

# Smultronställe

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Unity Project (Assignment 1)

*Video recording:* <https://youtu.be/VngQt7fRL3A>

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## ***Smultronställe***

My piece is called *Smultronställe*, an environment representing an island in the Swedish archipelago. “*Smultronställe*” is a Swedish word compound of *smultron* (“wild strawberry”) + *ställe* (“spot, place”) with the following meaning:

1. (*literally*) a spot where many wild strawberries grow,
2. (*figuratively*) a pleasant place with sentimental and personal value.

A *smultronställe* is an idyllic place that is close to your heart, that is not so easy for others to find, where you feel at ease with the world. The word has been used through many generations to describe the Swedish archipelago during summertime. This is especially true for me, as I have spent every summer of my life exploring those small islands out on the ocean.

Here is a glimpse of what the Swedish archipelago looks like - two moodboards that I created as inspiration to model my environment:





*Swedish archipelago island environments.*

### ***The experience***

With this piece, I want to introduce the user to my cultural heritage. I want them to experience those feelings of *smultronställe* as far as it goes. I also intend for those who have connections to the Swedish archipelago to feel at home and at ease through the experience, as they can take a moment to come back to this feeling when the Swedish archipelago is out of reach (like in my own case as an exchange student far from home).

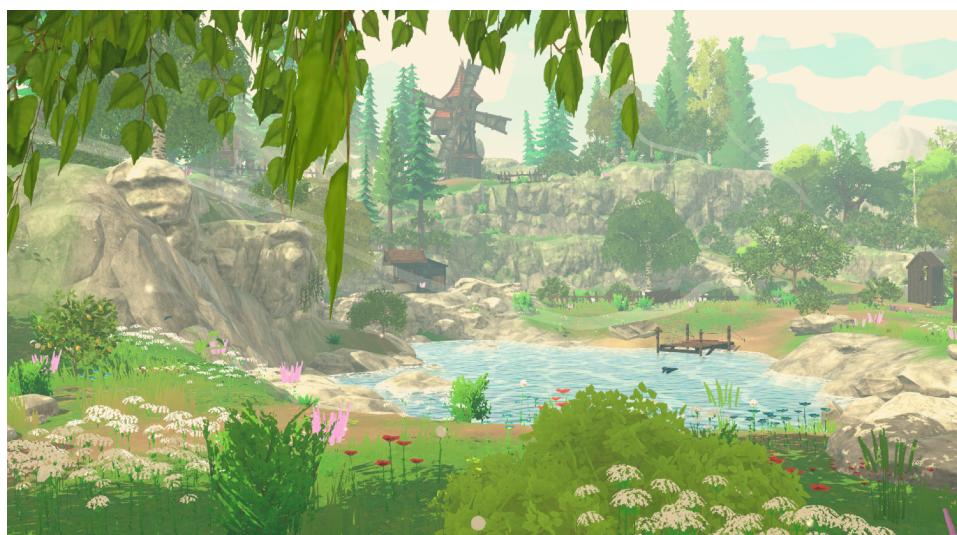
The application starts after clicking on the *Smultronställe* icon (which of course represents an actual wild strawberry plant!). When the application opens up the user first sees the Unity logo with a green background to start initial thoughts of nature. They are then met with a sight of the ocean, islands and vegetation. They hear the waves crashing in and birds chirping, and so they immediately find themselves in the summer setting of an archipelago.

On a PC, the user moves using the WASD keys, looks around using the mouse and can, if they want, hold shift to walk a little bit faster (but not too fast! why would you want to stress in such an idyllic setting anyway?).



*The application spawning point.*

The user first walks through a grove of trees out on a small meadow where they can get a small overview of a typical Swedish archipelago island. There are trees (primarily birches and pine trees), flowers (a lot of cow parsley) and a few butterflies flying around. The island has different levitations over a small area and the shore is almost always made out of smooth, sloping stone. There is a small lake, docks and boats, the iconic red Swedish cottages, a small sheep yard, a bonfire, a windmill and a few nice lookout points (among other things). All these elements are meant to be true to an actual Swedish island. Throughout the experience, the user can walk around to take in the feeling of the environment, the *smultronställe*, until they feel ready to get back to the real world and in their own time close down the application using the ESC button.



*The meadow view.*

## **Production items**

I find that my 3D environment is original as I have not come across this production before and just knew that I wanted to create something that means a lot to me. I merely kept the production-items checklist in mind when creating my environment as I first wanted to implement each element of my idea. When I finished up I had already included most of the items on the checklist. The following is how each item was implemented at the end:

- *2 contrasting rooms/areas/spaces in the environment:* Although the environment is technically on one island, I would argue that each part of the island has their own little space. There is a meadow, a more “towny” area with a farm, a dock area, a forest area at a higher altitude and then the entire ocean with other islands. All of these combine for the full experience.
- *2 or more complex 3D models:* I have included several 3D models in the environment. There are nature-based models (e.g. vegetation and rock models), sheep, buildings (cottages, windmill, shed, well) and several objects (e.g. tools, tents, benches, cartwheel, hay, guitar, flower pots, boats). All these are prefabs, where some have been modified or transformed to my liking.
- *Uses new textures/materials:* The textures I used for painting the terrain were from an asset. I painted and sculpted most of the terrain myself after importing a base from a demoscene terrain. I shifted some texture parameters on some objects. I created a new material and re-painted the base texture to achieve the look of the typical red Swedish cottage using a drawing app on my phone. I also changed the flag and sail materials to the Swedish flag.

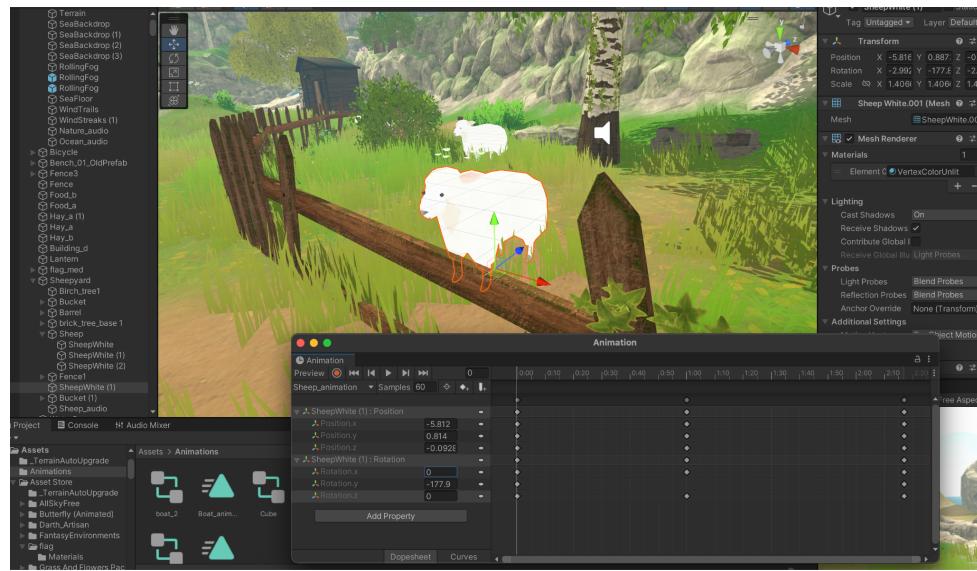


*The red Swedish cottage in the background.*



*Texture of cottage.*

- *Skybox:* Yes, I do have a nice one from the asset store.
- *Lighting:* There is directional sunlight and small lantern point-lights that are switched on when you approach them (i.e. comes within the collider area).
- *2 or more animations:*
  - The windmill that has a rotation animation for its fan.
  - The sheep are bobbing and jamming.
  - The boat by the dock is floating/bobbing.
  - The butterflies in the meadow are flying (preset animation, not my creation).



*Sheep animation.*

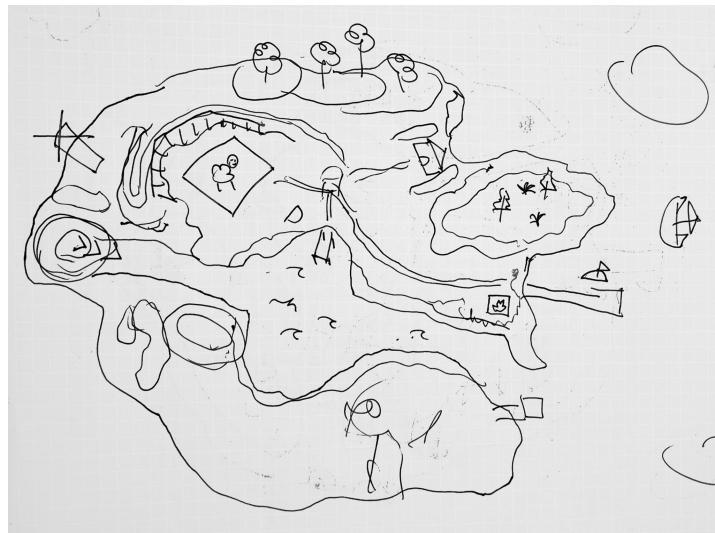
- *3 or more interactions:*
  - There are water colliders surrounding the island and the small lake so that the user can not fall in.

- Lanterns turn on when you are close to them.
- There are footstep sound effects when the user is walking.
- There is different audio playing when the user approaches different areas/objects (see audio content below).
- When the player stands before the acoustic guitar on the bench by the look-out point a few chords are played as if the user is playing themselves!
- *Audio:*
  - Ocean waves.
  - Birds chirping.
  - Sheep baaing.
  - Guitar strings.
  - Footsteps.

## ***Planning***

I first wrote down different ideas for the project. My initial idea was to create a midsummer setting (a Swedish cultural holiday), however I could not find enough material to go through with this idea. Therefore, I decided to just create the midsummer setting without the midsummer elements since this holiday is usually celebrated out in the Swedish archipelago anyway! And so my idea was formed.

I gathered up all assets needed and inspirational pictures as seen above. I made a terrible-looking drawing plan of the design of my island, as seen as follows:



*Island planning.*

I then started sculpting the terrain, added assets, implemented audio, made animations, made interactions with scripts, tweaked the post-processing and lastly touched up some textures. I forgot to continuously take screenshots but here is the first and last screenshot I took during the process:



*My first small area build - the fireplace gazebo.*



*The final island layout.*

### ***Links between audio and visual content***

There are a few audio sources used in the environment that is connected to the 3D visual content.

Firstly, there are four audio sources that are continuously played on awake. The first audio source is an overall background nature/bird chirping audio that can be heard all over the

island for ambience. Then there are calm ocean waves audio placed at two places on the island: one at the dock and one at the spawn point by the stone shore. The reasons for their locations are 1. these two points are when the user is closest to the ocean, and 2. the sources are far enough from each other so that they don't interfere but have enough reach so that the waves can be heard all over the island but with lower volume per distance. Lastly, there are sheep baaing audio placed among the sheep that gets logarithmically louder the closer you get. All these sounds are used to create the true ambience of the Swedish archipelago.



*The dock.*

An interactive audio source in the environment is the guitar audio linked to the acoustic 3D guitar asset. The interaction is quite simple - when the user goes within the bounding collider area the audio source is triggered and starts playing a simple chord. When the player leaves the area the audio stops. The idea was to make the user feel like they are strumming on the guitar by the bench - with a lovely view.





*The guitar by the bench with a lovely view.*

Lastly, there are footstep sound effects playing when the user moves. This script was a bit more difficult to make run smoothly since there are always problems with character movement but a rather simple script seemed to do the trick at the end (see below for code). The footstep audio was added to create a more immersive experience to make the user feel like they are actually walking around on the island. If I had more time I would have made the audio play at a higher speed when the character is sprinting.

### ***Assets used + footsteps audio script***

Here is a list of all the assets that were used in the making of *Smultronställe*.

- Nature Adventure Environment:  
<https://assetstore.unity.com/packages/3d/environments/fantasy/fantasy-adventure-environment-70354>
- Fantasy Landscape:  
<https://assetstore.unity.com/packages/3d/environments/fantasy-landscape-103573>
- Medieval Town Exteriors:  
<https://assetstore.unity.com/packages/3d/environments/fantasy/medieval-town-exteriors-27026>
- Old Sea Port Environment:  
<https://assetstore.unity.com/packages/3d/environments/old-sea-port-environment-36897>
- Shed, Tools, Bridge and Fences:  
<https://assetstore.unity.com/packages/3d/props/shed-tools-bridge-and-fences-104216>
- Starter Assets - FPC:  
<https://assetstore.unity.com/packages/essentials/starter-assets-first-person-character-controller-upr-196525>

- Lemon Trees:  
<https://assetstore.unity.com/packages/3d/vegetation/trees/lemon-trees-200372>
- Sheep (Farm Animal Set):  
<https://assetstore.unity.com/packages/3d/farm-animals-set-97945>
- Cloth animation based Flag:  
<https://assetstore.unity.com/packages/3d/props/exterior/cloth-animation-based-flag-65842>
- Medieval Windmill:  
<https://assetstore.unity.com/packages/3d/medieval-windmill-89489>
- Ornamental Flower Set:  
<https://assetstore.unity.com/packages/3d/vegetation/flowers/ornamental-flower-set-11920>
- Free Stylized Garden Assets:  
<https://assetstore.unity.com/packages/3d/props/exterior/free-stylized-garden-asset-145896>
- Sailing Ship:  
<https://assetstore.unity.com/packages/3d/vehicles/sea/brig-sloop-sailing-ship-77862>
- Butterfly (animated):  
<https://assetstore.unity.com/packages/3d/characters/animals/insects/butterfly-animated-58355>
- Acoustic Guitar:  
<https://assetstore.unity.com/packages/3d/props/acoustic-guitar-21037>
- Bicycle:  
<https://assetstore.unity.com/packages/3d/vehicles/land/bicycle-scooter-skateboard-170056>
- Bench (BAZ Street Props):  
<https://assetstore.unity.com/packages/3d/props/exterior/gaz-street-props-57285>
- Audio - Sheep, Small group, Sound effect:  
<https://soundcloud.com/soundporium/sheep-small-group-sound-effect>
- Audio - Calm Seashore:  
<https://www.youtube.com/watch?v=aUeCnyQi3bQ>
- Audio - Nature Sounds Birds:  
<https://www.youtube.com/watch?v=jAebfliXlIY>
- Audio - Guitar Sound Effects:  
<https://www.youtube.com/watch?v=wA2Tgw8Px38>
- Audio - Footsteps Sound Effect:  
<https://www.youtube.com/watch?v=7wSqR4tHnz0>
- Icon - Wild strawberry:  
<https://creazilla.com/nodes/13483-strawberries-on-the-plant-clipart>

*Footsteps audio script:*

```
public class Footsteps : MonoBehaviour
{
    CharacterController cc;

    void Start () {
        cc = GetComponent<CharacterController>();
        // Make sure the audio does not play after the initialisation is complete
        GetComponent<AudioSource>().Stop ();
    }

    void Update() {
        // If the user is moving play sound
        if (cc.isGrounded == true && cc.velocity.magnitude > 2f &&
            GetComponent< AudioSource >().isPlaying == false) {
            GetComponent< AudioSource >().Play ();
        }

        // If the user is not moving stop sound
        if (cc.isGrounded == true && cc.velocity.magnitude == 0f &&
            GetComponent< AudioSource >().isPlaying == true) {
            GetComponent< AudioSource >().Stop ();
        }
    }
}
```

### ***Final thoughts***

I am really proud of how *Smultronställe* turned out. Just like the Swedish archipelago itself, my first Unity project will forever be close to my heart. It was a fun journey and I learned a lot along the way. If I had more time I would definitely look into scripting more as I think that would make for cool interactions. I would also have liked a day/night cycle skybox to show off the starry forever-sunset night part of Swedish summer as well. I can't wait to show *Smultronställe* to my friends and family back home :)