

# GSoC 2018: Inclusively Design & Build a Game for Kids

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## Abstract:

The project aims to develop an online game for young kids using an eye-gaze technology. This will help them to develop their skills through exploration and discovery. The ultimate aim with any student using alternative access is to enable the use of the same resources and help them gain confidence, clarity, understanding, social integration and self sufficiency.

Another aim is to develop a simple and fun game for visually impaired toddlers to help them begin a journey towards digital literacy. As children with visual impairments may not be able to learn by watching what is going on around them, they must learn "by doing" and interacting with their environment.

## Description:

### Game 1- For kids who use eye gaze

#### Spifind- Spot the Spider

The room is dark and as the spider appears, the kids (the players) dart their flashlights around the room to find and capture it. The flashlight will be operated by the movement of the kid's eyes. When the flashlight is on the spider, the kid dwells/blinks to capture it. The capturing needs to be done in a given time limit. The number of spiders captured by the child will be reflected on the scoreboard.

Most kids benefit from exploration, discovery, playing, making mistakes, initiating and repeating. This game aims to provide opportunities for free exploration and early control without significant consequences. This game helps assess the positioning and calibration skills of a child. It is also useful as a guide to determine the presence of very early visual skills. It tells us how a kid reacts to animation and sound. Using our eyes for expressive purposes and developing essential cognitive, recognition, comparison and searching skills in a pattern can be done with the help of this game. With motivation, perception, planning and motion the child can develop control over his muscles.

### Game 2: For visually impaired toddlers.

#### Music Mania

Music is a wonderful resource for an infant born blind. Exposure to it enhances a child's natural ability to decode sounds and words. Music Mania is a simple game where kids can play music using the keyboard keys. When the baby presses the key, it produces a sound. Eventually, he'll figure out that he is making that sound himself and this is an important step towards mental development. Pressing any key produces music gives a sense of accomplishment and instills happiness in the child.

Toddlers sway, bounce, or move their hands in response to music they hear and enjoy the process. It not only improves their motor skills but is also a step towards digital literacy. The first step in understanding the fundamentals of the location of different keys on the keyboard will be accomplished by this game. Later on, this knowledge will help them use different technologies and solve problems.

## Technical Details:

Both of the above games are web applications and have been developed using standard technologies - HTML, CSS & Javascript. For better maintainability and composability of code, modern JavaScript framework- [ReactJs](#) has been used.

## Partners + Mentors

Partners: [Beit Issie Shapiro](#); [Holland Bloorview Kids Rehabilitation Hospital](#)

Mentors: Jess Mitchell, Alan Harnum, Dana Ayotte, Gregor Moss

## Blog Post

[GSoC 2018 - Blog Post](#)

## Project Links

[Spifind-Spot the Spider](#)

[Music Mania](#)

## Progress Sheet:

I am organising my work here. A Trello account is required to join my workspace.

<https://trello.com/invite/b/DtLK91f7/bae5beca524fa263408e5ad18512d115/community-bonding>

## Communication:

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