



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
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
```