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Portfolio

Fly Til You Crash

Link to the game: https://yrgo-game-programmer.itch.io/fly-til-you-crash

This is the one of the highscore scripts where I make the username and Id setup.

```
void Update()
{
    //Set score variable to the game score
    score = timer.score;
    //If the inputfield is empty, inputfield is active otherwise inactive
    if (GetComponent<InputField>().text == "")
    {
        submit.interactable = false;
    }
    else
    {
        submit.interactable = true;
    }
}
//Limits the player from making to long names and unexpected symbols.
//Gives the user input a uniqe id for every name
String GetUniqueID(String username)
{
    string[] split = System.Guid.NewGuid().ToString().Split(new Char[] { ':', '.' });
    string id = "";
    for (int i = 0; i < split.Length; i++)
    {
        id = username + " " + split[i];
    }
    return id;
}

//When the player dies a menu will pop up, there you can write your name and it automaticly puts the imput into a username id.
public void OnClick()
{
    //Gets player input (name)
    username = GetComponent<InputField>().text;
    //Finds the input and updates the username id
    username = GetUniqueID(username);
    //turns the highscore ui active
    HighscoreUI.SetActive(true);
    //truns the userinput ui to inactive
    UserInputUI.SetActive(false);
    //Add the username and score to the highscorelist
    Highscores.AddNewHighscore(username, (int)score);
}
```

Thought Process

What was the challenge?
The first thing I did before the developing of the game, was to figure out what it should be. I had a lot of idéas, many of them were good but not what I was aiming for. After some time we figured out what we wanted to make. The challenge with making the game was that there was so many new things that we hadn't worked on before. We constantly had to destroy and rebuild everything we did to get it as we wanted.

What approach did you take to solving it?
First of all we had to do a lot of research and fiddling to get everything working properly. Second was to find a way to make the

What would you do differently now?
I would probably start with making the game accessible from at least two platforms.

Treasure Hunter 2D

https://philip0921.itch.io/treasure-hunter-2d

This is my absolute favourite code solution in this project where I made a fade out to my blood splatter effect.

1.

```csharp
//Destroys the blood prefab after 55 seconds.
private void Update()
{
    Destroy(gameObject, 55f);
}

//Check the tile collider to make sure the BloodPartical effect can land on tiles.
private void OnParticleCollision(GameObject other)
{
    ParticlePhysicsExtensions.GetCollisionEvents(particle, other, collisionEvents);

    int count = collisionEvents.Count;

    //Instansiates blood prefab when player dies, also has a random range that the blood will spread out on.
    for (int i = 0; i < count; i++)
    {
        Instantiate(splatPrephab, collisionEvents[i].intersection, Quaternion.Euler(0.0f, 0.0f, Random.Range(0.0f, 360.0f)), splatHolder);
        FindObjectOfType<AudioManager>().Play("BloodSplatter");
    }
}
```

2.

```csharp
void Start()
{
    //Get's the mask and spirte component of the bloodsprite
    mask = GetComponent<SpriteMask>();
    sprite = GetComponent<SpriteRenderer>();

    if (sprite)
    {
        color = sprite.color;
    }
    starttime = Time.time;
}

// Update is called once per frame
void Update()
{
    //Checks if the player is dead and starts the fadeout on the bloodeffect
    if (Time.time - starttime > lifeTime && !dying)
    {
        dying = true;
        StartCoroutine(fadeOut());
    }
}

IEnumerator fadeOut()
{
    //Sets the fadeout time to 1
    float value = 1;
    while ( value > 0 )
    {
        //removes value amount every frame until it reaches 0
        value -= Time.deltaTime * 0.01f;
        if (sprite)
        {
            sprite.color = new Color(color.r, color.g, color.b, value);
        }
        transform.localScale = new Vector3(value, value, value);
        yield return new WaitForEndOfFrame();
    }
    Destroy(gameObject);
}
```

Thought Process

What was the challenge?
The hardest part when making the game was the movement. I took me a long time to get the controls to feel right.

What approach did you take to solving it?
First to see what I did wrong in my code I went to play other games similar to mine to try out there movement and maybe get an idéa of how I could replicate that feeling on my game. I took a lot of research and recoding to get It to feel fairly smooth.

What would you do differently now?
If I remade this project I would probably make sure to start with getting the movement in place first before moving on to other parts.

Elio

https://yrgo-game-programmer.itch.io/elio
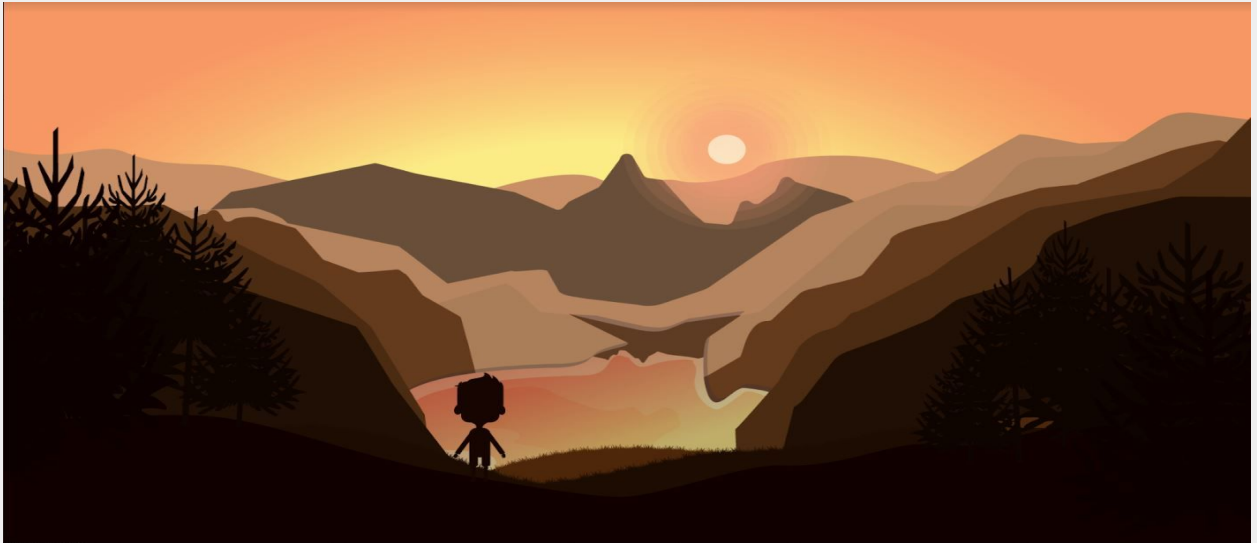
In this game I wasn't focusing on the coding as much as the level design. Here is a picture from what the map I made look like from above. The sun was also part of the things I did in this projekt.
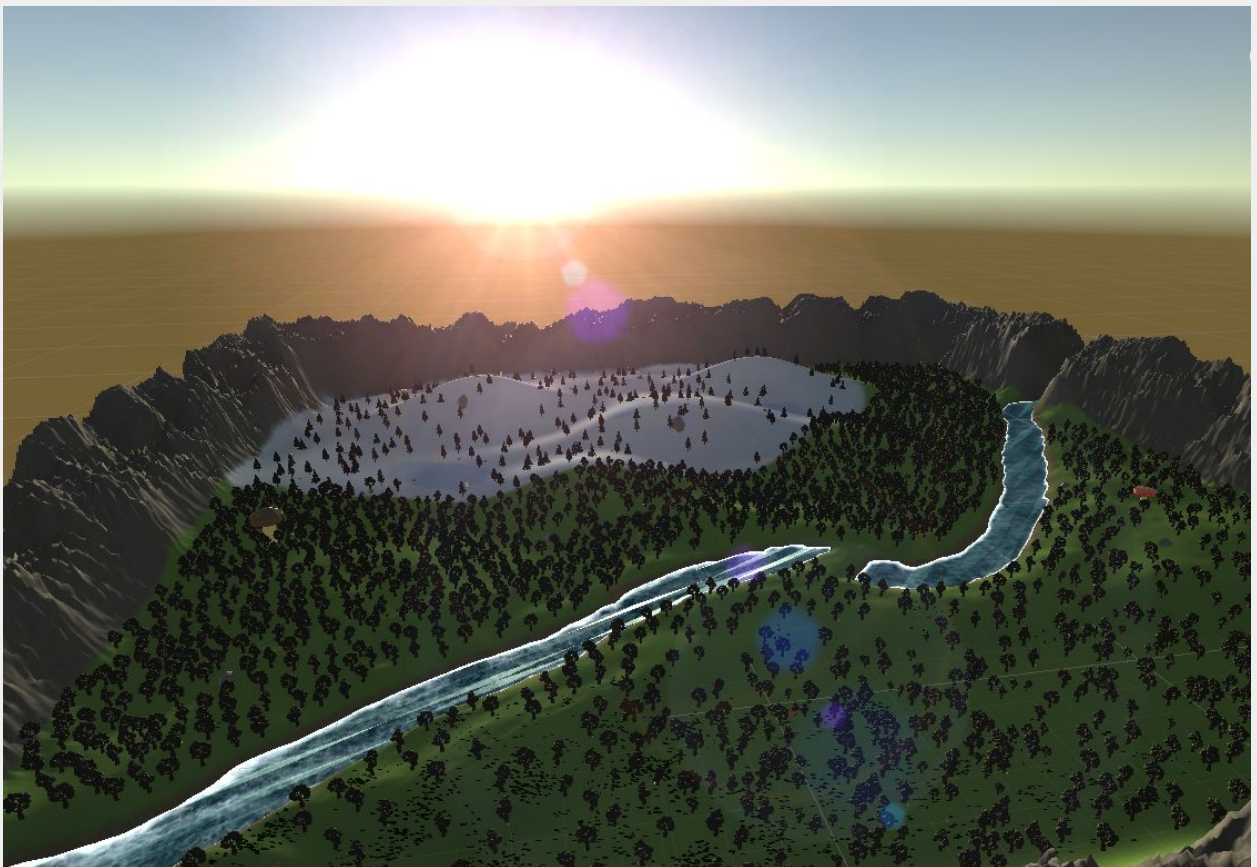
Thought Process

What was the challenge?

The most challenging part of this project for me was the level design. I took me sometime to figure out what the map would look like, when I got to the actual creation of the level it started to give me problems. One of them was the water, we couldn't use the unity water material because it wouldn't fit the low poly theme we planned to have. Instead I used a free low poly water pack. The assets where the big problem in all of this, making them look natural by placing and scaling planes was not the best way to go.

What approach did you take to solving it?

I really only had one choice and that was to make the best of it and try to cover up the sharp edges so the player didn't notice it.

What would you do differently now?

I would probably start with the river knowing it would be something that I could have issues with later in the project. Made make my own water asset or use the existing unity version and remake it.

VR Overlord

Unity, using the Oculus Headset.

Just finished the project so there is yet no download link, will add as soon as it's uploaded. This is the game room which I created, it contains the level as you see in the middle of the room.

Thought Process

What was the challenge?
The big problem I had in this project was making the game area scale properly to the Oculus player model. We also had a few problems with the optimisation, we started at 1.6 million triangles/vertices and about 1.8 thousand draw calls.

What approach did you take to solving it?
To scale the level properly to player I slowly scaled up and down the unity terrain until I found the right scale. Optimisation wise I did a lot of research to what I could do to reduce the current numbers. I found a good tutorial which showed me how by changing the unity settings and unticking a few boxes could reduce the numbers to almost nothing compared to what I had before.

What would you do differently now?
What I would do differently In this project would be to do more research to what the Oculus has to offer so I could better understand how to use it and work with it properly.