Exam 2 is certainly timely. [#cse335exam2](#)

Apr 28, 2020

 **cse335**
[@cse335](#)

An interesting song related to Project 2 is 50 Words for Snow by Kate Bush. It may answer the question of where certain names came from. [#cse335project2](#)

Apr 7, 2020

 **cse335**
[@cse335](#)

Six teams approved already, which is really great. One team had a very simple design that was right the first time and one team had a really interesting and unique design, also right the first time. Super rare. [#cse335project2](#)

Apr 7, 2020

 **cse335**
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Suppose I am designing a program to store UML object diagrams. Would a link from one object to another be represented in my design

[Embed](#)

[View on Twitter](#)

You are required to implement two machines. Machine 1 should be similar to the example machine. It should have all of the same parts, though it is not required that they have the same appearance. Your machine 2 should be the machine you are entering in the contest. What it does and what it looks like is up to you other than this specific requirement:

- If you choose to implement any of the challenge tasks, your second machine must demonstrate the challenge task.

b) A Cool Movie Movie

Make a cool 30 second movie using your program. You can have your characters dance, act out a story, or whatever. You must have at least 30 keyframe locations in your presentation. Your two machines must be part of the scene and running. We reserve the right to show the better ones to the class. You must utilize the prop from (a) above.

When done with your presentation, put the .anim file in the solution folder, then submit your project. If you are submitting via the web site, be sure to put the file in the folder before you export the .zip file.

See the [submission page \(submission.php\)](#) for details on submitting the project.

Useful pages and information

- [Harold's Mousetrap Machines Design \(machines.php\)](#).
- [Design Questions You Must be Able to Answer \(designquestions.php\)](#).
- [Common Design Rejections \(designrejections.php\)](#).
- [Implementation of Harold's Mousetrap Machines \(implementation.php\)](#).
- [Integration into the Canadian Experience \(adapter.php\)](#).
- [The CPolygon class \(polygon.php\)](#).
- [The Parable of the Tree \(tree.php\)](#).
- [Some Common Questions \(questions.php\)](#).
- [Testing MachineLib classes \(testing.php\)](#).



Some implementation help pages (available after Part 1 closes):

- [Harold's Mousetrap Machines Ideas and Advice \(advice.php\)](#).
- [Sinks to Components \(sink-component.php\)](#).
- [Example machine factory code \(machinefactory.php\)](#).

Harold's Mousetrap Machines designs are due **Wednesday, 11/25** by 8:00pm. These are to be submitted using the submission page. The following due dates are for the programming elements of Project 2:

Part 1 is due Wednesday, November 25, 2020 at 11:55pm

Part 2 is due Friday, December 11, 2020 at 11:55pm

Your project 2 design must be approved by course staff. If they approve your design, you will receive a certificate (electronically). Be sure your team can answer the [design questions \(designquestions.php\)](#) before the presentation.

I suggest reading this entire assignment immediately.

The **design** for Harold's Mousetrap Machines is a *team project*. All **programming elements** of this assignment are an *individual assignment*.

There are two contests associated with this project.

Project 2 Design Team: Macaroni and Cheese

Name	User ID	email	The email links are mailto: (mailto:klynstr8@msu.edu;liuziyu6@msu.edu;maddurs1@msu.edu) links for the team members subject=CSE335%20Team%20Macaroni%20and%20Cheese or the entire team.
Joseph Alan Klynstra (/cbowen/cse335/cl/console/grading//623).	klynstr8	klynstr8@msu.edu	(mailto:klynstr8@msu.edu?subject=CSE335%20Team%20Macaroni%20and%20Cheese)
Ziyu Liu (/cbowen/cse335/cl/console/grading//649).	liuziyu6	liuziyu6@msu.edu	(mailto:liuziyu6@msu.edu?subject=CSE335%20Team%20Macaroni%20and%20Cheese)
Shreesha Suresh Maddur (/cbowen/cse335/cl/console/grading//653).	maddurs1	maddurs1@msu.edu	(mailto:maddurs1@msu.edu?subject=CSE335%20Team%20Macaroni%20and%20Cheese)
Will Teasley (/cbowen/cse335/cl/console/grading//726).	teasleyw	teasleyw@msu.edu	(mailto:teasleyw@msu.edu?subject=CSE335%20Team%20Macaroni%20and%20Cheese)
Rohit Sai Vadlamudi (/cbowen/cse335/cl/console/grading//732).	vadlam10	vadlam10@msu.edu	(mailto:vadlam10@msu.edu?subject=CSE335%20Team%20Macaroni%20and%20Cheese)
Tianyu Wang (/cbowen/cse335/cl/console/grading//744).	wangti60	wangti60@msu.edu	(mailto:wangti60@msu.edu?subject=CSE335%20Team%20Macaroni%20and%20Cheese)

I am providing a Step 6 reference solution with XML save/load code and the machine library already added (available after Step 6 closes) that you can use for the project. You are welcome to use your own Step 6 solution if you wish, but you will have to add the two additional projects and save/load functionality, so I recommend using this solution as the starting point.



Project 2 Starter Project (project2starter.zip).

<https://powcoder.com>

The starter project has two executable projects: CanadianExperience and MachineDemo. To choose which one to run and debug, select it in Solution Explorer and choose **Project > Set as Startup Project**.

I get Unable to start program: MachineLib.dll when I try to run?

This is an executable version of MachineDemo that includes my example machine:



MachineDemo Executable (MachineDemo.zip).

Extract to a folder and run MachineDemo.exe. Drag the slider to the right to run the machine or press the play button. Machine 1 is the reference machine. You are required to make a machine that functions like this one. Machine 2 is another machine I made. Machine 2 demonstrates all of the challenge tasks. Machines 10-17 are machines I made to create the project pages. You may find them useful.

Two content pages are provided with information important to Project 2. They are:

- [Adapter Classes \(adaptervid.php\)](#)
- [The Infamous Lecture 13 \(lecture13vid.php\)](#)

Notice: If you attempt to do the project without watching the Infamous Lecture 13 video, you will probably ask a question in Interact! that will make it obvious you did not watch the Infamous Lecture 13 video.

The Movie Contest

We are holding a contest based on the Project 2 movies. The movie element of this assignment is a creative activity and deserves some recognition.

To be eligible for this contest you must have completed both the machine implementation and have integrated it into your system. A perfect implementation or integration is not required for contest eligibility, but most of the functionality must be there. You must also not have been indicated as a non-participant in the Part 1 design.

A judging panel will select the best *five* movies. These will be published on the class web site. The students who's movies are selected will win the following amazing prize:

You are excused from the final exam and will receive an automatic 100% grade for that exam.

Wow! Great prize, huh?

The Coolest Mousetrap Contest

We are holding a contest based on the Project 2 machines. You have a lot of flexibility in how you construct and parameterize your mousetrap, so some will look more impressive than others. For example, you can use graphics you have found or created or have some interesting functionality that your mousetrap performs.

You are allowed to add additional images for your machine if you like beyond those supplied. However, at least two winners will be chosen who use images only in the supplied set. You are free to draw things other than images as much as you want. For example, if you choose to draw a post yourself instead of using an image, that will be fine. If you want to add text to your machine, that is fine.

To be eligible for this contest you must have completed both the machine implementation and have integrated it into your system. A perfect implementation or integration is not required for contest eligibility, but most of the functionality must be there. You must also not have been indicated as a non-participant in the Part 1 design.

Here is how the contest will work:

For each eligible student the judges will select your Machine 2 and hit play in MachineDemo.

A judging panel will select the best *five* machines. These will be published on the class web site. The students who's machines are selected will win the following amazing prize:

You are excused from the final exam and will receive an automatic 100% grade for that exam.

Wow! Great prize, huh?

The Fine Print

The judging panels will consist of Dr. Owen, the TAs, and any others we may choose to invite. The judging panels will not include undergraduate students, but may include other faculty and/or spouses.

You can only win once (you can't get 200% on the final exam). If a student is selected in both contests, an additional winner will be chosen so at least ten students receive the prize. Students who won in Project 1 are not

Assignment Project Exam Help

<https://powcoder.com>

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We reserve the right to extend each winning cohort beyond five if we are significantly impressed with more than 5 machines or movies.

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 (http://www.msu.edu)

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