# Contributors

Gus - movement, time travel interaction, grabbing

Nisa - dissolve effect

Anton - timeline and UI

Paolo - particle effects, HUD and refactoring

# High Level Overview

The Player includes both the character’s physical form and its HUD UI.

The player can move around and perform actions (including grabbing and time jumping). They also display physical changes such as changing colour, dissolving or being wrapped in particles.

The HUD displays 2D information to the user, overlaid on top of the game scene. This includes a timeline, team name and game timer among others.

User input is handled here and makes changes to the player itself as well as the rest of the game.

The Player prefab in Unity contains several objects and components. The main object (groups) are:

## Body

This is the tic tac body of the player.

## CameraHolder

This contains the camera and anything attached to the character that we want to see from a first person perspective such as the arm.

## UI

This contains all the HUD elements such as the timeline, game timer and debug panel.

## FireCircle and Splash

These are particle systems used for the time jump effects.

## NameTag

This contains the text for the name tag that is displayed above the player.

# Implementation

The code associated with the player is split across several scripts.

## PlayerController.cs

This script is the main hub for triggering actions and making RPC calls. It calls methods from other scripts such as PlayerHud.cs and ParticleController.cs to trigger specific actions.

## PlayerHud.cs

This script is the interface for interacting with UI elements in the HUD.

## ParticleController.cs

This script triggers animations, including ones to do with particle systems and player material effects.

## PlayerMaterial.cs

This script is the interface for interacting with the material of the player.

## PlayerMovement.cs

This script handles all movement of the player, including position and rotation.

## PlayerNameTag.cs & Billboard.cs

These scripts are used to display a name tag above other players.