IObject
+ Update()
+ Draw()

IGameObject
+ Boundary

MelloMario.Objects.BaseGameObject
+ Boundary
# World
- location
- size
- sprite

+ Update()
+ Draw()
# BaseGameObject()
# OnUpdate()
# OnSimulation()
# OnDraw()
# Relocate()
# Resize()
# ShowSprite()
# HideSprite()

MelloMario.Objects.BaseCollidableObject
- movement

+ LivesHandler()
+ PointHandler()
# BaseCollidableObject()
# OnCollision()
# OnCollideWorld()
# Move()
# StopHorizontalMovement()
# StopVerticalMovement()
# RemoveSelf()
# OnSimulation()
# ScorePoints()
# ChangeLives()
- ScanCollideModes()
- CollideAll()

MelloMario.Objects.Miscs.Background
- targetZIndex
- type

+ Background()
# OnUpdate()
# OnSimulation()
# OnDraw()
- UpdateSprite()

MelloMario.Objects.UserInterfaces.PopingUpPoints
- elapsed

+ PopingUpPoints()
# OnUpdate()
# OnSimulation()
# OnDraw()

MelloMario.Objects.BasePhysicalObject
Facing
- pixelScale
- accel
- frictionalAccel
- velocity
- movement

BasePhysicalObject()
ApplyAccel()
ApplyGravity()
ApplyHorizontalFriction()
ApplyVerticalFriction()
SetHorizontalVelocity()
SetVerticalVelocity()
Bounce()
OnSimulation()

MelloMario.Objects.Blocks.Brick
+ SoundEventArgs
+ HasInitialItem
+ State
- isHidden
- state

+ Brick()
+ Initialize()
+ OnDestroy()
+ Remove()
+ Bump()
+ BumpMove()
+ ReleaseNextItem()
# OnUpdate()
# OnSimulation()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()

MelloMario.Objects.Blocks.Flag
- height
- maxHeight
- top
- eventInfo

+ TimeScoreHandler()
+ Flag()
# OnUpdate()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()

MelloMario.Objects.Blocks.Floor
+ Floor()
# OnUpdate()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()

MelloMario.Objects.Blocks.Pipeline
+ SoundEventArgs
+ Type
- model
- elapsed
- switchingPlayer

+ Pipeline()
# OnUpdate()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- SetModel()
- UpdateSprite()

MelloMario.Objects.Blocks.Question
+ SoundEventArgs
+ State
- isHidden
- state

+ Question()
+ Initialize()
+ Bump()
+ BumpMove()
+ ReleaseNextItem()
# OnUpdate()
# OnSimulation()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()

MelloMario.Objects.Blocks.Stair
+ Stair()
# OnUpdate()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()

MelloMario.Objects.Items.Coin
+ SoundEventArgs
+ State
- coinEventInfo
- collected
- state

+ CoinHandler()
+ Coin()
+ Collect()
+ UnveilMove()
# OnUpdate()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()

MelloMario.Objects.Items.FireFlower
+ State
+ SoundEventArgs
- collected
- state

+ FireFlower()
+ Collect()
+ UnveilMove()
# OnUpdate()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()

MelloMario.Objects.Characters.Mario
+ SoundEventArgs
+ MovementState
+ PowerUpState
+ ProtectionState
- eventInfo
- movementState
- powerUpState
- protectionState

+ GameOverHandler()
+ Mario()
+ OnDeath()
+ TransToGameOver()
+ UpgradeToSuper()
+ UpgradeToFire()
+ Downgrade()
# RaiseSoundEvent()
# ChangeFacing()
# OnUpdate()
# OnSimulation()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()

MelloMario.Objects.Characters.MarioCharacter
+ Active
+ CurrentWorld
+ Player
+ Sensing
- animation
- toBeTraveled
- userInput
- soundListener

+ MarioCharacter()
+ Left()
+ LeftPress()
+ LeftRelease()
+ Right()
+ RightPress()
+ RightRelease()
+ Jump()
+ JumpPress()
+ JumpRelease()
+ Crouch()
+ CrouchPress()
+ CrouchRelease()
+ FireCreate()
+ SuperCreate()
+ NormalCreate()
+ Action()
+ Move()
+ Remove()
+ FlagPole()
# Teleport()
# Reset()
# OnSimulation()
# OnUpdate()

MelloMario.Objects.Enemies.Goomba
+ State
- state

+ Goomba()
+ Defeat()
# OnUpdate()
# OnSimulation()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()
- ChangeFacing()

MelloMario.Objects.Enemies.Koopa
+ State
- color
- state

+ Koopa()
+ JumpOn()
+ Pushed()
+ Defeat()
# OnUpdate()
# OnSimulation()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()
- ChangeFacing()

MelloMario.Objects.Enemies.Piranha
+ HasMarioAbove
+ State
+ ShowTime
+ HiddenTime

+ Piranha()
+ Defeat()
# OnSimulation()
# OnUpdate()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()
- DetectMario()

MelloMario.Objects.Enemies.Thwomp
+ State
- state

+ Thwomp()
+ Defeat()
# OnUpdate()
# OnSimulation()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()
- ChangeFacing()

MelloMario.Objects.Items.FireBall
+ SoundEventArgs

+ FireBall()
# OnSimulation()
# OnUpdate()
# OnDraw()
# OnCollision()
# OnCollideWorld()

MelloMario.Objects.Items.OneUpMushroom
+ State
+ SoundEventArgs
- collected
- state

+ OneUpMushroom()
+ Collect()
+ UnveilMove()
# OnUpdate()
# OnSimulation()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()

MelloMario.Objects.Items.Star
+ State
+ SoundEventArgs
- collected
- state

+ Star()
+ Collect()
+ UnveilMove()
# OnUpdate()
# OnSimulation()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()

MelloMario.Objects.Items.SuperMushroom
+ State
+ SoundEventArgs
- collected
- state
- listener
- soundListener

+ SuperMushroom()
+ GetFireFlower()
+ Collect()
+ UnveilMove()
# OnUpdate()
# OnSimulation()
# OnCollision()
# OnCollideWorld()
# OnDraw()
- UpdateSprite()