Armen Arslanian **Anderson Giang** ArslanianGiang282P3 UML

ArslanianGiang282P2

- serialVersionUID: static final long

app : ArslanianGiang282P2

- bot : ArrayList <Player>

- map : Map

- charlie : Player

- current_waypoint : WayPoint

- initial_waypoint : WayPoint

- dest_waypoint : WayPoint

- player1 : Player

- player2 : Player

- player3 : Player

- player4 : Player

- target : WayPoint

- treasure : WayPoint

+ ArslanianGiang282P2(frameTitle: String, imageFile: String)

+ main(args : String[]) : static void

+ setSimModel(): void

+ makePlayer(name : String, p : Point, color : Color) : void

+ choosePlayer(): void

+ performUpdates(path : Stack<WayPoint>) : void

+ findPath(begin : WayPoint, player : Player) : void

+ aStar(start : WayPoint, end : WayPoint)

+ movePath(begin : WayPoint) : void

+ simulateAlgorithm(): synchronized void

Player

- strength: int

- wealth: int

- treasure : boolean

- id : String

- place : String

- goal : Point

- begin : Point

- myPath : Stack<WayPoint>

- isPlaying : boolean

+ Player(label: String, p: Point, colorValue: Color)

+ getPathSize(): int

+ getStrength(): int

+ setStrength(strength: int): void

+ hasTreasure(): boolean

+ setTreasure(treasure : boolean) : void

+ setPlaying(isPlaying : boolean) : void

+ isPlaying(): boolean

+ getId(): String

+ move(pt : Point) : void

+ setPath(myPath : Stack<WayPoint>) : void

+ getPath() : Stack<WayPoint>

+ getGoal(): Point

+ getBegin(): Point

WayPoint

- x : int

- y : int

- height : double

- cityCost : int

- gold : int

- mapX : int

- mapY : int

- countOfNeighbors : int

- visited : boolean

- neighbors : ArrayList<Point>

- parent : WayPoint

- current : WayPoint

- goal : WayPoint

- g : double

- h : double

- f : double

+ WayPoint(x: int, y: int, height: int, cityCost: int, gold: int, mapX: int, mapY: int, countOfNeighbors:

int, neighbors : ArrayList<Point>)

+ isVisited(): boolean

+ setVisited(visited : boolean) : void

+ getHeight(): double

+ getNeighbors() : ArrayList<Point>

+ getCityCost(): int

+ getParent() : WayPoint

+ setParent(parent : WayPoint) : void

+ getG(): double

+ setG(g : double) : void

+ getH(): double

+ setH(h : double) : void

+ getF(): double

+ setF(f : double) : void

+ getMapX(): int

+ getMapY(): int

Map

- numOfGold: int

- numOfMaps : int

- numOfCities : int

- myMap : HashMap<Point, WayPoint>

- neighbors : ArrayList<Point>

- animatePanel : AnimatePanel

- simFrame : SimFrame

+ Map(simFrame : SimFrame)

+ readWayPoints(): void

+ findClosestWayPoint(p : Point) : WayPoint

+ twoDimDistance(a : Point,b : Point) : double

+ threeDimDistance(a : WayPoint, b : WayPoint) : double

+ getWayPoint(p : Point) : WayPoint

+ mapInfo(): String