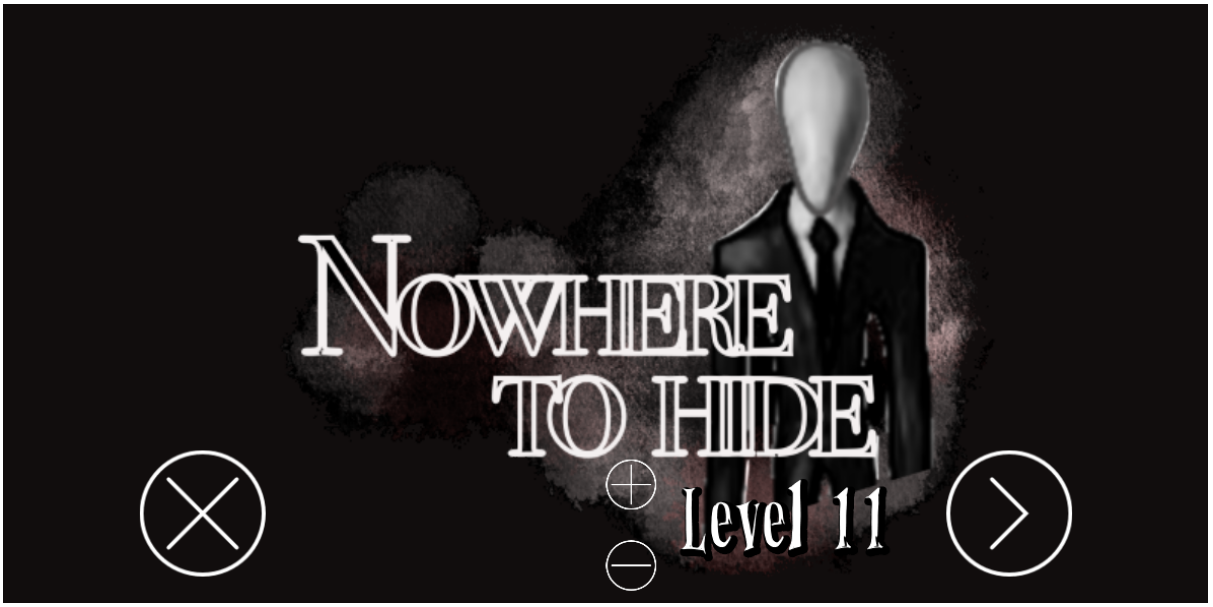
Conclusion of the Games Lab Master Praktikum

Final Results

We designed “Nowhere To Hide” as a fast to pick up, casual mobile dungeon runner that instantly pulls players into a flow state. The core gameplay consists of crossing a randomly generated labyrinth, while evading the pursuing Slender Man. The player has to evade obstacles, orientate himself in the labyrinth and perform various quick time events.

Main Menu



We designed a simple menu to enable the player to quickly start the game and choose a desired difficulty. The difficulty influences the size of the labyrinth, amount of obtainable items and movement speed and therefore reaction time for quick time events for the player.

Gameplay

The primary key gameplay element of “Nowhere To Hide” are the quicktime events. These consist of directional inputs that determine the path to choose at a crossroad, which items to pick up or to destroy a barrier. The player chooses which option to take at each quick time event by swiping in the corresponding direction. If the player fails to make a decision in time, he gets punished and a random action is taken instead. An exemplary quick time event can be seen in the following picture.

The quick time events are coupled with a timing mechanic. If the player swipes at the right moment, when the outer orange circle touches the smaller green circle, a special event is played and the player gains additional speed and an advantage over the pursuing Slender Man. This effect is visualized in the subsequent picture.

The player can find numerous items while exploring the labyrinth. Each item can be used to open a corresponding barricade that further expands the level and finally lets the player escape out of the haunted forest. Items can be picked up at quick time events by first swiping into the direction of the item. The item is then shown in the player's inventar at the bottom of the screen. In order to help the player orientate himself inside the labyrinth, we implemented a compass at the top of the screen that shows nearby items and barricades and their relative positions to the player. In the following picture the player uses the compass to locate the key item inside the labyrinth and is in the process of picking it up.

If the player has the correct item, they can open the corresponding barricade and access succeeding sections or finish the game. Each barricade is marked with the icon of its corresponding item. In the below image, the final door barricade is opened with the key item, which lets the player escape the level.

The secondary key gameplay element of “Nowhere To Hide” consists of evading obstacles. These are randomly spawned inside the labyrinth outside of the quick time event zones and are marked with a red outline shader. The player can evade them by moving right or left or jump and duck under them. If the player fails to evade an obstacle, or fails at a quick time event, he gets punished and the Slender Man catches up to the player. The distance of the Slender Man to the player is visualized by moving tentacles, a static-like shader, and a shifting background music to underline the intense atmosphere of the hunt. These effects can be seen in the following images. The player loses the game if the Slender Man catches up to him.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Changes from alpha release

One of our most prominent changes to the alpha release is the implementation of a compass that helps the player to locate items and barricades inside the labyrinth. During playtesting, we noticed that a lot of players traversed the labyrinth rather aimlessly and needed longer than expected to complete the levels. Since we designed “Nowhere To Hide” as a fast and casual game, we wanted to decrease the exploratory effort of the labyrinth, lessen the time needed to successfully complete a run and define clear goals for the player.
The compass helped us in achieving these goals by defining simple stepping stones for the player and steering the gameplay loop in a more casual direction.

Furthermore we improved our initial simple swiping mechanic by introducing a timing aspect to it. During playtesting, many testers complained about the repetitive gameplay loop and shallow learning curve of the game. To counter this, we chose to give the player an incentive to give the swiping and handling of the quick time events more attention, since these were the gameplay aspects that felt the most rewarding and fun to us. This was achieved by rewarding the player for performing the swipe actions at the right time, just before getting punished for swiping too late.

Our third major change to the alpha release was the introduction of a dedicated tutorial level for new players. This level aims to give the player a general overview over the settings and goals of the game, as well as conveying the key gameplay aspects of the game to the player by explicitly showing how to approach and solve different situations in the game.
This tutorial is given only at player level 0. Contrary to that, we capped the possible level to reach at 20. At that level the difficulty of the labyrinth stays the same.

Finally, we put a lot of effort into optimizing our game in order to especially increase performance and fps count on mobile.
After profiling the performance both on mobile and on PC, we noticed a rendering performance bottleneck. As such we simplified our used environment models and replaced

them with low poly counterparts. We downscaled our visual effects and introduced adaptive quality and resolution settings for mobile. As our labyrinth is dynamically created, we couldn't leverage pre-baked lightmaps, but we utilized static batching on the environment of each tile, which drastically reduced the amount of needed batches per frame.
Furthermore, we implemented tile culling in order to only render the relevant tiles in front of the player. With these changes we now achieve 60fps on PC and on relatively new mobile devices.

Experience during class

Our core design idea to create a casual dungeon runner mobile game did materialize into our final game. Most of our initial ideas towards this goal were reached, with even additional mechanics, like a compass for orientation and a timed swiping mechanic added.
Some of our more ambitious nice-to-have ideas, like the fighting phase during the dungeon run, where the player has to compete against some of Slender Mans minions, were scrapped. Furthermore, we could only implement rather basic items, as we did not have time to develop animations that could be used for a rope swing or digging a hole. Other ideas, like items that would give the player an advantage over the Slender Man, were transformed into permanent game mechanics, like the before mentioned compass or the speed boost for a perfect swipe.

We were able to follow our development schedule. This was possible with the help of a weekly meeting, in which we discussed our progress from the last week and distributed tasks for the following week. At the end of each meeting we summarized our results.

The project structure helped our progress, as it gave us clear goals at each time in development. The prototyping was especially helpful, as it helped us to explicitly work out the core concepts and feasibility of our game. Our final game is thus only slightly different from our prototype.

Personal expressions of the course

What was the biggest technical difficulty during the project?
Our biggest technical difficulty was implementing an algorithm for the random generation of our labyrinth. This proved to be more difficult than originally anticipated, since coming up with an algorithm that would produce fun but still solvable labyrinths was no trivial task.

What was your impression of working with the theme?
The theme was fun and it was easy to gather multiple different ideas. As such the final projects of our course are also widely different.

Do you think the theme enhanced your game, or would you have been happier with total freedom?
The theme decreased the given freedom to create a game, but did also force us to get more creative, which steered us in a beneficial direction.

What would you do differently in your next game project?
Probably start earlier with testing the project on mobile devices, especially when including assets. That way we could recognize performance bottlenecks easier and earlier.

Are you happy with the final result of your project? Do you consider it a success?
As we hit most of our goals and milestones with only a few nice-to-have features missing, we consider our project a success. We were able to create a casual mobile dungeon runner that could be released as a full game to the app store. With more time the game could be further improved with additional items or mechanics that make the runs more interesting. As such we are happy with the result of our final project.

To what extent did you meet your project plan and milestones (not at all, partly, mostly, always)?
As described in the section “Experience during class”, we did meet most of our milestones, with only some nice-to-have features not included in our final game. Weekly meetings and clear tasks helped with the organization of the project.

What improvements would you suggest for the course organization?
Maybe it would be beneficial to start the course a bit earlier in order to avoid finishing the course in the exam phase.