The A Team

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App Name: Acies

Category: Games for kids

General Overview/Description: A sound game for kids where a point will follow a line until it hits a corner. Upon hitting the corner, the game will make a sound and then the point will proceed down the intersecting line. The pitch, volume, and quality of the sound created depends on the color, width, and how dotted the line is. Users will be able to create their own music by drawing lines in an arrangement to create a melody or rhythm.

Similar Apps

Isle of Tune

http://www.isleoftune.com/

Comparison-

> Isle of Tune is a browser-based game in which you place down roads on a grid, and place down cars to follow those roads. As the car travels along the road, it makes unique sounds for each object that it passes. The premise of the game is that the user places these objects on the side of the roads in varying arrangements to make music or fun sounds. There are four objects, each of which make a different noise whose pitch can be modified. This app is similar to ours, in the general idea of something traveling and making music as it goes along. In Isle of Tune the moving object is a car, and in Acies it is an orb. They both involve connecting the auditory and visual senses; being able to see the music makes it easier to understand. This makes the game more approachable for children or beginners. Isle of Tune also has a “stamp” feature, with which you can duplicate an object on the side of the road and paste it somewhere else, preserving its sound, pitch, and cadence. Acies has a similar feature, in which you use the eyedropper tool to take the values of a selected line* and draw a new line in a new location with those same values. However, this is where the similarities end. A major difference is that in Isle of Tune, sounds are made as the car passes objects on the side of the road. In Acies, sounds are made when the orb hits a corner. Isle of Tune is more graphically

involved, while Acies is visually simpler. The objects in Isle of Tune are houses, lampposts, bushes, and trees, which does not logically correlate to qualities of sound. In Acies, the width of a line correlates to the volume, the color correlates with the pitch, and the dotted gap distance correlates with the quality of the sound. Isle of Tune has a maximum of two cars on the island, and thus is limited to a certain complexity. Acies has unlimited orbs, which means that the creations can be much more involved. Acies also has a feature to import audio, in which you can take recordings of your own creation and apply them to lines. Isle of Tune only has those four categories of sound. In Acies, the speed of the orb is incremented and able to be set by the user. Isle of Tune has no such feature; the speed of the car is set and unchangeable. In Isle of Tune, the user can draw roads right next to each other, which creates intersections with arrows and sequences of turns that can be confusing. In Acies, there will be no intersections. Overall, both games express sound visually, and are approachable. However, Acies is visually simpler, and has more creative freedom and a larger potential for complex music.

Turtle Audio

http://www.turtle.audio/

Comparison -

Turtle Audio is a website which allows the user to draw lines on a gridded canvas, add dots to those lines representing notes, and run the program to watch a small orb follow the lines and play a note when it crosses each dot on that line. The user can change the instrument and pitch of each note, the speed at which the orb follows the line, and even define the lines with "rules", a custom formatting language. Acies is fairly similar to this program, but will be designed to be much simpler to use and easier to pick up as a child or beginner. While Acies will also require drawing a line on a gridded canvas and watching an orb follow it, sounds will only be played when the line makes a 90 degree angle turn. Additionally, in Turtle Audio there can be multiple dots per line each creating their own sound, while in Acies each line will create only a single sound which reduces complexity. One thing that Acies has that Turtle Audio does not is custom sound effects. Users are able to use their own wav and mp3 files in the program to make a line play their custom sound instead of one of the default instruments. Also, most of the traditional sound modifiers like pitch, sustain, and attack/decay are visually shown on the lines based on their color, width, and brightness. This means that the function of each line is more apparent and visible at first glance, and draws a strong association between color

and music. Overall, Acies is a less feature rich music toy than Turtle Audio but has more visual appeal and uses its simplicity as a feature to make music creation flow in a more fun and entertaining way.

Ball Droppings

https://experiments.withgoogle.com/balldroppings

Comparison -

Ball Droppings is a Chrome Experiment web app in which balls periodically fall from a point on your screen. As they fall, they bounce off lines and make sounds each time they hit a line. In both of these apps, orbs and lines are used to produce tones and make music. There are no other elements in the app except for the orbs and the lines, and the orbs interacting with the lines is what produces music. Because of this, both of these apps are visually simple and minimalistic. Both apps also use user-drawn lines and user-curated orb placement to create tones. However, the two apps have a few key differences. In orb droppings, the balls are controlled by gravity, and fall towards the bottom of the screen as they bounce off the lines. In our app, the orbs will always follow the lines. The orbs are dependent on the lines to determine where they will go next, and do not move off of the lines. This makes it so that the user can much more purposefully create music in Acies than in Ball Droppings. Ball Droppings does not allow the modification of the frequency of the ball drops, nor the location, which makes it very difficult to create a tune, unlike Acies. In the orb droppings app, the orbs start in the air and use gravity physics to move, initially standing still and accelerating downwards. When they hit a line, they bounce off of it, retaining some of their momentum. Our app will have no such features and will not utilize any sort of physics, which means our app will be quicker. The lines in Ball Droppings are just black, and there is no obvious indication of what sound the ball will make as it hits the line. In Acies, some lines will be dotted, and every line will have a color and width, creating the volume, pitch, and quality of the sound. In the orb droppings app, the app makes a tone whenever the orb hits a line at any speed. In our app, it will only make a tone whenever the orb hits a corner. Overall, the two apps are visually simple, but Acies is faster, and allows for the purposeful creation of music, while Ball Droppings allows only for playing around with sounds.

GitHub Repository

https://github.com/yoctometric/Acies

All of our group members as well as Professor Sepideh have been added as collaborators for the repository.