Server

Client

ProtocolHandler

+ handleMessageReceived()

GameInfo

+ players : Player[]

+ savePosition(msgProtocol : string)
+ allPositionInOneString() : string

Player

+ ID : int
+ posX : float
+ posY : float

<<interface>>
IServerUdpMultiThreadWrapper

+ turnOn (port : int, functionToHandleMessageReceived)
+ sendMessageToLastestClient(message : string)

ServerUdpMultiThreadWrapper

- socket : boost::asio::ip::udp

+ turnOn (port : int, functionToHandleMessageReceived)
+ sendMessageToLastestClient(message : string)
- handleRequest()

<<interface>>
IClientUdpMultiThreadWrapper

+ setServer(serverAddress : string, port : int)
+ sendMessage(message : string)
+ getReply() : string
+ stop()

ClientUdpMultiThreadWrapper

- socket : boost::asio::ip::udp

+ setServer(serverAddress : string, port : int)
+ sendMessage(message : string)
+ getReply() : string
+ stop()

NetworkManager

- udp : ClientUdpMultiThreadWrapper
- mutex : std::mutex
- clock : sfClock

+ handleProtocol(gameEngine : GameEngine)
+ protocolDecideWhichMessageToSend(gameEngine : GameEngine) : string
+ protocolHandleReceivedMessages(reply : string, gameEngine : GameEngine)
+ stop()

<<enumeration>>
Direction

RIGHT
LEFT
UP
BOTTOM

CharacterGraphic

+ pathImage : string
+ areaFirstFrame : sfIntReact
+ offset : int
+ frameCount : int
+ direction : Direction

Character

- graphic : CharacterGraphic

+ drawOnWindow(window : sfRenderWindow)
+ activateKeyboardMvt(event : sfEvent)

+ getPosition() : Vector2f
+ getSize() : Vector2f

+ move(offset : Vector2f)
+ setPosition(pos : Vector2f)
+ setDistancePerMove(distance : float)
+ setBoundariesMvt(rect : sfFloatRect)
+ setScale(scale : float)

Player

+ ID : int
+ posX : float
+ posY : float

GameEngine

+ scene : Scene
+ players : Player[]
+ mainPlayerID : int

+ saveAllPositions(positionsFromNetwork : string)
+ updateMainCharacterPosition(characters : unordered_map<Player, Character>)

<<enumeration>>
Scene

INTRO
WORLD
END

<<interface>>
IGraphicWrapper

+ createWindows(width : int, height : int)
+ setBackground(pathImageBg : string, pathImageStars : string)
+ draw()

PlayerBoard

- mapTextAreas : map<Player, sfText>
- font : sfFont

+ setText(players : player[])
+ drawOnWindow(window : sfRenderWindow)

Background

+ clock : sfClock

+ initSprite(pathImageBg : string, pathImageStars : string)
+ drawAndMoveBackground()

Cinematic

+ drawOnWindow()

GraphicWrapper

+ characters : unordered_map<Player, Character>
- window : sfRenderWindow
- cinematic : Cinematic
- playerBoard : PlayerBoard
- background : Background

+ createWindows(width : int, height : int)
+ setBackground(pathImageBg : string, pathImageStars : string)
+ draw()
- drawBackground()
+ loadAssets()
+ addRemoveCharacter(players : Player[])
+ moveCharacters(players : Player[], mainPlayerID : int)