Goblin Tower Defense

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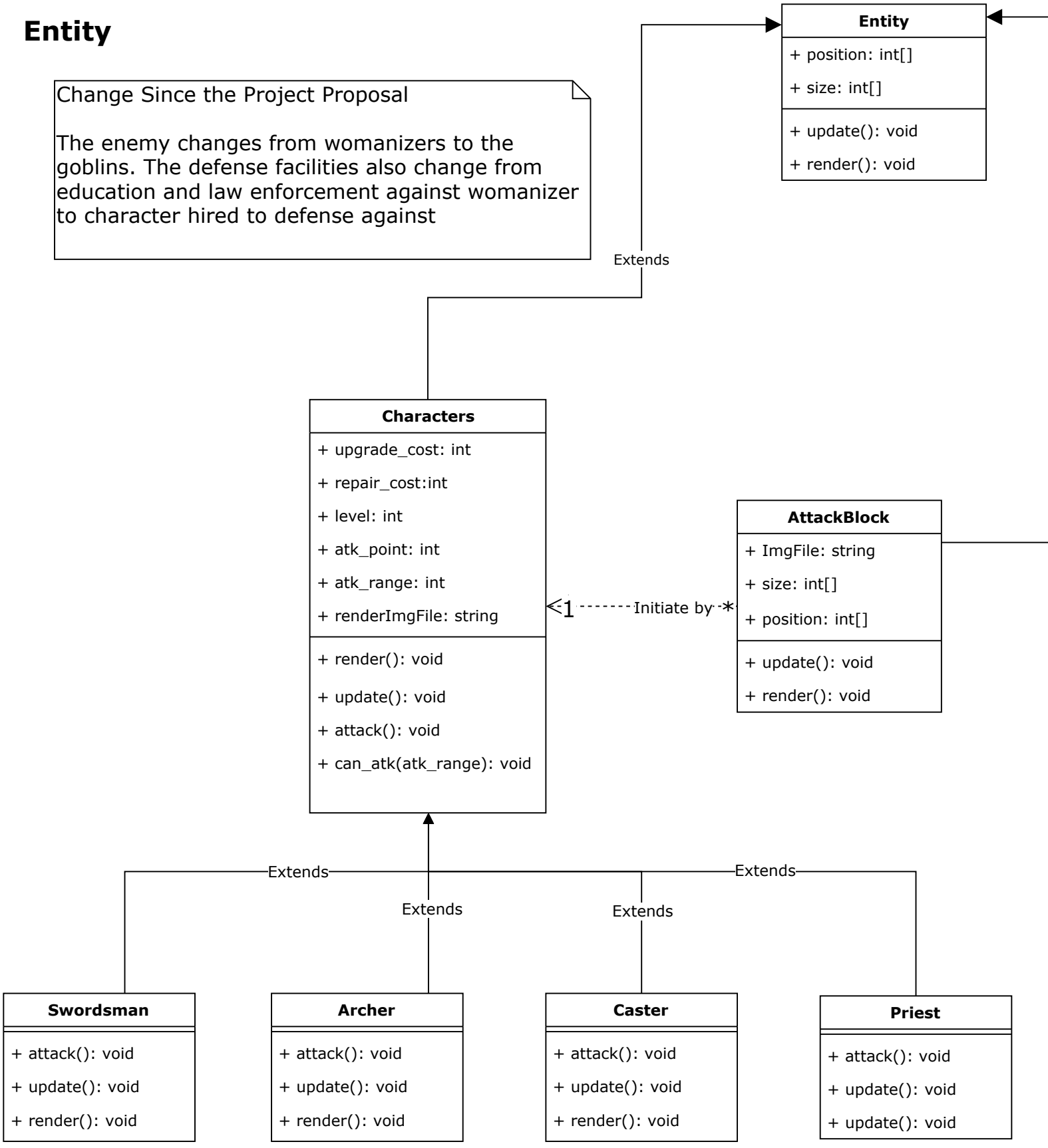
Class Diagram Description of Goblin Tower Defense

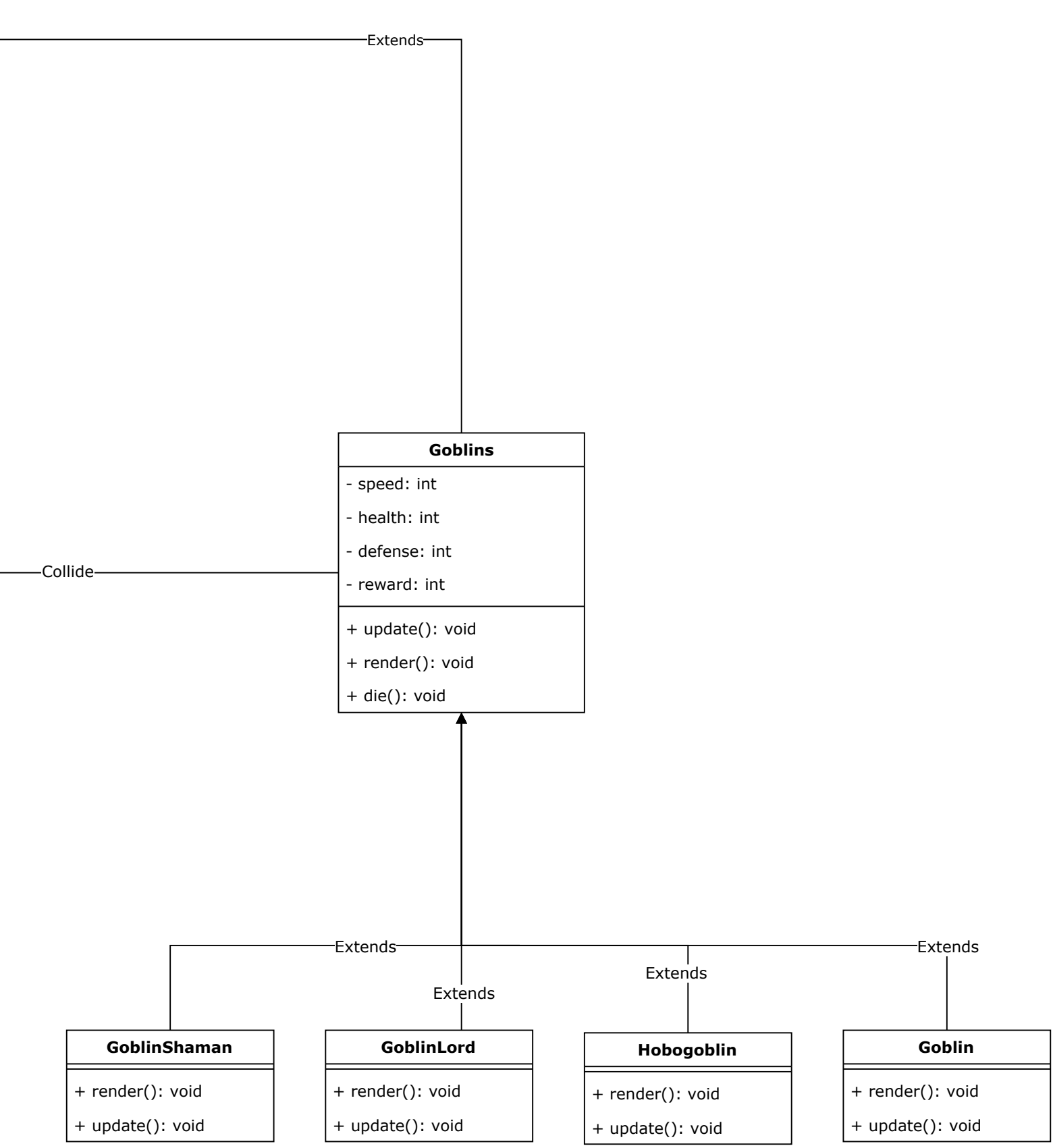
Goblin Tower Defense will begin with a game world that will host all the objects that exist in the game. Some of the key components of the game world are Characters, Feedback System, Game Course, Goblins, and Player. When the Gameworld class instantiates, the Gameworld class will initiate a screen surface followed by a course. The Game Course object draws the course with routes for the Goblins to move. After creating the Game Course, a Player object will be initiated to represent the user in the game. The player object will store player information and update it as the game progresses. There will be a Character class that parents child classes which represent the type of characters to be hired by the player in the game. Each hired character will be stored in the player object. There are currently four characters: Swordsman, Archer, Caster, and Priest. There will be a Goblins class that serves as the parent class for all the goblins that appear in the game. Each type of goblin will be an instance of the corresponding child class of Goblins. There are currently four types of goblins: Goblin, Hobgoblin, Goblin Shaman, Goblin Lord. The characters will attack the goblins as goblins advance through the course. Each attack is represented by an instance of Attack Block. The attacks will be store in the Game World instance and continue to render until a function triggered by a collision with the goblins or border of the game world. For each defeated goblin, there will be updates to the player and the characters. The Feedback System class will have child classes to render the updates on the player and the characters. The Character Feedback class will display information for the selected character. The Player Feedback class will display player information. The Available Hire class will show characters that players can hire.

Entity

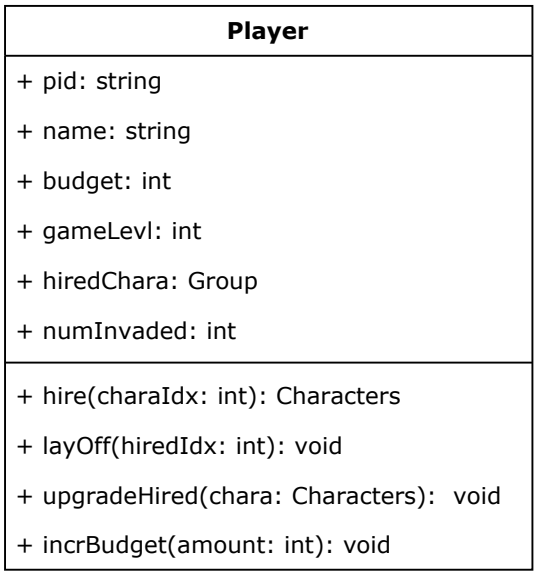
Change Since the Project Proposal

The enemy changes from womanizers to the goblins. The defense facilities also change from education and law enforcement against womanizer to character hired to defense against

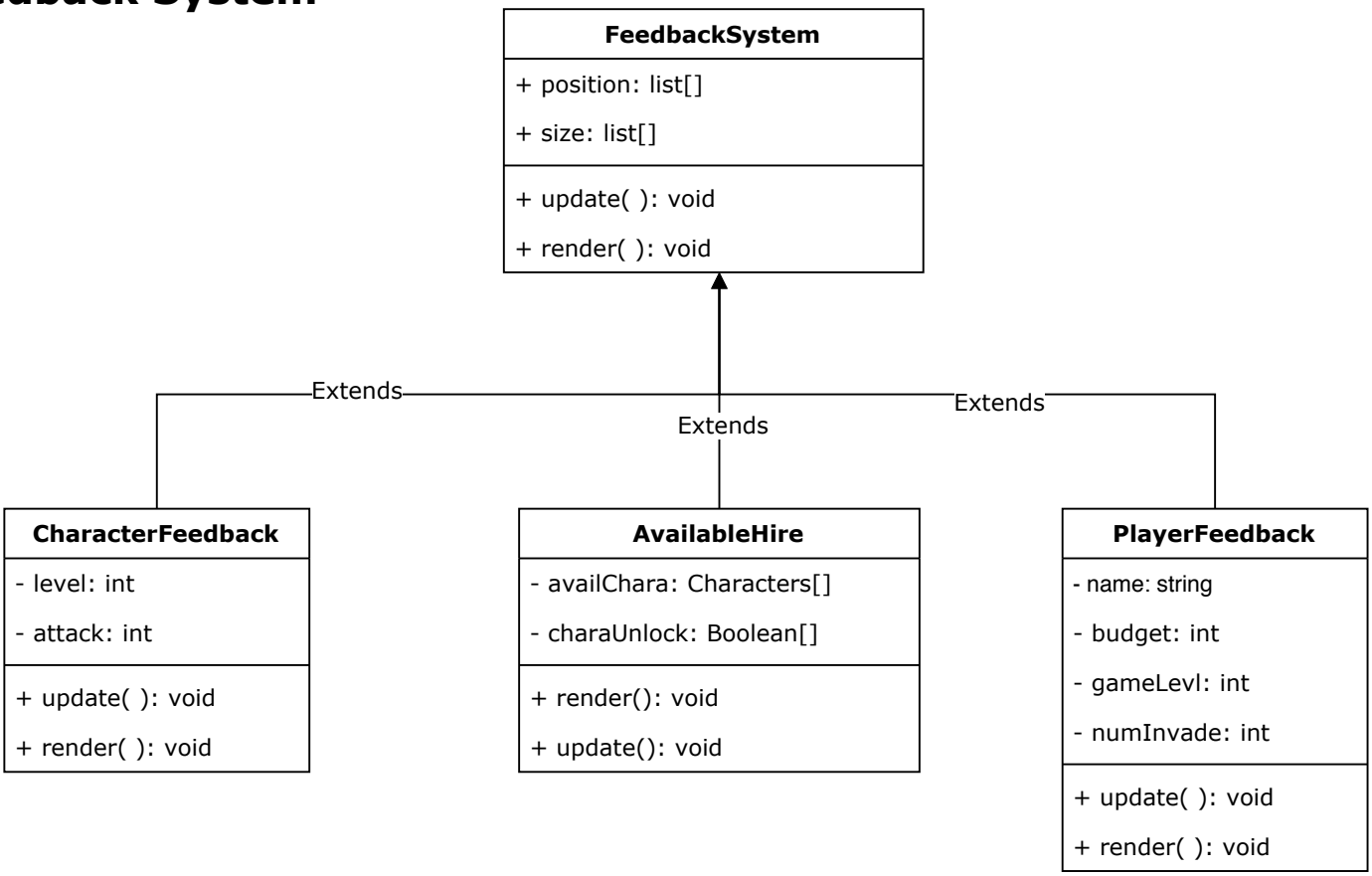



Extends
Goblins
- speed: int
- health: int
- defense: int
- reward: int
+ update(): void
+ render(): void
+ die(): void
Collide
Extends
Extends
Extends
Extends
GoblinShaman
+ render(): void
+ update(): void
GoblinLord
+ render(): void
+ update(): void
Hobogoblin
+ render(): void
+ update(): void
Goblin
+ render(): void
+ update(): void

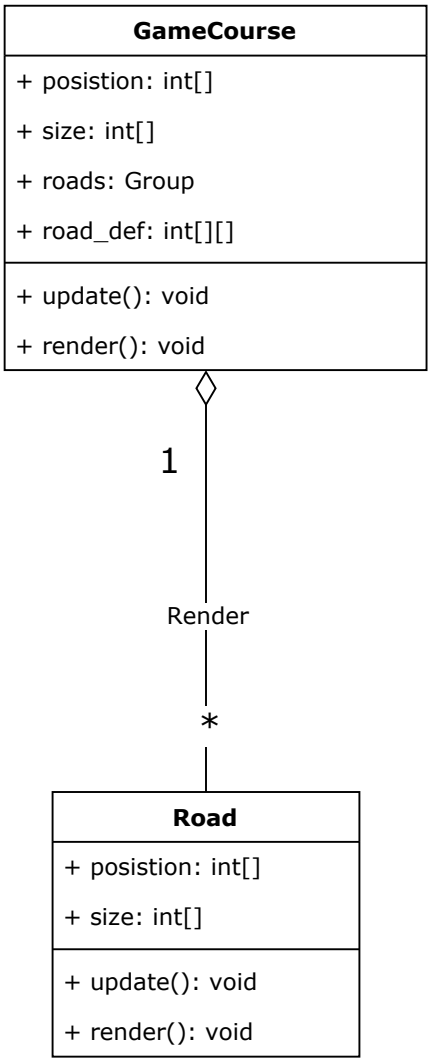
Player


Player
+ pid: string
+ name: string
+ budget: int
+ gameLevl: int
+ hiredChara: Group
+ numInvaded: int
+ hire(charaIdx: int): Characters
+ layOff(hiredIdx: int): void
+ upgradeHired(chara: Characters): void
+ incrBudget(amount: int): void

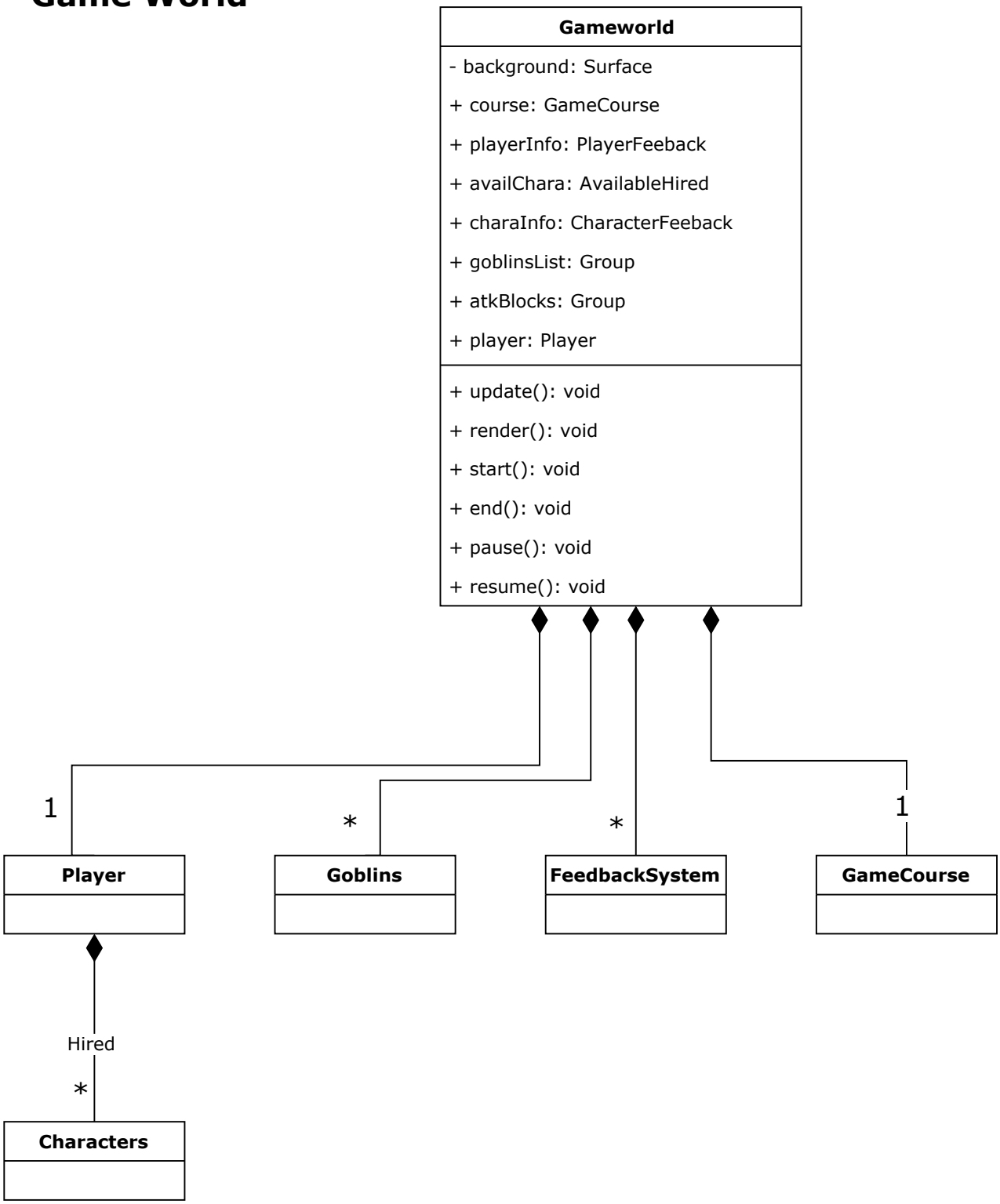
Feedback System



Game Course


GameCourse
+ posistion: int[]
+ size: int[]
+ roads: Group
+ road_def: int[][]
+ update(): void
+ render(): void
1
Render
*
Road
+ posistion: int[]
+ size: int[]
+ update(): void
+ render(): void

Game World


Gameworld
- background: Surface
+ course: GameCourse
+ playerInfo: PlayerFeeback
+ availChara: AvailableHired
+ charaInfo: CharacterFeeback
+ goblinsList: Group
+ atkBlocks: Group
+ player: Player
+ update(): void
+ render(): void
+ start(): void
+ end(): void
+ pause(): void
+ resume(): void
1
*
*
1
Player
Goblins
FeedbackSystem
GameCourse
Hired
*
Characters