

Web Programming Project, Norppis-game

Aarre Urtamo

July 2024

1 What Was Done

I made a Phaser HTML5 game where saimaannorppa (saimaa ringed seal) swims in saimaa and dodges fishing neds. I got the idea for the game when I thought about how amazing it is that only 100 meters from my home, there is a lake where the endangered saimaannorppa lives, with fewer than 500 of them in the world! I ended up reading about the saimaannorppa and learned how big of a problem fishing nets are for them. So, I made this game because I thought it would be a fun way to combine learning web programming and raising awareness about the saimaannorppa.

The goal of the game is to eat as many fish as possible before the saimaannorppa collides with a rock or a fishing net. There are also teekkari hats dropping from the surface that the norppa can wear after collecting them (because why not).

The game constructs of three different maps. When the game starts, the first map the player sees is the main menu map. It's called StartGame in the code. This map includes the player's highscore of eating fish and two buttons where you can start the game and open a Wwf's article about saimaannorppa. If the player is playing for the first time there are instructions on how to play the game instead of the highscore.

The second map is PlayGame map. This is the map that contains the actual game. There are seven different moving elements/element groups in the game: Norppa (avatar), fish, ground, rock, net, plant and teekkari hat. Everything except the norppa moves to the left so that the player gets the effect that the seal is moving to the right, even though it is actually stationary vertically. All these other elements are moving to left at the same speed, except the fish are moving faster because they are also actually moving even without the effect. In addition to the visible elements there are sensors made to keep the norppa in the playing area and to listen interactions between the seven elements. For example, there is a little sensor located to the norppas head that notices if the norppa eats a fish or collects a teekkari hat. In the upper left corner of the PlayGame map the player can see the current fish score.

The third map is opened when the game stops. This is map is named GameOver map. There are two buttons. One starts the game again and the

other returns the player to the main menu map. There is also circle containing a fact about saimaannorppa. The fact is randomly picked out of 14 facts so it changes each time the map opens.

I included sound effects to the game. I recorder the sound of a chip bag crumbling and made it the sound of norppa eating a fish. When norppa collides with a rock or a net, a sound of my dog barking is played. I also made a disco cover of Juha Vainio's norppa related song Vanhojapokia Viiksekäitä with logic pro application. It's played repeatly in the backround of the game.

2 What Tools Were Used

I used Html and JavaScript languages and the Phaser 2D game framework to create the game. The maps were implemented with Phaser's functions preload, create and upload.

I used the Phaser's physics engine to make the elements move. For example, the norppa and the hats have gravity that pulls them to the bottom of the screen. I used Phaser's Between function to implement randomness and Phaser's time variable to loop events. For example, I used those to randomize the creation of rocks and fishing nets. The delays of the time events that creates nets and fishing nets are changed for every ten seconds with the help of another time event. The game is more exciting when the player doesn't know when and how often the rocks and nets are coming.

3 Suggestion of Grading

Feature	Points
Well written PDF report	3
Application is responsive and can be used on both desktop and mobile environment	4
Application works on Firefox, Safari, Edge and Chrome	3
The application has clear directory structure and everything is organized well	2
There is a clear plot in the game.	3
There are different (more than 1) objects to collect	2
There are moving parts in the game area	3
There are more than one map	3
Game uses physics engine, so that there are falling parts (hats,norppa)	2
There is music and sound effects	3
Gamer can play the game with touch screen	3
The avatar can't move away from the visible area	3
The time-event delay is randomized.	4

Table 1: self-grading