WASHINGTON STATE MIDDLE SCHOOL COMPUTER SCIENCE COMPETITION
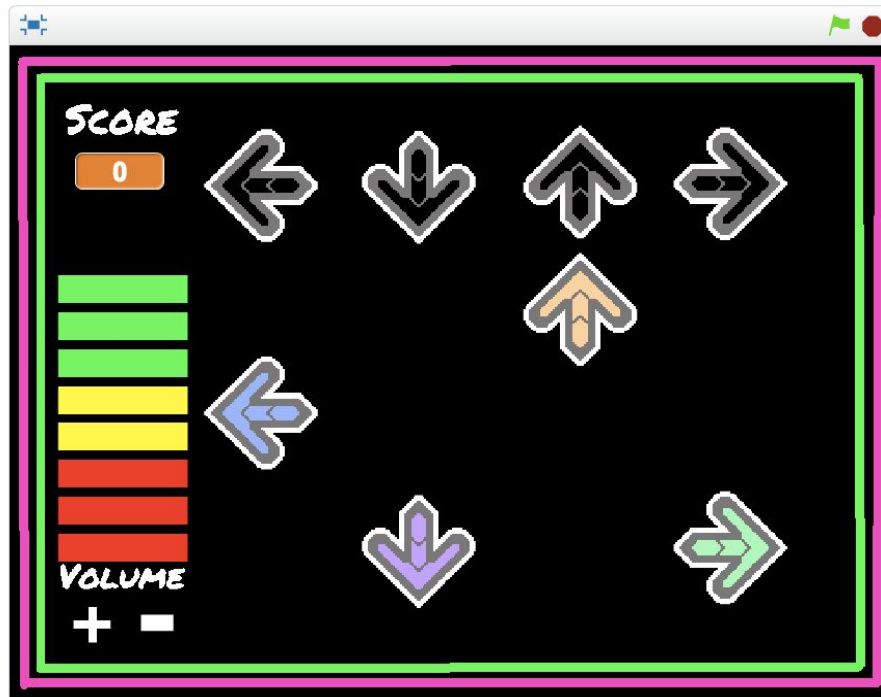
May 13, 2017

Team Test
Grades 5-8
90 Minutes

Please read these directions carefully before beginning. Breaking any of the rules is grounds for disqualification.

- Do not turn this page and begin working on the test until the start of the test is announced. Once time starts, you will have 90 minutes to complete this test.

- You are only allowed to consult with your teammates during the competition. No talking to anyone else (including coaches) is permitted.

- No devices of any kind (calculators, phones, etc.) besides computers are allowed during the test.

- You are not permitted to have any internet browser windows open during the test. Researching other projects on Scratch is not allowed - you should only be working on ONE project!

- Items with a positive point value are bonuses – choose which ones you want to include in your game.

- If you do not complete all of the required items, the rest of your test will not be graded and you will be disqualified.

- Partial credit can be awarded if you include a bonus item that is not fully functional.

- Bonus points will be awarded for game design and special effects.

Dance Dance Revolution

The object of this game is to have the player tap along to a song playing in the background. In the original game, players step on a dance mat along to music to get points, and are judged based on how well they line up their steps to the arrows on the screen. In today's version, players will use the arrow keys on your laptop's keyboard instead.

Required Sprites:

❏ 4 **Target Arrows** named **UpTarget, LeftTarget, RightTarget** and **DownTarget.**
❏ 4 **Moving Arrows** named **Up, Left, Right** and **Down.**

Required Features:
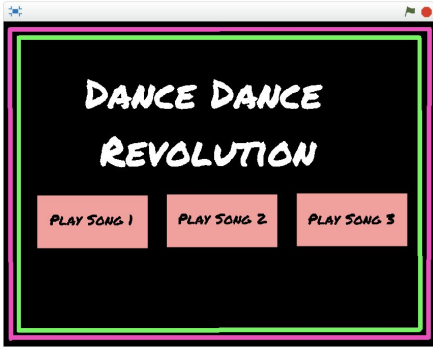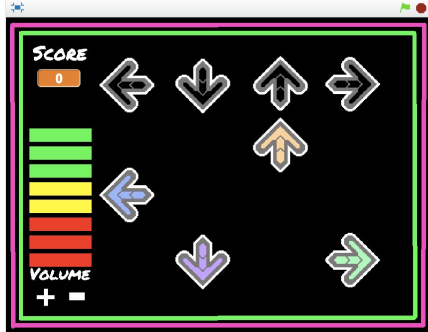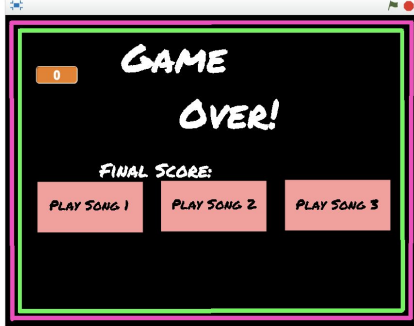
❏ Backdrop
  ❏ There is a backdrop of your choice - be creative!
❏ Target Arrows
  ❏ The Target Arrows remain stationary at the top of the screen - see image for positions.
❏ Moving Arrows
  ❏ A Moving Arrow appears at the bottom of the screen, directly below its corresponding Target Arrow, and moves upwards at a constant speed.
  ❏ The Moving Arrows all move at the same speed (so the Up Arrow is just as fast as the Left, Right and Down arrows).
❏ Music
  ❏ Music starts playing when the game starts. ***NOTE:** You will be provided 3 songs **by your proctors** and can choose what you want to play during the game.*
❏ Dance Sequence
  ❏ There is a choreographed Dance Sequence - the Moving Arrows overlap with the Target Arrows in time with the music.
  ❏ There are at least 10 Moving Arrows in the Dance Sequence.
❏ Score
  ❏ The game keeps track of & displays the user's **Score**
  ❏ 10 Points are added to the score when the player presses the correct arrow key as the Moving Arrow and Target Arrow overlap (Example: When **UpTarget** and **Up** overlap, the player should press the up arrow on the keyboard)

Bonus Features

	+ 1 Point each
	Score decreases by 5 points if an arrow key is pressed when the Moving and Target Arrows are not overlapping.
	The Moving Arrows stop moving when the song has ended.
	+ 3 Points each
	A "Start" screen with the game title and a Play button appears when the Green Flag is clicked. The game does not begin until the player presses the Play button.
	There is a **+** and a **-** Sprite that the player can click to control the volume of the music in the game.
	A "Game Over" screen appears with the final **Score** and a button to "Try Again" after the song ends. The Try Again button restarts the game.
	+ 5 Points each
	Points are categorized into "Boo", "Good", "Cool" and "Awesome" based on how closely the two arrows overlap. Players get -5 points for "Boo", 5 points for "Good", 10 points for "Cool" and 15 points for "Awesome".
	There is a volume Sprite that changes its appearance based on the song's current volume
	+ 10 Points each
	There is a "Song Selection Menu" on the "Start" screen, and players can choose between the 3 different songs **provided by the proctor** by clicking on the associated Sprite. The Moving Arrows overlap according to each song's own unique Dance Sequence.
	The player can pause and un-pause the game during the song by pressing the spacebar.

Example images can be found on page 6

	Example Start Screen with 3 song option buttons
	Example gameplay screen with volume
	Example Game Over Screen with Try Again buttons (1 button for each song)

BOO	GOOD	COOL	AWESOME

Moving arrows can be above OR below their target arrow!