



Project Class Diagram

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classDiagram
class Singleton~T~ { +static T instance }
class PortalTraveller { +GameObject
graphicsObject +GameObject graphicsClone +Vector3 prevOffsetFromPortal
+Teleport(Transform, Transform, Vector3, Quaternion) +EnterPortalTrigger()
+ExitPortalTrigger() }
class PortalTravellerSingleton~T~ { }
class CameraUtility { +static bool
VisibleFromCamera(Renderer, Camera) +static bool BoundsOverlap(MeshFilter, MeshFilter,
Camera) }
class GoalPoint { +OnTriggerEnter(Collider) } %% Interactables
class Pickupable { +Rigidbody rigid +OnPickup(PlayerPickup) }
class RigidbodyTraveller { +Rigidbody rigid
+Teleport(Transform, Transform, Vector3, Quaternion) } %% Managers
class FPSLimiter { +int
targetFPS }
class GamaManager { +Start() }
class LevelManager { +Transform goalPoint +int
currentLevel +List~Portal~ portals +AddPortal(Portal) +RemovePortal(Portal)
+OnPlayerArriveAtGoal() +LoadLevel(int) +ResetPlayerPosition(Transform) } %% Player
class class
MainCamera { +Camera GetCamera() }
class PlayerController { +float walkSpeed +float
runSpeed +Transform eyeTransform +Start() +Update() }
class PlayerPickup { +Transform
holdPoint +TeleportHoldPoint(Transform, Transform) }
class PlayerShoot { +GameObject
portalPrefab +Portal portal1 +Portal portal2 +PerformShoot(int) } %% Tools
class Laser {
+Vector3 startPosition +OnTriggerEnter(Collider) }
class LaserEmitter { +GameObject
laserPrefab +EmitLaser() }
class Portal { +Portal linkedPortal +SpawnPortal(GameObject,
Portal, RaycastHit, Transform, bool, bool) +Render(ScriptableRenderContext) }
class
PortalTrigger { +OnTriggerEnter(Collider) +OnTriggerExit(Collider) } %% UI
class FrameRate {
+Update() }
class PlayerUIManager { +GameObject crosshair +SetCrosshair(int) } %%
Inheritance Relationships
Singleton <|-- GamaManager Singleton <|-- LevelManager Singleton
<|-- MainCamera Singleton <|-- PlayerPickup Singleton <|-- PlayerShoot Singleton <|--
PlayerUIManager PortalTraveller <|-- RigidbodyTraveller PortalTraveller <|--
PortalTravellerSingleton PortalTravellerSingleton <|-- PlayerController %% Associations
LevelManager "1" --> "*" Portal PlayerShoot --> Portal Portal --> Portal : linkedPortal
PortalTrigger --> Portal LaserEmitter "1" --> "*" Laser Pickupable ..> PlayerPickup : uses
PlayerPickup --> PlayerController PlayerShoot --> PlayerController MainCamera ..>
PlayerController : uses MainCamera ..> LevelManager : uses
```