

## Mini-Game Test

ⓘ This is a preview of the published version of the quiz

Started: Dec 31 at 11:20am

### Quiz Instructions

This is the mini-game test. The description of the mini-game is in the question. The question is a "File Upload" type. When finished or time is almost up, upload a .zip file of your folder using that question. Be careful to not "accidentally" upload an incorrect .zip file.

I **strongly** recommend opening the quiz in one browser (such as Firefox) and using a different browser (such as Chrome) to do the development on the game. This will help you from inadvertently closing the quiz page. However, if that happens, you can return to the quiz in Canvas and it will allow you to Resume the quiz...you don't get more time, it just recovers the previous state.

Have fun!

#### Question 1

0 pts

##### Introduction

A mini game is a game that lasts only a few seconds to a few minutes per play. Nintendo released an entire "game" made up of mini games called, "WarioWare". Each mini game lasted at most 5 seconds; actually, these are called micro games.

Did you know that back in 1984 that Old Main had a quite serious fire? After the fire they did some remodeling to improve the building, then several years later they added significantly to the building. In honor of this memory, you'll be writing a picture unscramble game (Old Main Is Burning!). This is a game in which the player is presented with a picture divided into a number of tiles, but they are scrambled. The purpose of the game is to have the player move the tiles to their correct positions, revealing the correct image.

##### Mini-Game

Write a mini-game that meets the following game-play requirements...

- Create a mini-game that matches the description in the introduction. In case the description doesn't mean anything to you, I've placed an example scrambled image below).
- At the start of game play, randomize the location of the image tiles. You may hard-code the position of the empty tile.
- This is a tile-sliding game. Tile movement is done using the mouse, as follows:
  - Left click a tile to move into the empty space. If a valid tile is clicked, the tile automatically moves into the empty space.
    - You must animate the movement of the tile into the empty space. In other words, it must slide into the empty space; taking about 1 second to move.
    - If the user clicks on a tile that can't be moved, because it isn't beside the empty space, nothing happens.
- Each time a tile is placed into a its correct position, create a small shower of sparks to celebrate the move. The sparks emanate along the four edges of the tile and move in a direction away from the tile. The way to set the direction is to create a vector that begins at the center of the tile and moves through the particle point along the edge. Use this, or something like it, to generate the particle direction.
- The player can select either "easy" or "hard". Easy is the 4 x 4 tile set (named "Tile-128..."), hard is the 8x8 tile set (named "Tile64...").
- Track and display the following during the game play:
  - Elapsed time
  - Number of moves
- Must use the graphics assets I have provided: [link](#)

##### Technical Requirements

- HTML5 Canvas Rendering & JavaScript based; as we have been doing all semester.
  - No node.js server needed (or wanted).
- Menu and game screen system
  - New Game - Easy
  - New Game - Hard
  - High Scores
  - Credits
- Keep track of four sets of "high scores" (top 5 lowest for each) in local storage, by each difficulty.
  - One set by elapsed time
  - One set by number of moves

##### Reference Images

Original Image



Mockup Scramble



### Grading Criteria

- Menus : 8 points
- Scoring & High Scores : 8 points
- Gameplay Visual
  - Particle effect: 10 points
  - Border around each tile: 4 points
  - Elapsed Time: 2 points
  - Number of Moves: 2 points
  - Animation of tile: 8 points
- Game play
  - Mouse selection of tile: 5 points
  - End of game message: 3 points
  - Easy version: 4 points
  - Hard version: 4 points

Upload

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