



P2 Gold Spike

Prove Your Idea is Possible

Students per team: 1

Restrictions

- **COVID 19 SEMESTER : Controller-based games must have mouse+Keyboard controls too.**
 - **W21, F21, W22**
- Network functionality (Online Multiplayer, Server-Centralized High Scores, etc) is forbidden.
- Ask on Piazza / email before using major external assets (and don't forget credits.txt).
- Prohibited Game Types
 - Minigame Collections
 - Overly violent games



On May 10th 1869, a golden spike was driven into the ground, completing [the transcontinental railroad](#)-- a track that was built from the coasts of the United States inward. Connecting the eastern and western rails was considered the most difficult challenge of the project. Likewise, a "golden spike" now refers to the most challenging aspect of any given project. To lower the project's overall risk, we may seek to tackle it first.

Assignment Logline

P2 Gold Spike is a sub-assignment that tasks students with showing substantial progress on their P2 rapid prototype. In particular, students must **accomplish the most technically difficult / risky / novel element** of their game.

Purpose

Most experimental projects carry heavy risk by their very nature. When designing Super Mario Bros, the team didn't know for some time whether large, horizontal scrolling stages would even be possible on the NES hardware. When developing the iPhone, the team at Apple wasn't entirely sure it would be possible to miniaturize all that technology.

In the 1860s, the designers behind the [Transcontinental Railroad](#) had no idea if it would even be possible to get rail across such a vast distance, through forest, plains, and mountains. When the team finally did lay the track (building from two ends of the country simultaneously, meeting in the middle), they planted a golden spike in the track-- they knew that the hard part had been completed.

What's "the hard part" in making your game? What's the greatest technological challenge you will face? That challenge is your **gold spike**, and by attacking it early on in a project, you can gain confidence in your ability to deliver on the final product (or not).

Students will...

- Prove they can implement their game idea by completing the hardest part of it.
- Create the basic foundation for playtesting their game-- a *complete gameplay loop*.

Specification

Unity Input System Setup (if your game needs controllers - highly advised for multiplayer)

Unity is releasing a new InputSystem that makes it easier to work with multiple controllers at once (applicable to nearly all local multiplayer games). The system is still in development, so you will need to install a preview package to make use of it. [Follow this guide to learn the basics of installation and usage](#).

Complete Gold Spike Tasks (and make decent progress on the rest)

1. Successfully complete the Golden Spike-related tasks added to the p2_gold_spike version on jira (as part of the p2_project_management assignment).
2. Complete enough tasks such that the game is playable in a complete gameplay loop (the game can end somehow and it may be restarted somehow without killing the process or using a debug cheat key).
3. Create a GOLD_SPIKE.txt document, describing what your gold spike feature was in a sentence or two. **Do not just describe your game! Describe the one novel gold spike feature!**

4. Submit to canvas (as per the "Deliverables" section below). Rest before the next phase of P2 begins.

Examples

[GuruGuru](#) by Qinye Li (controls : Space, Shift, and arrow keys)

- Note that this is an example of a completed p2_gold (two weeks of investment), rather than a completed p2_gold_spike (one week of investment).

Deliverables

Submit to canvas one .zip file, **with your username in the title**, containing...

1. One Windows executable (.exe, with _Data folder, UnityPlayer.dll, and Mono directory next to it) of your completed p2 gold spike.
2. One Mac executable (.app) of your completed p2 gold spike.
3. One Assets folder (the top-level folder titled "Assets" in your Unity project).
4. One ProjectSettings folder (the top-level folder titled "ProjectSettings" in your Unity project).
5. One **GOLD_SPIKE.txt document**, describing what your **single** gold spike **mechanic** is in a sentence or two.



Tips

- Make liberal use of search engines (The query "Unity <question / topic>" is highly efficient). Just remember to credit code found online.
- Use the agile / burndown functionality of JIRA to determine if you're on-pace.
- Do not lose too much time to a single task. Write down your problems / questions, move on to other tasks, then attend office hours to knock the hard ones out efficiently.
- Make liberal use of Piazza. Ask questions in a project-agnostic way (or your question will be taken down).
- If you are behind, consider cutting the lowest-priority, least impactful tasks. This will impact your grade, but not necessarily in a huge way if done properly.