Chosen Design Pattern: Adapter Design Pattern

Justification for the Adapter Design Pattern. Unity has a lot of built in classes and features that us as the Software engineers don't need to use. Almost every class we use has 10's of features that are obsolete to us, and either would hinder our program or not affect it in a meaningful way. So we adapt it to fit in our program how we need. For the Camera, we take the big overarching class that is the camera system in Unity, and adapt it to be able to use 2 instances of it, change its limits of view, change how it reacts to move it, and adapt it to our use. For a menu, we take an overarching class called a "canvas" and we adapt it to our needs to act as a pause and help menu.

Unity

Rigidbody2D

Vector2 Velocity

Vector3

float magnitude
Vector3 normalized
float sqrMagnitude
int[] this
float x
float y

Collider2D

Bounds bounds

Animator

public void SetFloat(float value)

ProgressBar

Slider progressBar
GameObject player
int playerNum
int barValue
isA Component

void Awake()
void Start()
void Update()

HUDController

GameObject player

public void Start()
public void Update()

GameObject

Transform transform

Vector2

float magnitude
Vector2 normalized
float sqrMagnitude
int[] this
float x
float y

Camera

int targetDisplay
Color backgroundColor
float orthographicSize

Canvas

rotation
scale

Transform

GameObject gameObject
Vector3 postion
Transform parent

PlayerMovement

GameObject gameObject
float speed
float jumpVelocity
float jumpCancelFactor
bool isFacingRight
bool isGrounded
bool isJumping
Rigidbody2D m_Rigidbody
Collider2D m_Collider
Animator m_Animator

public void jump()
public void Start()
public void Update()
public void CheckGround()
public void FlipAnimation()
public void Move()
public void Jump()
public void Dash()
public void Grapple()

Component

GameObject gameObject
Transform transform

Unity

Vector3

float magnitude
Vector3 normalized
float sqrMagnitude
int[] this
float x
float y

GameObject

Transform transform

Transform

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rotation
scale

Component

GameObject gameObject
Transform transform

Player2Cam

Player1Cam

Menu

Player1Hud

Player2Hud

PauseButton