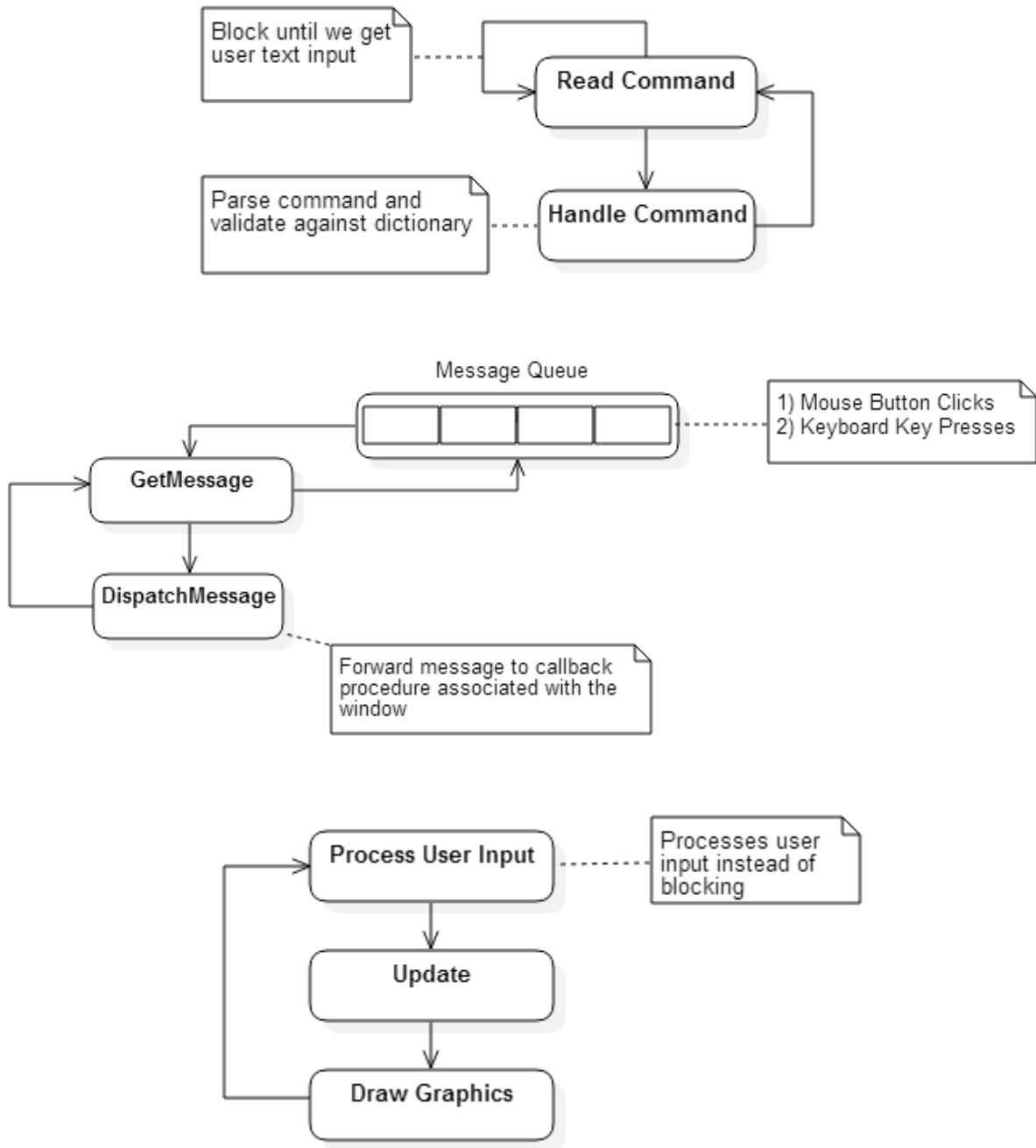
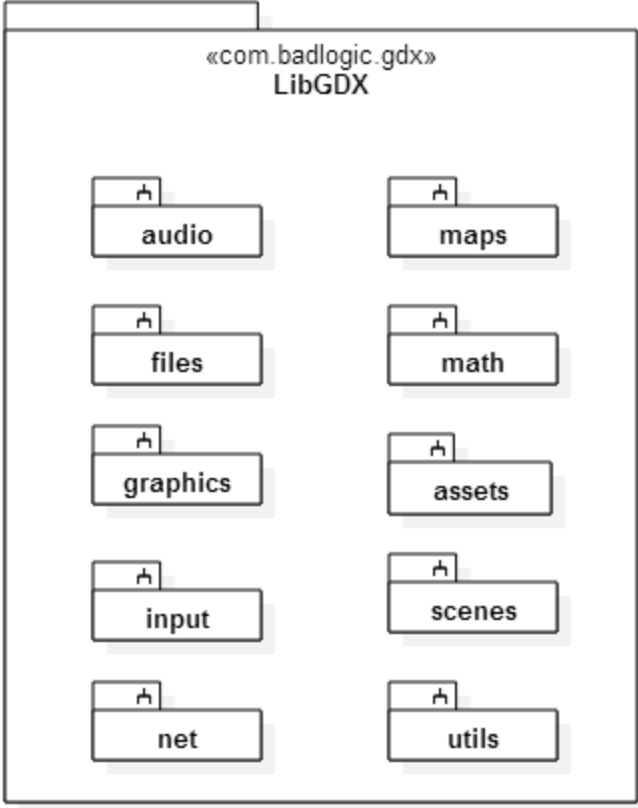
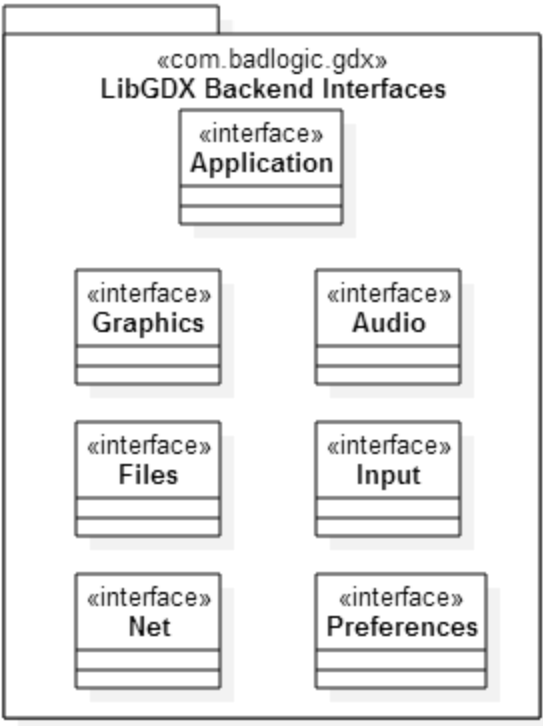
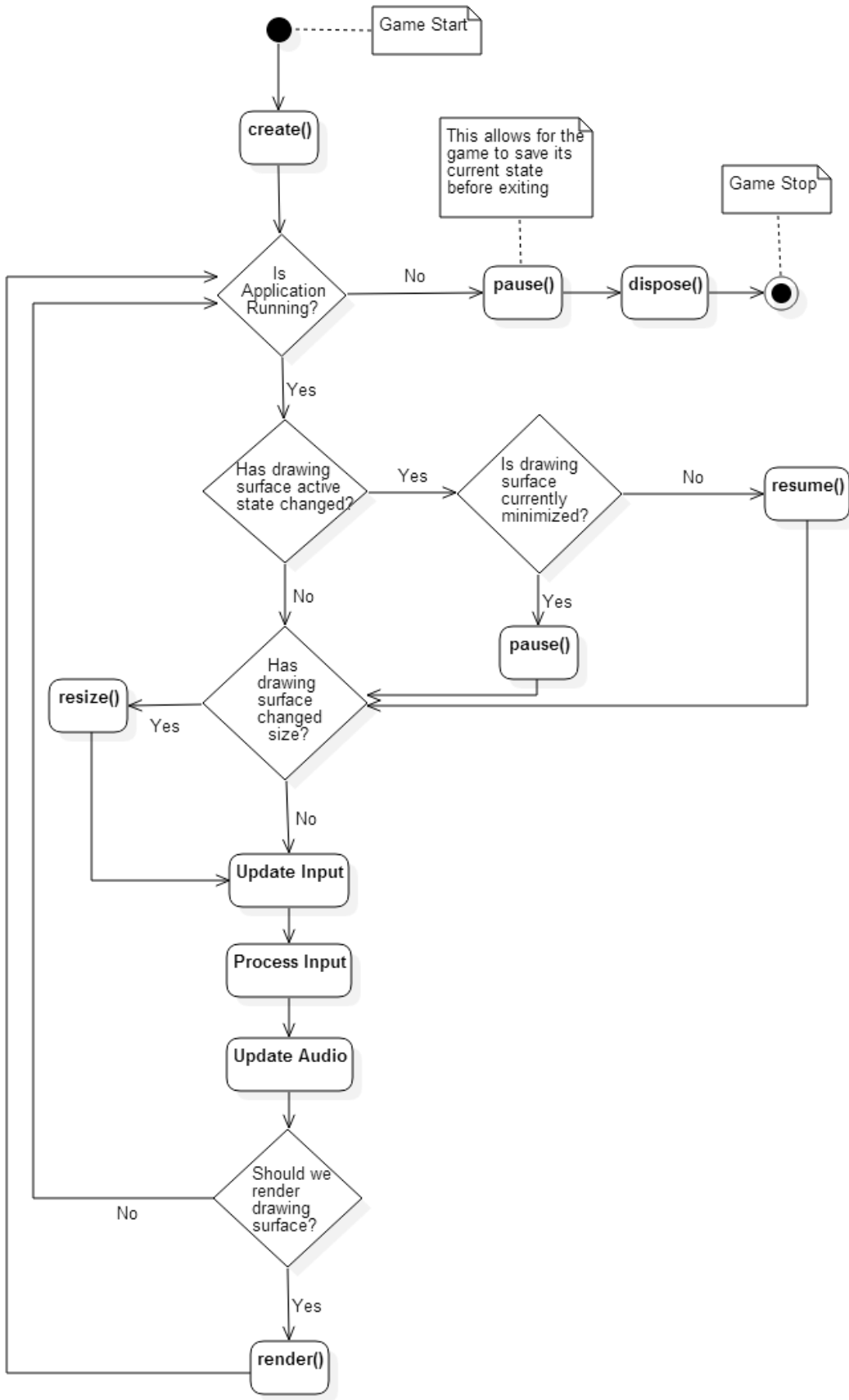
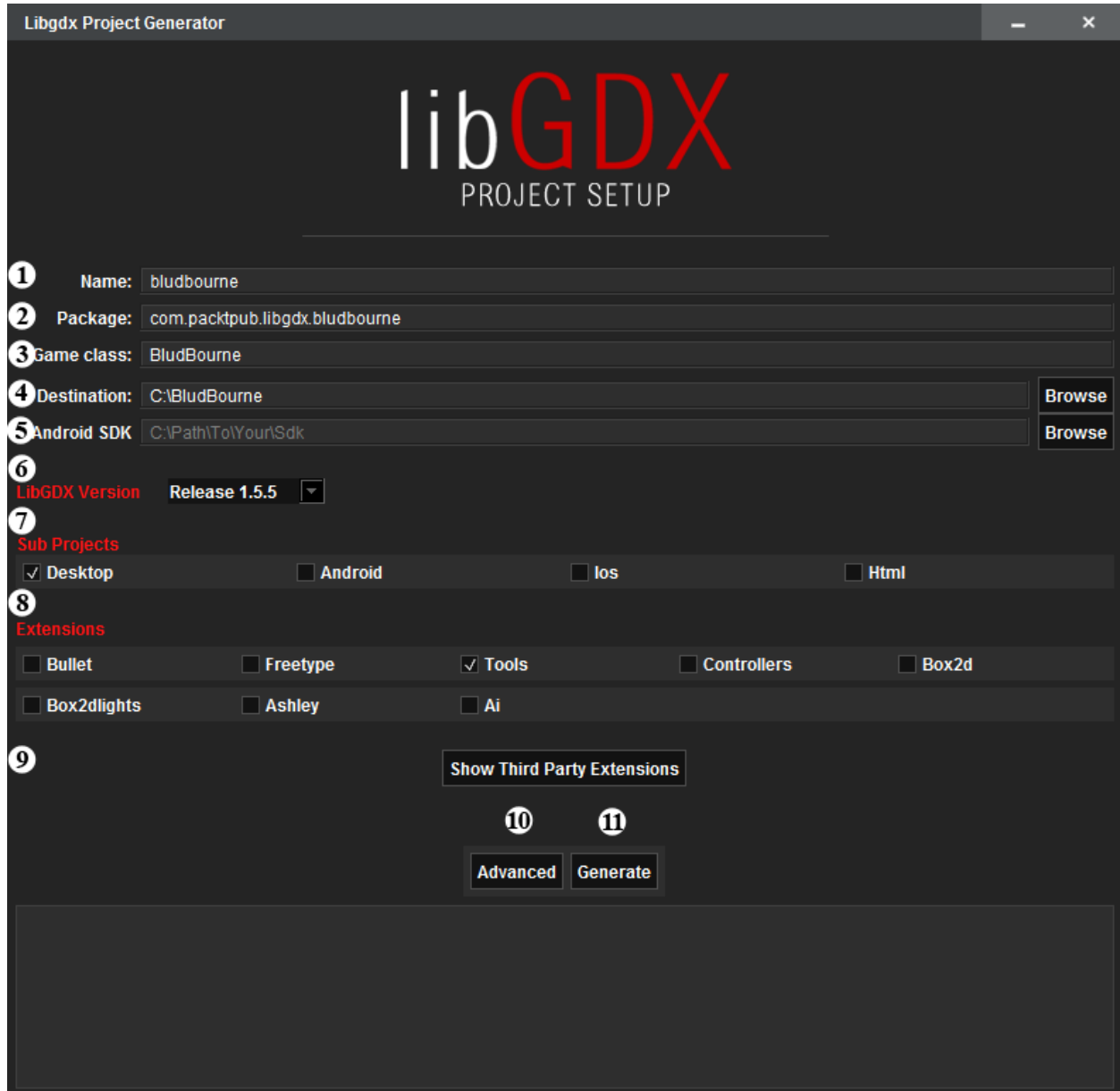
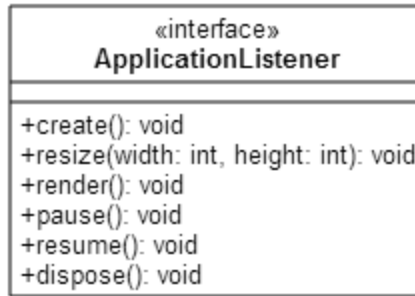


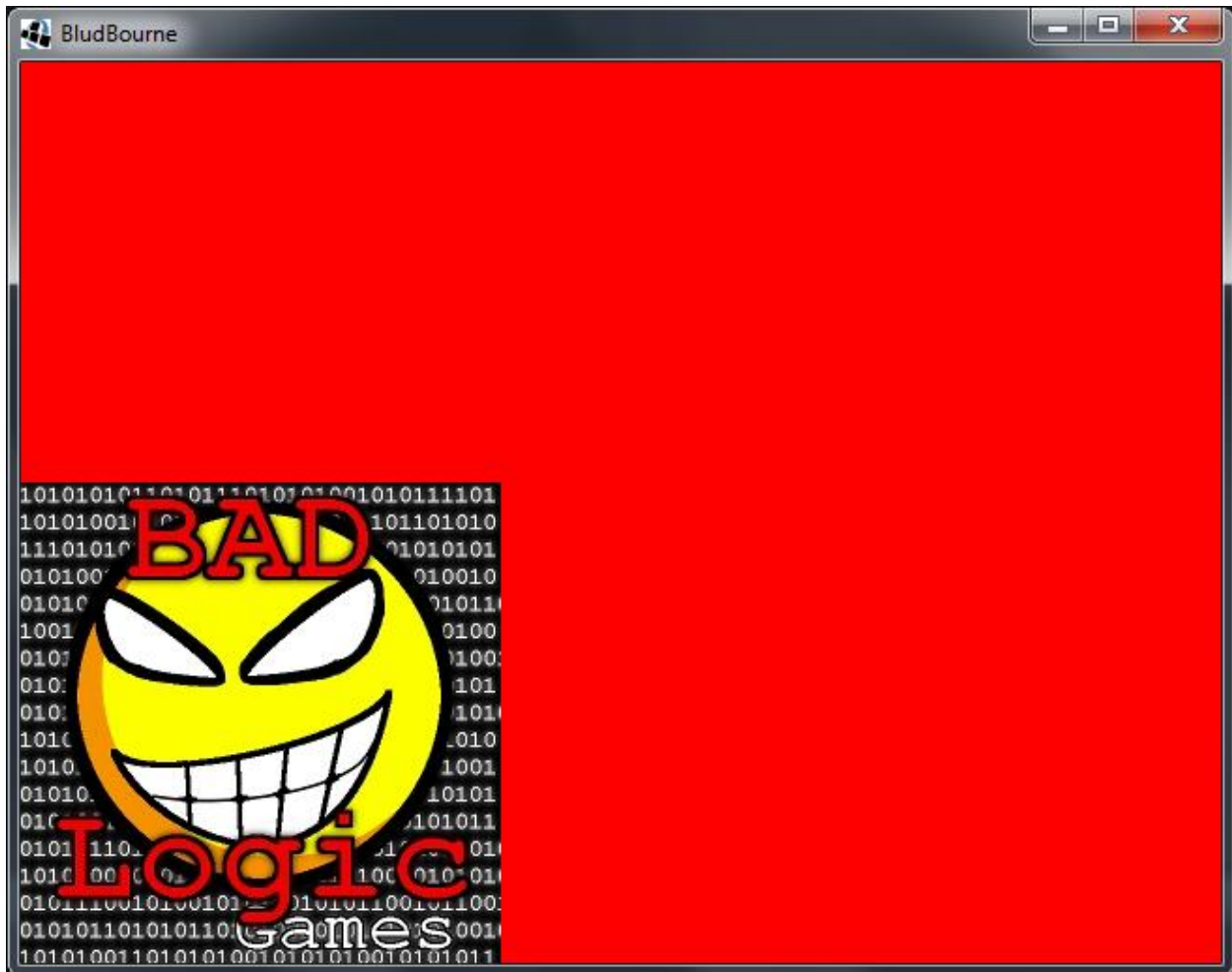
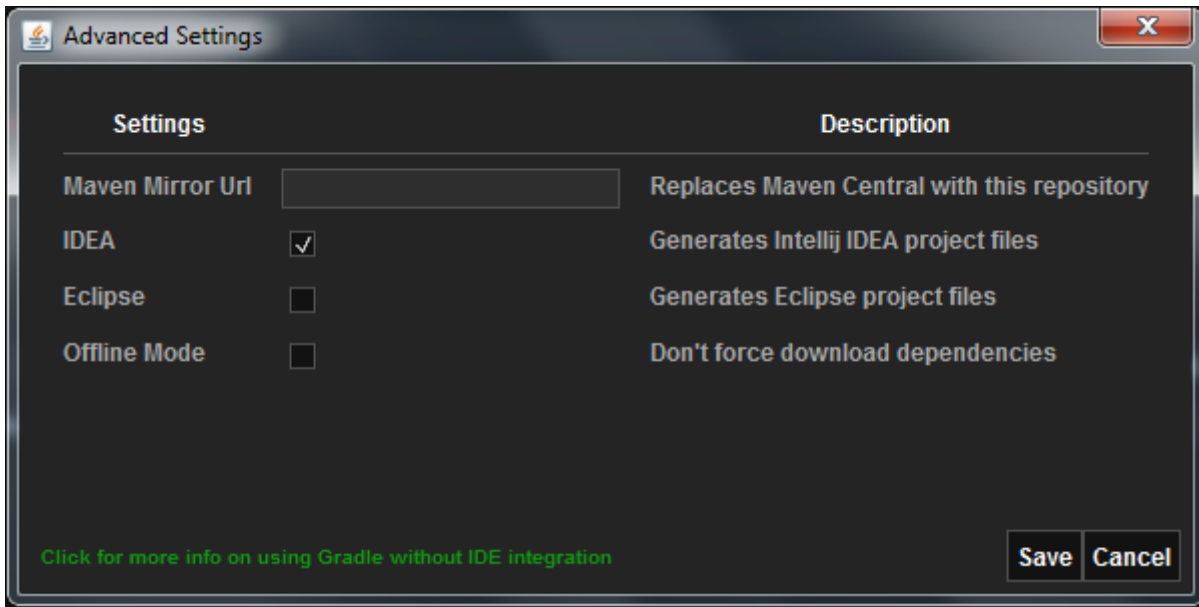
Chapter 1, As the Prophecy Foretold, a Hero is Born



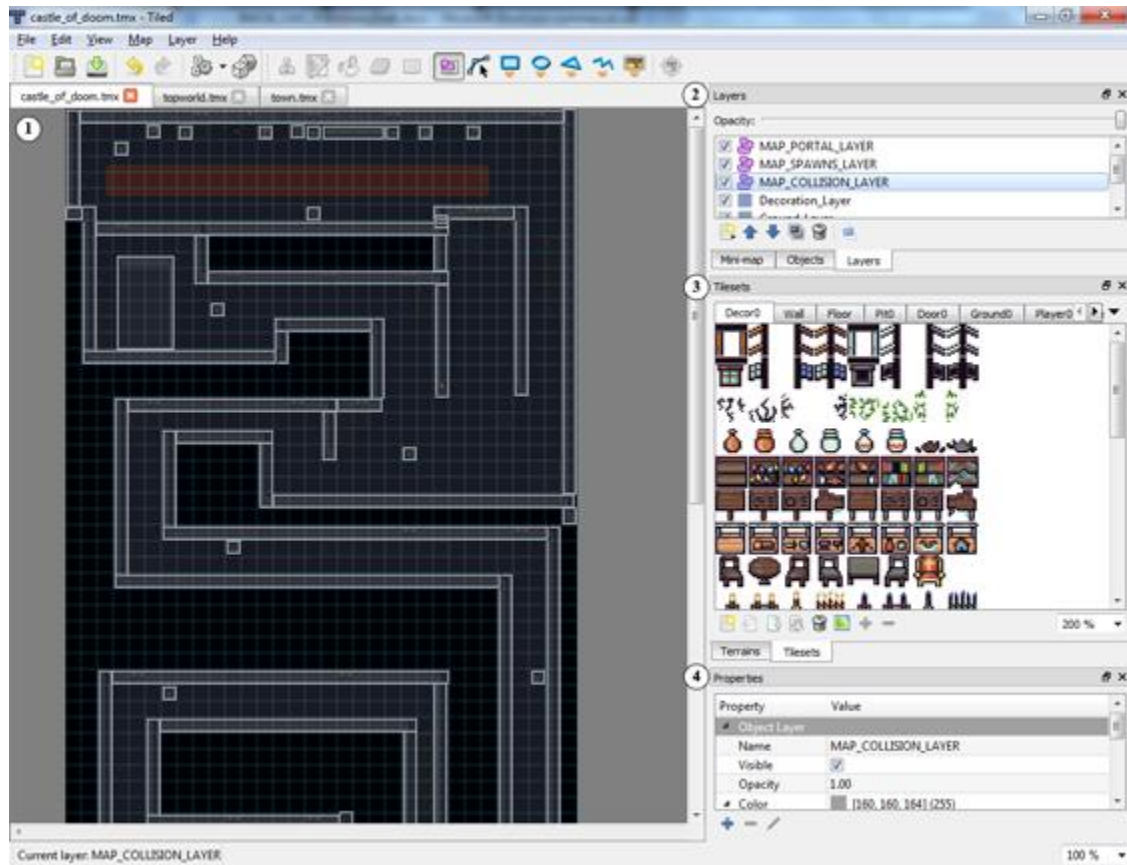


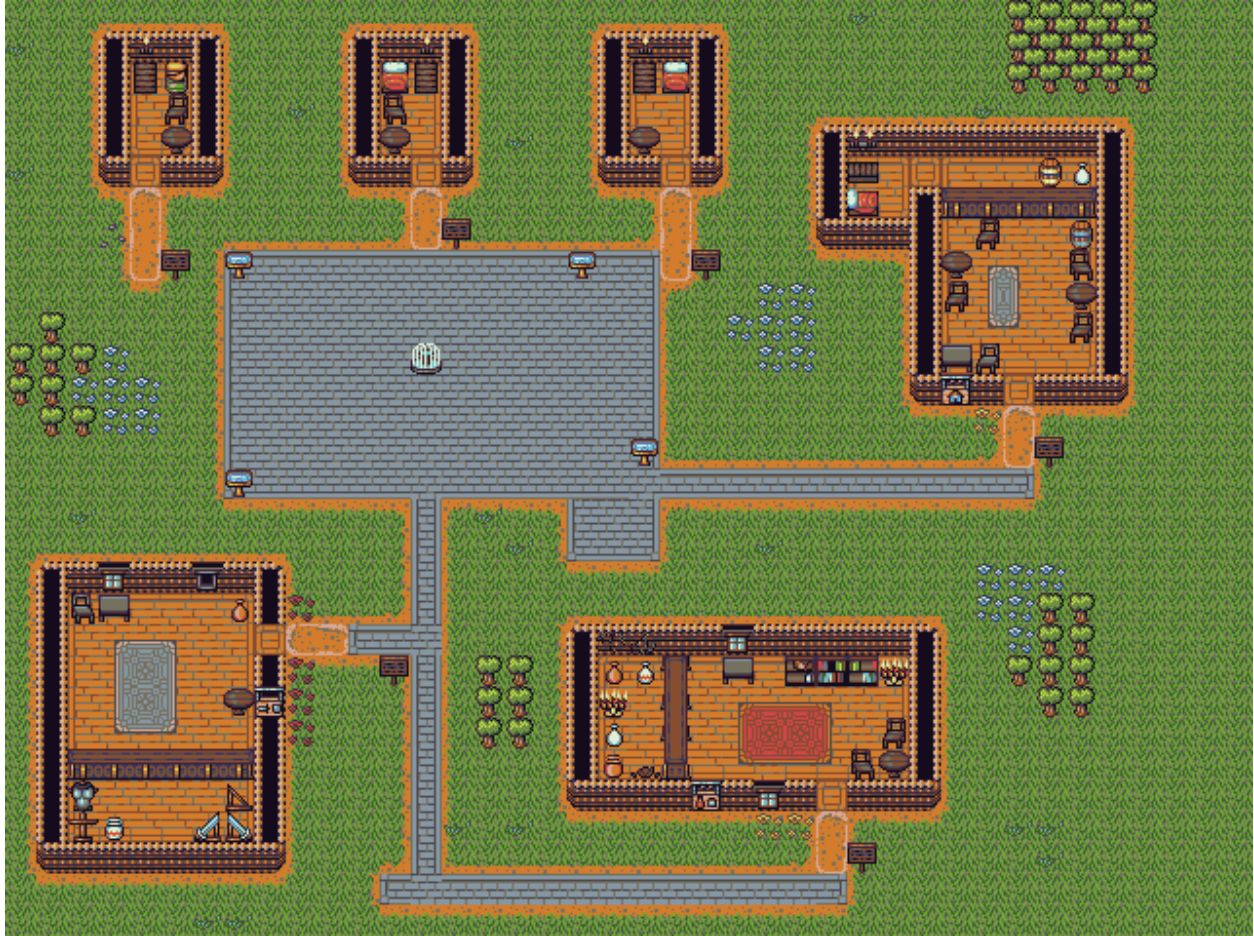


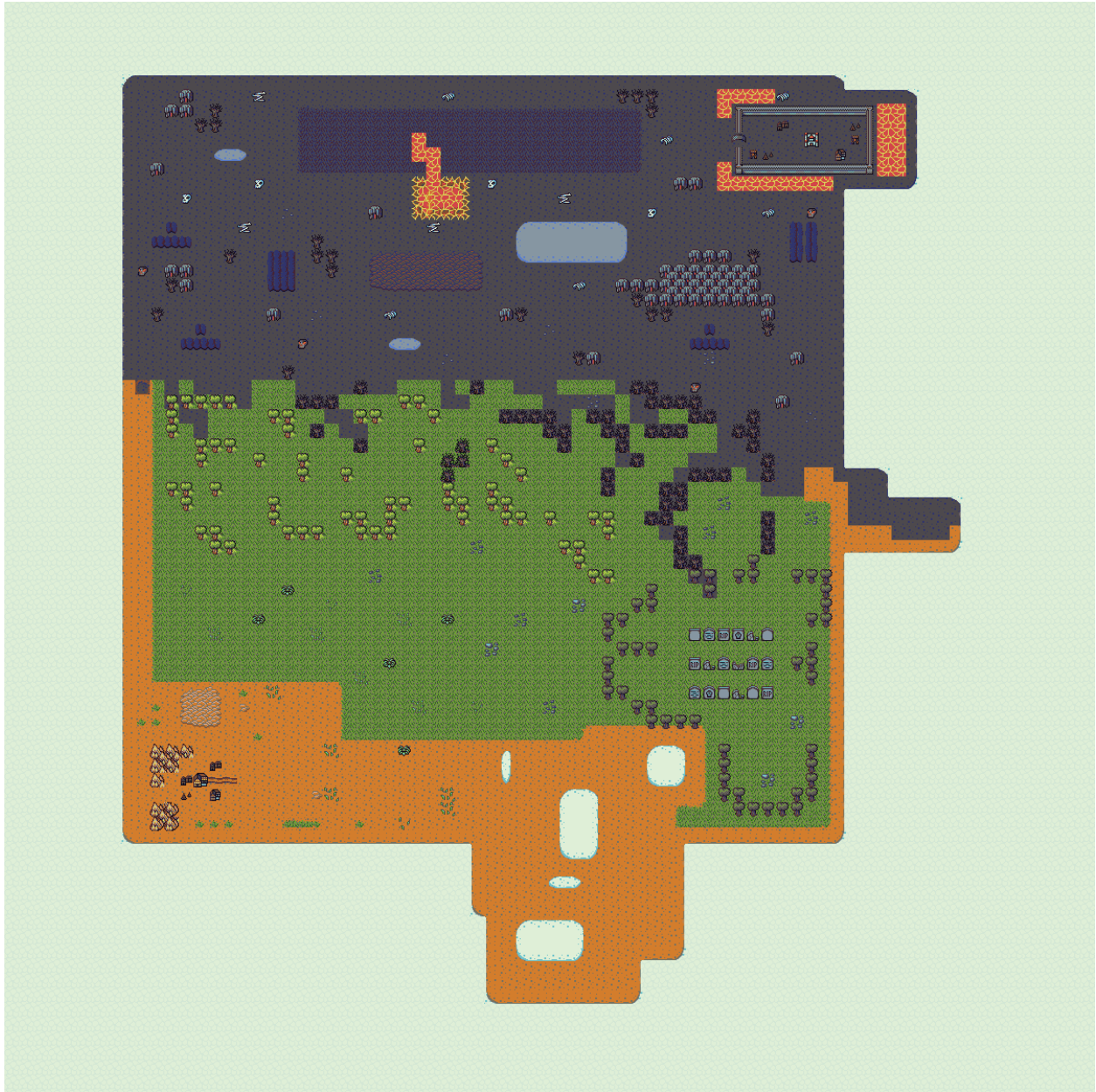


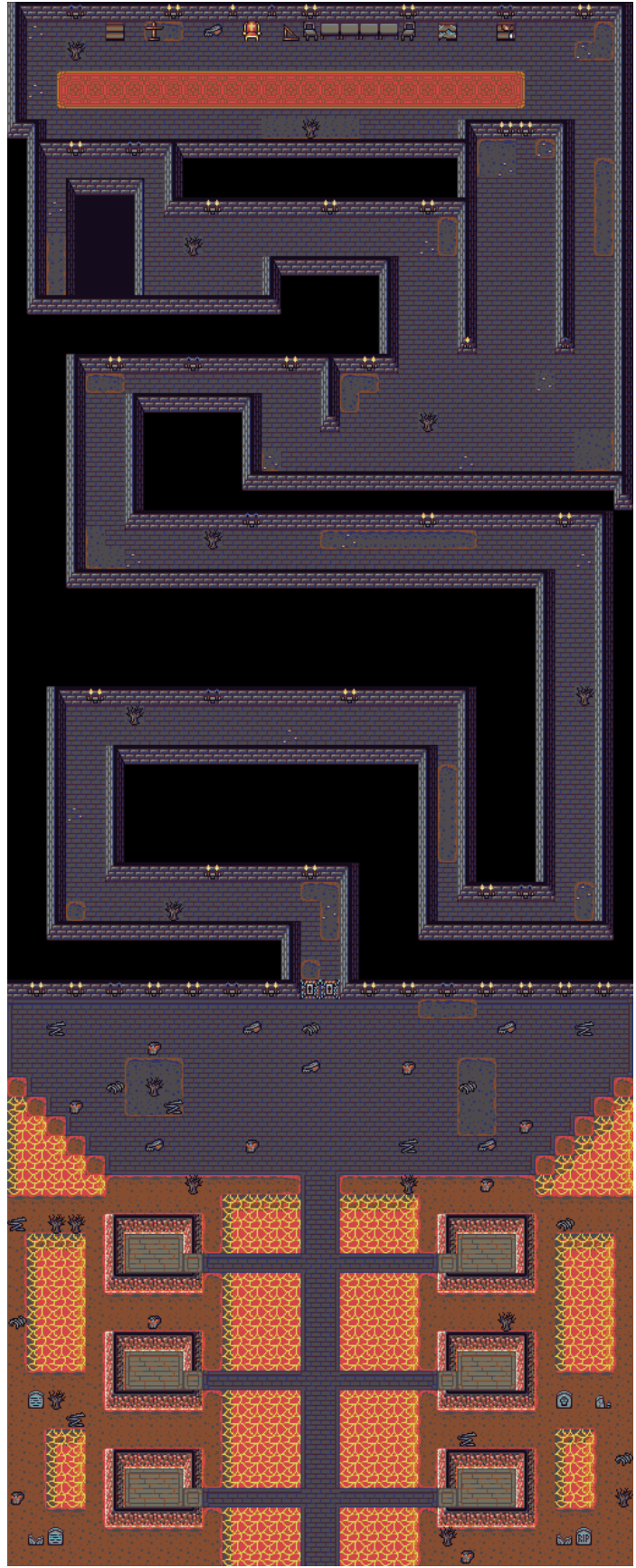


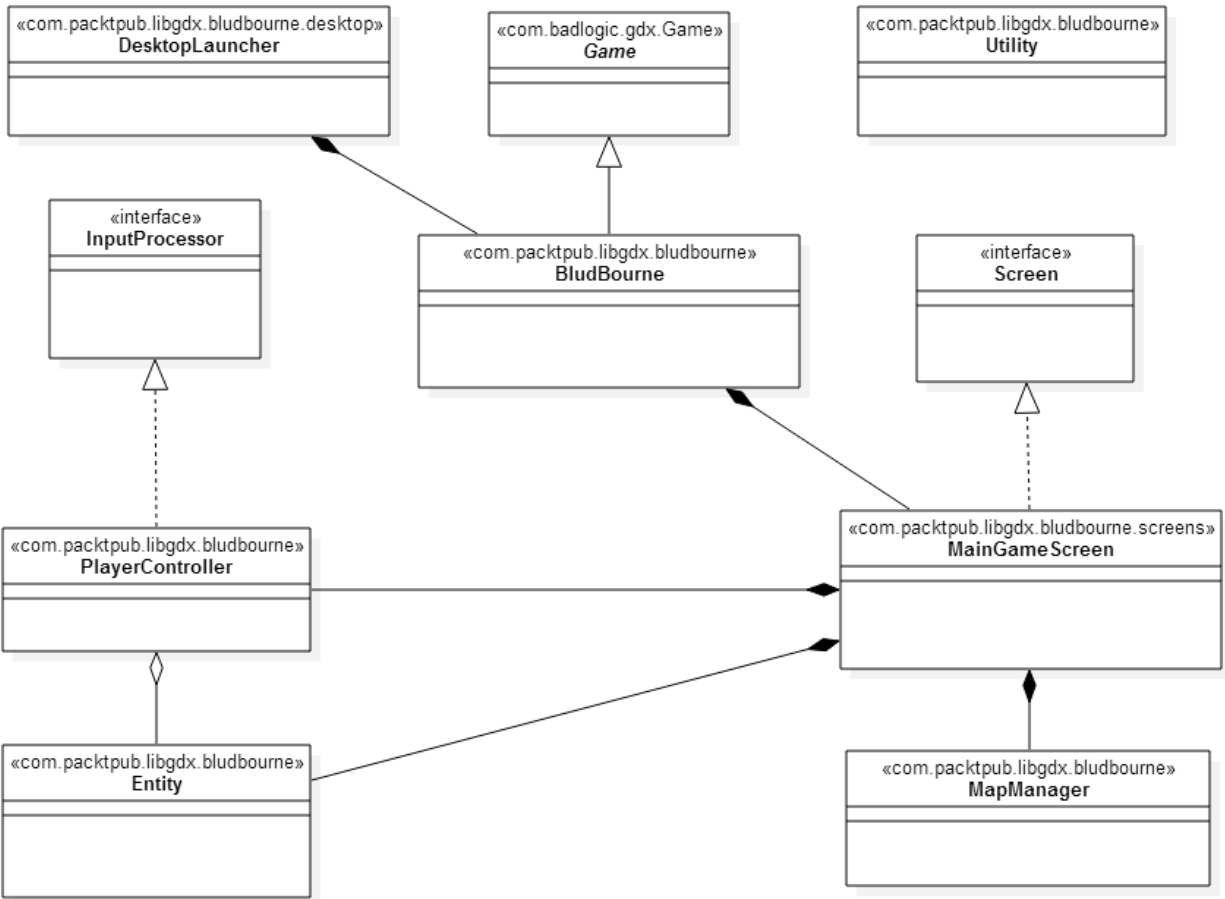
Chapter 2, Welcome to the Land of BludBourne









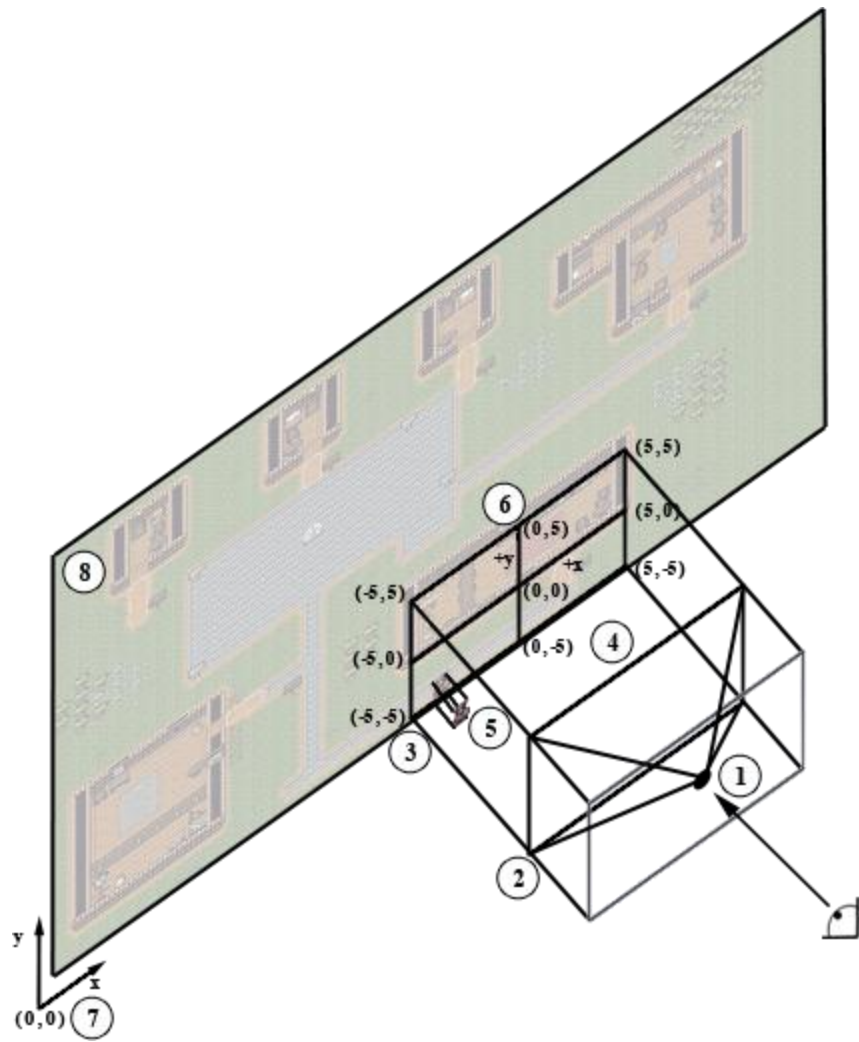


```

classDiagram
    class BludBourne {
        (from BludBourne)
        +_mainGameScreen: MainGameScreen {readOnly}
        +create(): void
        +dispose(): void
    }
  
```

Utility (from Utility)
-TAG: String {readOnly} - filePathResolver: InternalFileHandleResolver + _assetManager: AssetManager {readOnly}
+unloadAsset(assetFilePath: String): void +loadCompleted(): float +numberAssetsQueued(): int +updateAssetLoading(): boolean +isAssetLoaded(fileName: String): boolean +loadMapAsset(mapFilePath: String): void +getMapAsset(mapFilePath: String): TiledMap +loadTextureAsset(textureFilePath: String): void +getTextureAsset(textureFilePath: String): Texture

MainGameScreen (from MainGameScreen)
-TAG: String {readOnly} - _currentPlayerFrame: TextureRegion - _currentPlayerSprite: Sprite - _mapRenderer: OrthogonalTiledMapRenderer = null - _camera: OrthographicCamera = null - _player: Entity
«constructor»+MainGameScreen() +show(): void +hide(): void +render(delta: float): void +resize(width: int, height: int): void +pause(): void +resume(): void +dispose(): void -setupViewport(width: int, height: int): void -isCollisionWithMapLayer(boundingBox: Rectangle): boolean -updatePortalLayerActivation(boundingBox: Rectangle): boolean



MapManager
(from MapManager)

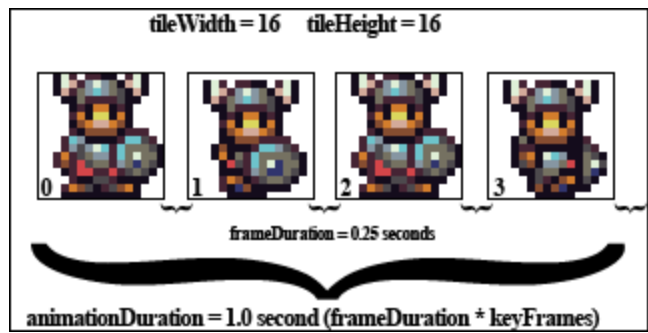
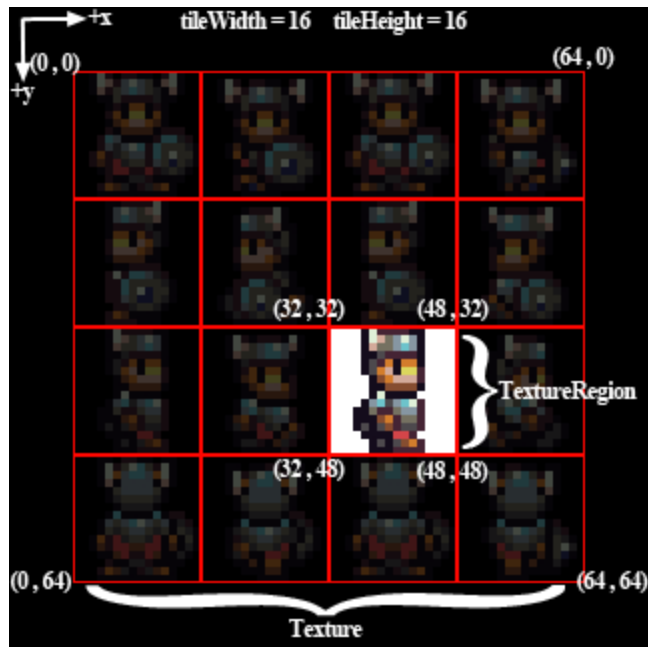
```
-TAG: String {readOnly}
- _mapTable: Hashtable
- _playerStartLocationTable: Hashtable
-TOP_WORLD: String = "TOP_WORLD" {readOnly}
-TOWN: String = "TOWN" {readOnly}
-CASTLE OF DOOM: String = "CASTLE OF DOOM" {readOnly}
-MAP_COLLISION_LAYER: String = "MAP_COLLISION_LAYER" {readOnly}
-MAP_SPAWNS_LAYER: String = "MAP_SPAWNS_LAYER" {readOnly}
-MAP_PORTAL_LAYER: String = "MAP_PORTAL_LAYER" {readOnly}
-PLAYER_START: String = "PLAYER_START" {readOnly}
- _playerStartPositionRect: Vector2
- _closestPlayerStartPosition: Vector2
- _convertedUnits: Vector2
- _playerStart: Vector2
- _currentMap: TiledMap = null
- _currentMapName: String
- _collisionLayer: MapLayer = null
- _portalLayer: MapLayer = null
- _spawnsLayer: MapLayer = null
+UNIT_SCALE: float {readOnly}

«constructor»+MapManager()
+loadMap(mapName: String): void
+getCurrentMap(): TiledMap
+getCollisionLayer(): MapLayer
+getPortalLayer(): MapLayer
+getPlayerStartUnitScaled(): Vector2
-setClosestStartPosition(position: Vector2): void
+setClosestStartPositionFromScaledUnits(position: Vector2): void
```

Entity
(from Entity)

-TAG: String {readOnly}
- defaultSpritePath: String = "sprites/characters/Warrior.png" {readOnly}
- velocity: Vector2
- entityID: String
- walkLeftAnimation: Animation
- walkRightAnimation: Animation
- walkUpAnimation: Animation
- walkDownAnimation: Animation
- walkLeftFrames: Array
- walkRightFrames: Array
- walkUpFrames: Array
- walkDownFrames: Array
#_nextPlayerPosition: Vector2
#_currentPlayerPosition: Vector2
#_frameTime: float = 0f
#_frameSprite: Sprite = null
#_currentFrame: TextureRegion = null
+FRAME_WIDTH: int = 16 {readOnly}
+FRAME_HEIGHT: int = 16 {readOnly}
+boundingBox: Rectangle

«constructor»+Entity()
+initEntity(): void
+update(delta: float): void
+init(startX: float, startY: float): void
+setBoundingBoxSize(percentageWidthReduced: float, percentageHeightReduced: float): void
-loadDefaultSprite(): void
-loadAllAnimations(): void
+dispose(): void
+setState(state: State): void
+getFrameSprite(): Sprite
+getFrame(): TextureRegion
+getCurrentPosition(): Vector2
+setCurrentPosition(currentPositionX: float, currentPositionY: float): void
+setDirection(direction: Direction, deltaTime: float): void
+setNextPositionToCurrent(): void
+calculateNextPosition(currentDirection: Direction, deltaTime: float): void



PlayerController
(from PlayerController)

-TAG: String {readOnly}

-keys: Map

-mouseButtons: Map

-lastMouseCoordinates: Vector3

-_player: Entity

+keyDown(keycode: int): boolean

+keyUp(keycode: int): boolean

+keyTyped(character: char): boolean

+touchDown(screenX: int, screenY: int, pointer: int, button: int): boolean

+touchUp(screenX: int, screenY: int, pointer: int, button: int): boolean

+touchDragged(screenX: int, screenY: int, pointer: int): boolean

+mouseMoved(screenX: int, screenY: int): boolean

+scrolled(amount: int): boolean

«constructor»+PlayerController(player: Entity)

+dispose(): void

+leftPressed(): void

+rightPressed(): void

+upPressed(): void

+downPressed(): void

+quitPressed(): void

+setClickedMouseCoordinates(x: int, y: int): void

+selectMouseButtonPressed(x: int, y: int): void

+doActionMouseButtonPressed(x: int, y: int): void

+leftReleased(): void

+rightReleased(): void

+upReleased(): void

+downReleased(): void

+quitReleased(): void

+selectMouseButtonReleased(x: int, y: int): void

+doActionMouseButtonReleased(x: int, y: int): void

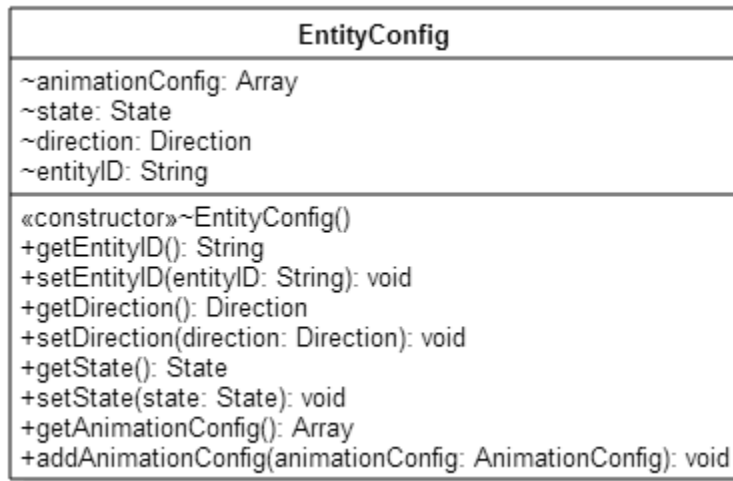
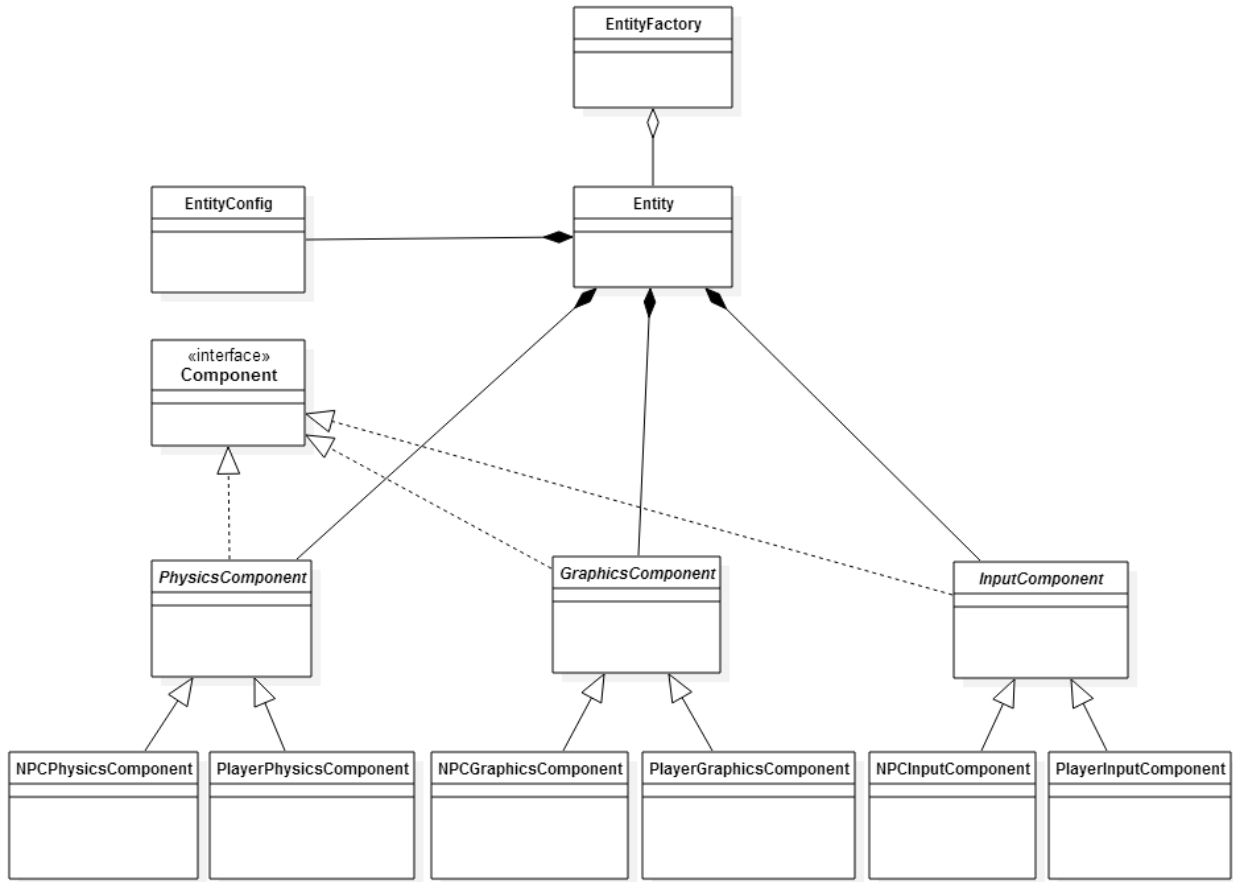
+update(delta: float): void

+hide(): void

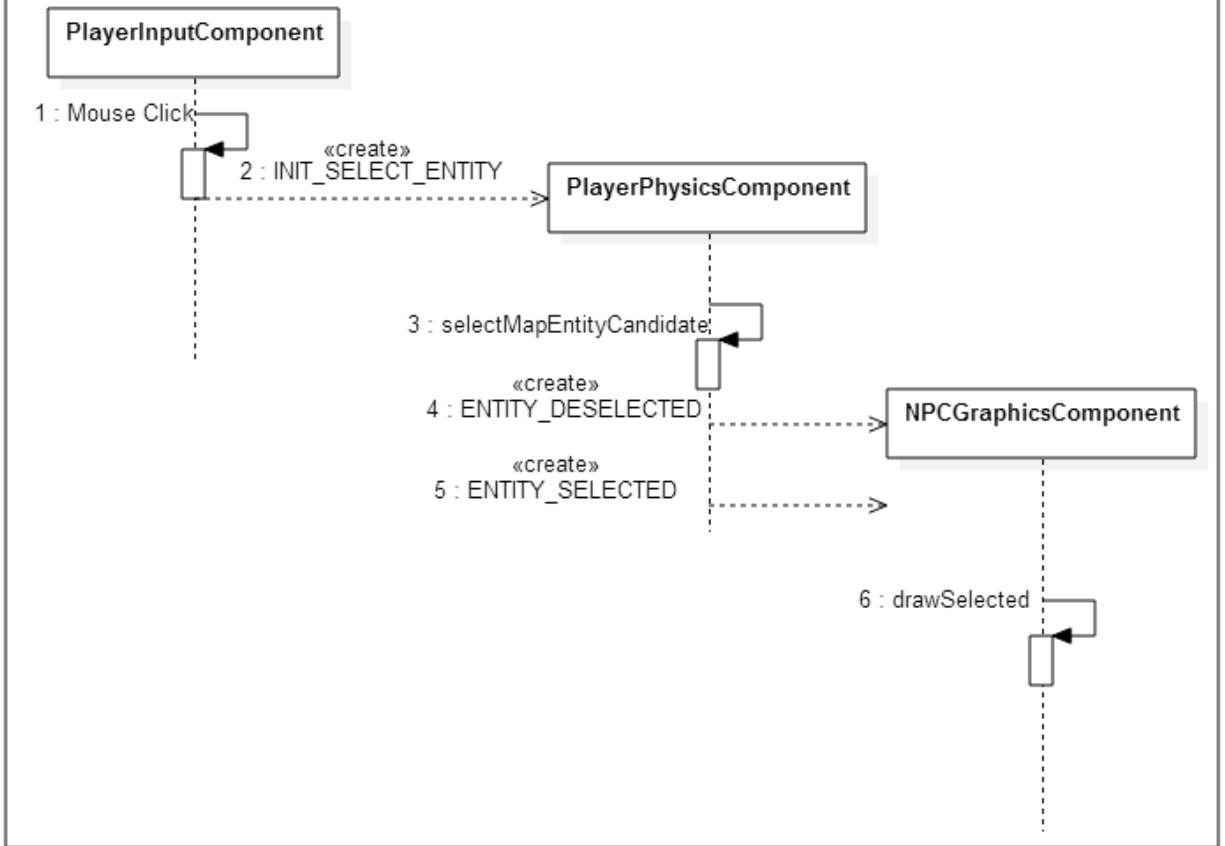
-processInput(delta: float): void

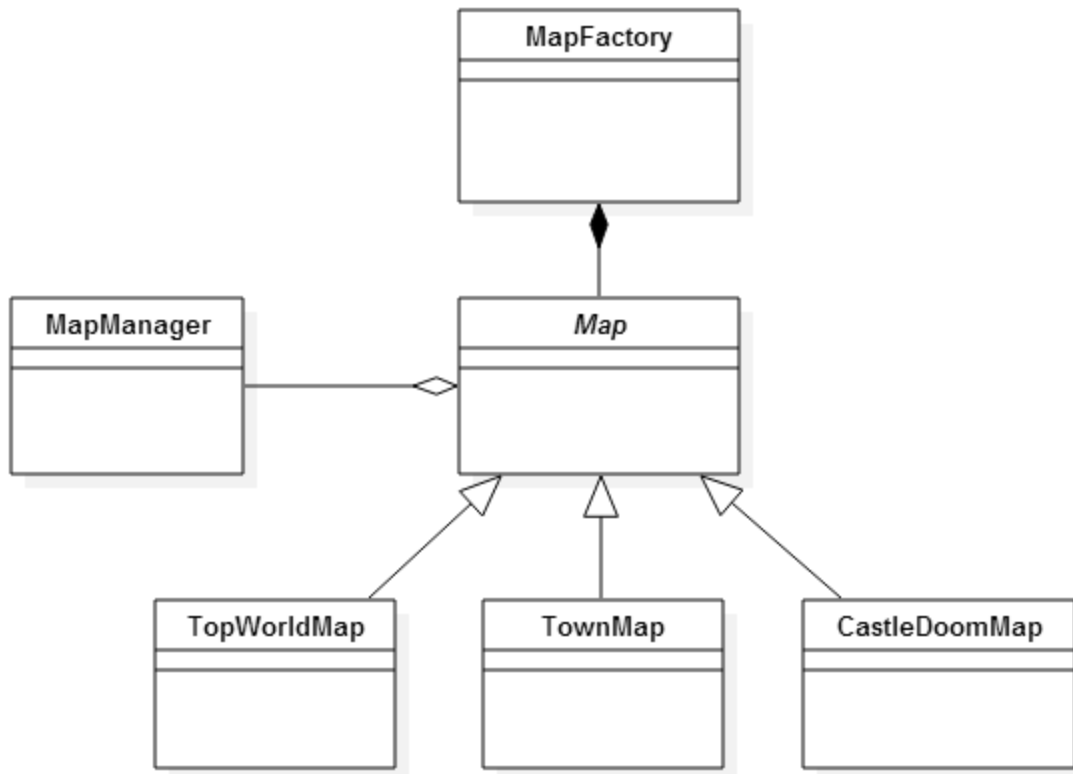
Chapter 3, It's Pretty Lonely in BludBourne...





interaction MessageSequenceDiagram



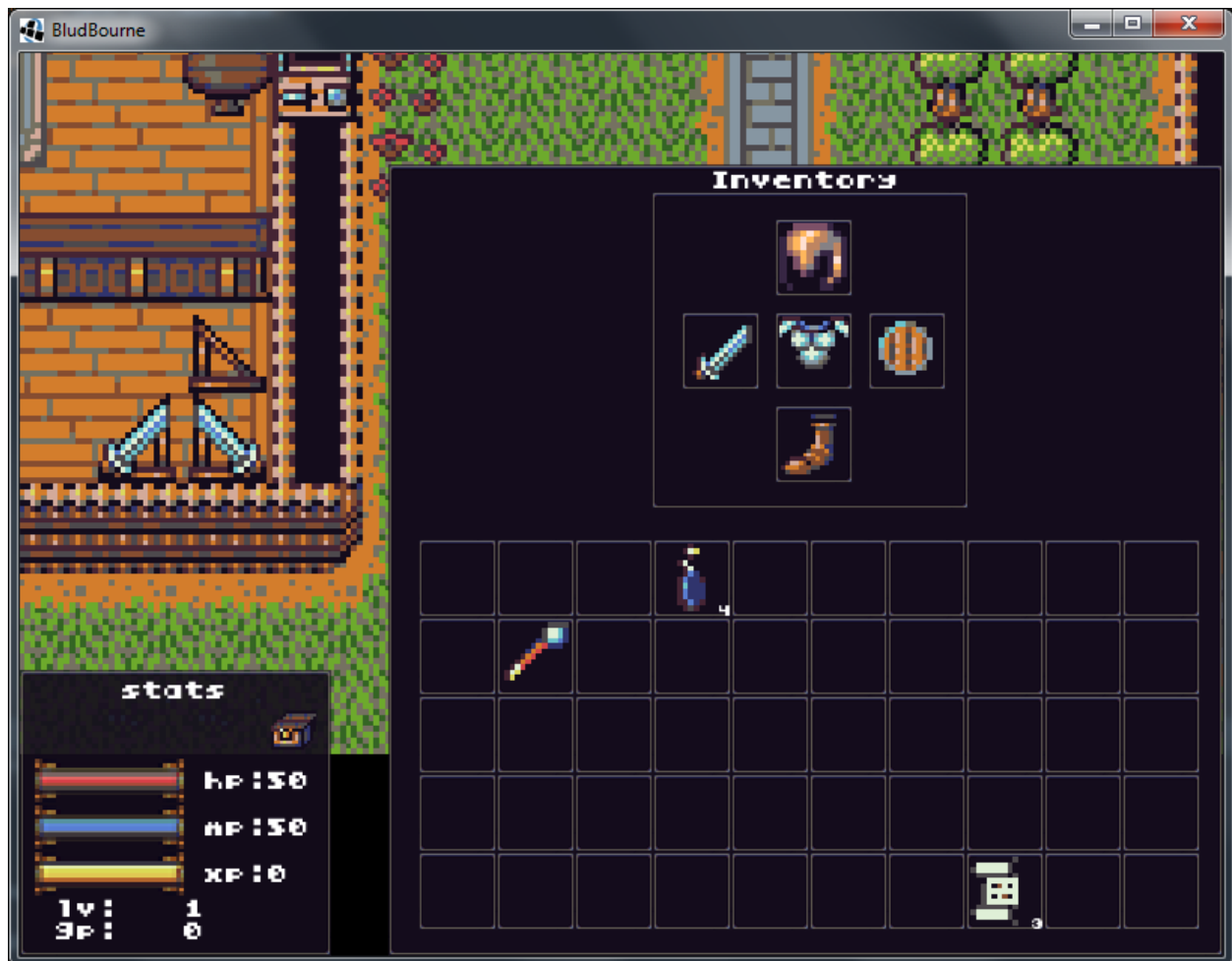


Map

```
-TAG: String {readOnly}
+UNIT_SCALE: float {readOnly}
#COLLISION_LAYER: String = "MAP_COLLISION_LAYER" {readOnly}
#SPAWNS_LAYER: String = "MAP_SPAWNS_LAYER" {readOnly}
#PORTAL_LAYER: String = "MAP_PORTAL_LAYER" {readOnly}
#PLAYER_START: String = "PLAYER_START" {readOnly}
#NPC_START: String = "NPC_START" {readOnly}
#_json: Json
#_playerStartPositionRect: Vector2
#_closestPlayerStartPosition: Vector2
#_convertedUnits: Vector2
#_currentMap: TiledMap = null
#_playerStart: Vector2
#_npcStartPositions: Array
#_specialNPCStartPositions: Hashtable
#_collisionLayer: MapLayer = null
#_portalLayer: MapLayer = null
#_spawnsLayer: MapLayer = null
#_currentMapType: MapType
#_mapEntities: Array

«constructor»~Map(mapType: MapType, fullMapPath: String)
+getMapEntities(): Array
+getPlayerStart(): Vector2
+updateMapEntities(mapMgr: MapManager, batch: Batch, delta: float): void
+getCollisionLayer(): MapLayer
+getPortalLayer(): MapLayer
+getCurrentTiledMap(): TiledMap
+getPlayerStartUnitScaled(): Vector2
-getNPCStartPositions(): Array
-getSpecialNPCStartPositions(): Hashtable
-setClosestStartPosition(position: Vector2): void
+setClosestStartPositionFromScaledUnits(position: Vector2): void
```

Chapter 4, Where Do I Put My Stuff?



PlayerHUD
- _stage: Stage - _viewport: Viewport - _camera: Camera
«constructor»+PlayerHUD(camera: Camera, player: Entity) +getStage(): Stage +onNotify(profileManager: ProfileManager, event: ProfileEvent): void +show(): void +render(delta: float): void +resize(width: int, height: int): void +pause(): void +resume(): void +hide(): void +dispose(): void



GDX Texture Packer

PROJECT CONFIGURATION

New pack Open project Save project

statusui Input directory: f:\work\statusui_sprites Output directory: x:\work\core\assets\skins File name: statusui.atlas

Pack'em all Pack selected

SELECTED PACK SETTINGS

Copy settings to all packs

Encoding format: RGBA8888 Min filter: Nearest
Output format: png Mag filter: Nearest

Min page width: 16 Min page height: 16
Max page width: 512 Max page height: 512

PaddingX: 2 PaddingY: 2
WrapX: ClampToEdge WrapY: ClampToEdge

Jpeg quality: 1
Alpha threshold: 0

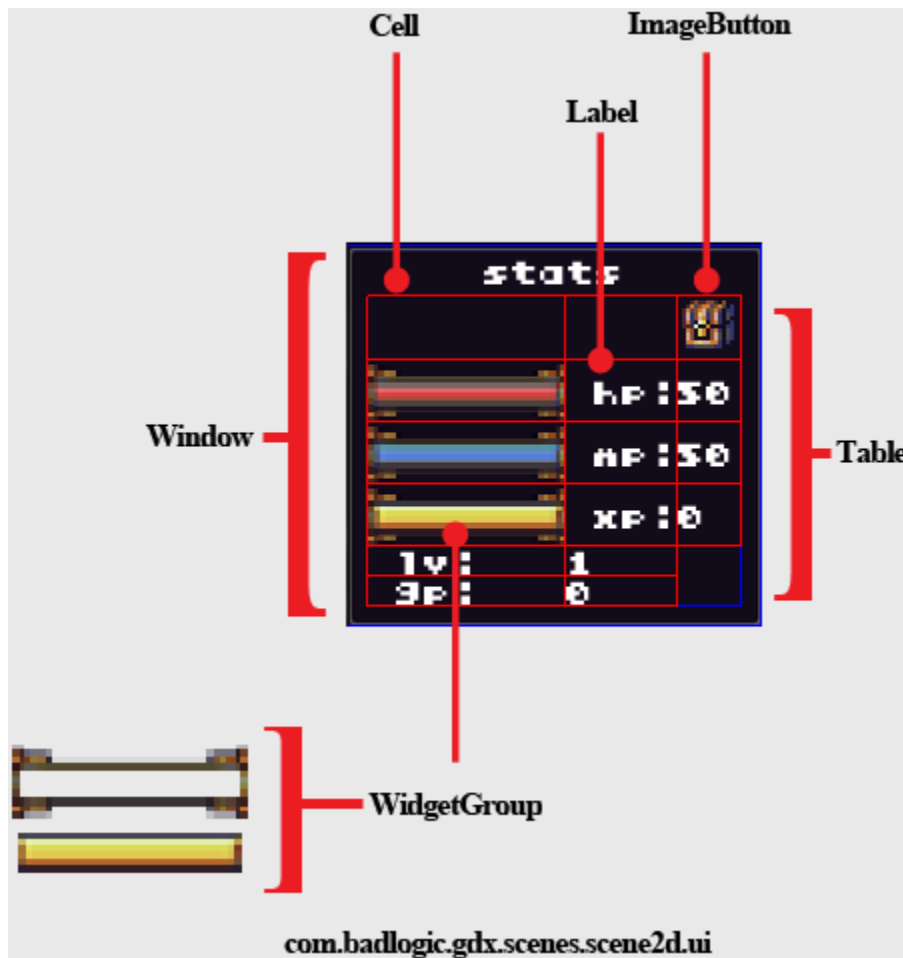
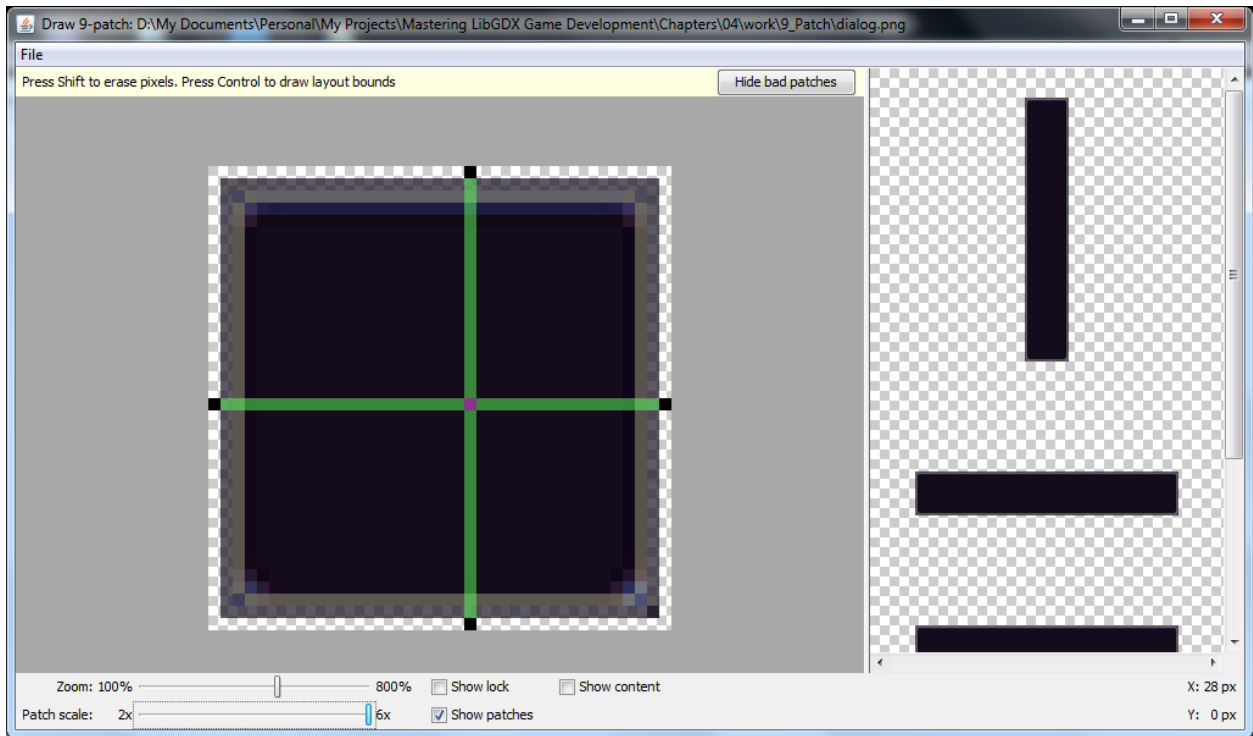
Use fast algorithm Force PoT
 Duplicate padding Use aliases
 Edge padding Ignore blank imgs
 Strip whitespace X Debug
 Strip whitespace Y
 Allow rotations

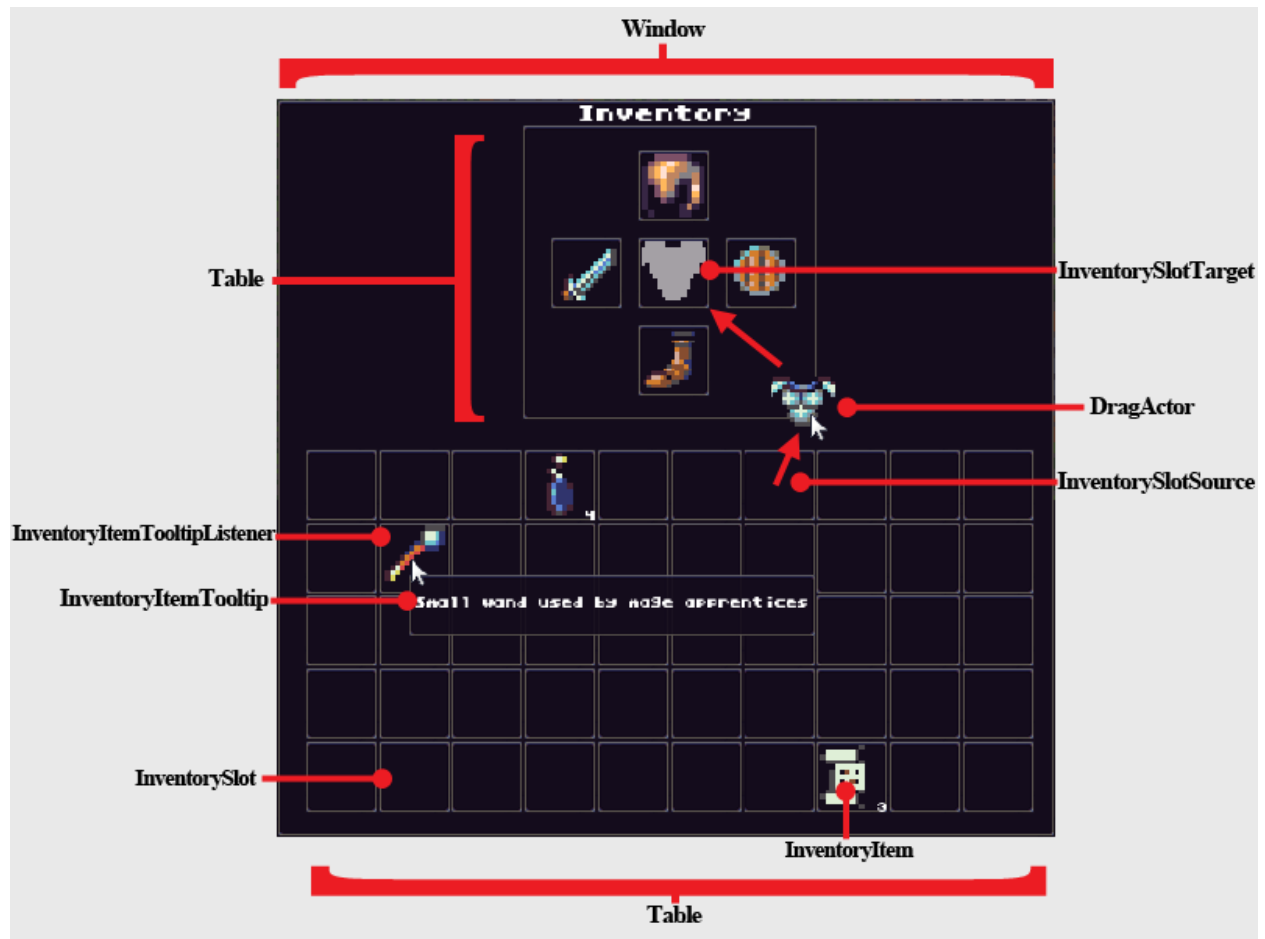
v3.2.0 (latest version)

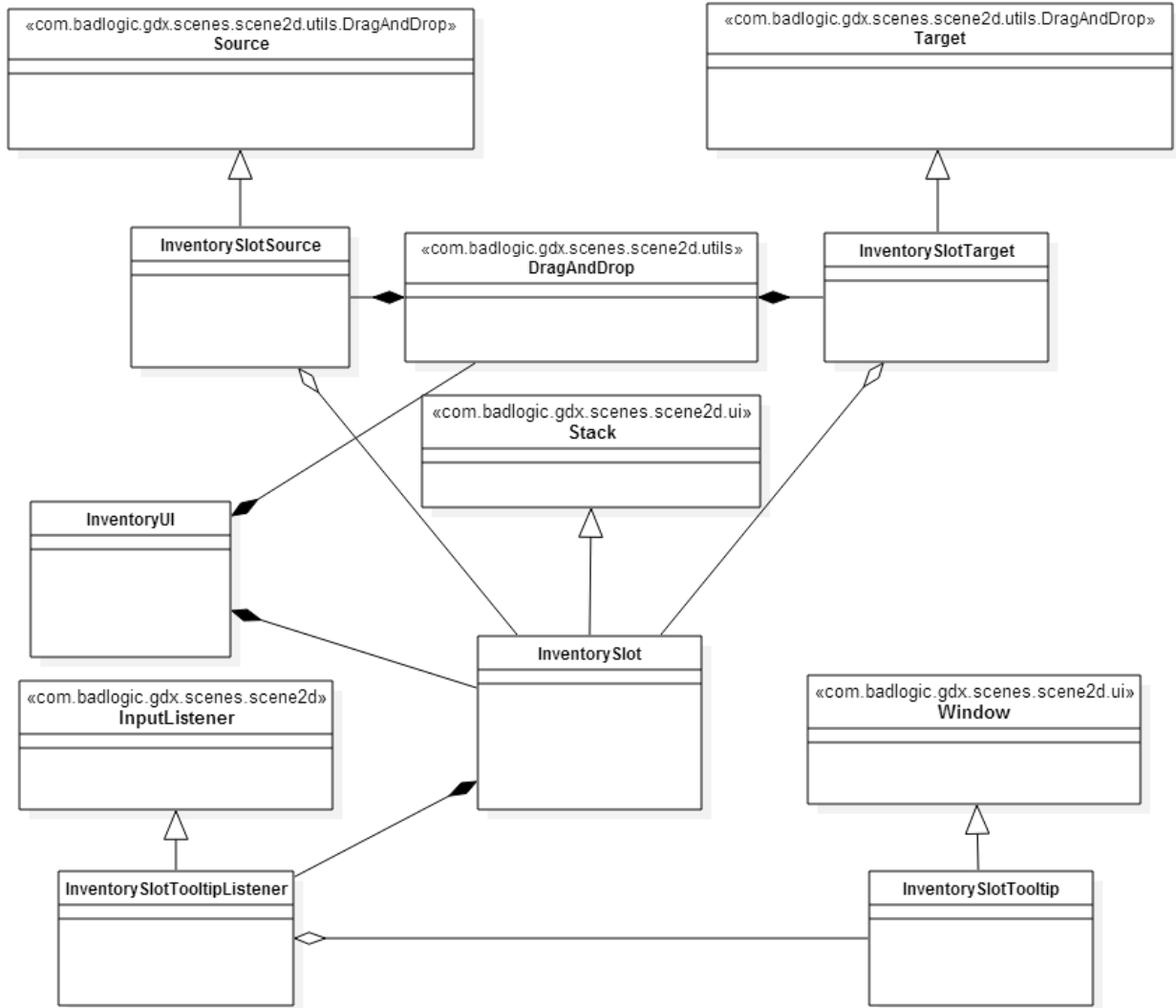
SELECTED PACK VIEW

Next page
Previous page

Page 1 / 1
Zoom: 200 %
Fps: 61







```

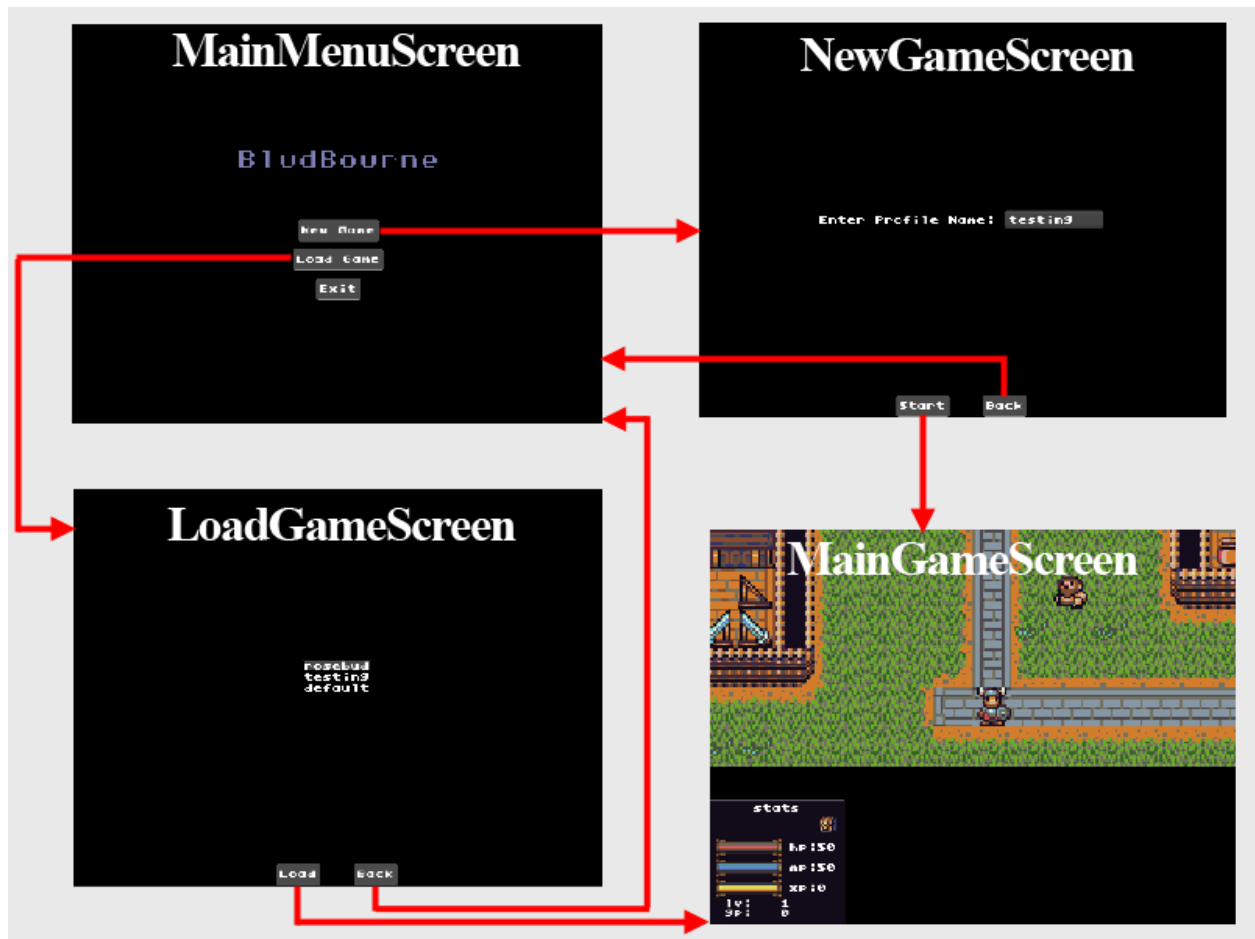
class InventorySlot {
    -_numItemsLabel: Label
    -_numItemsVal: int = 0
    -_filterItemType: int

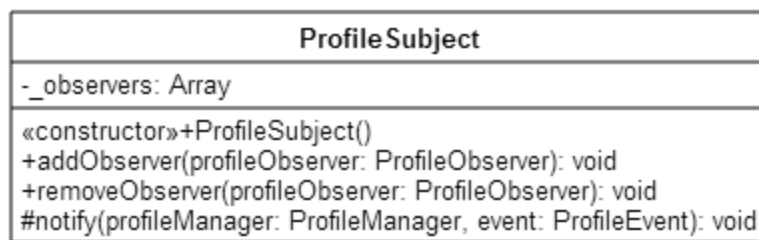
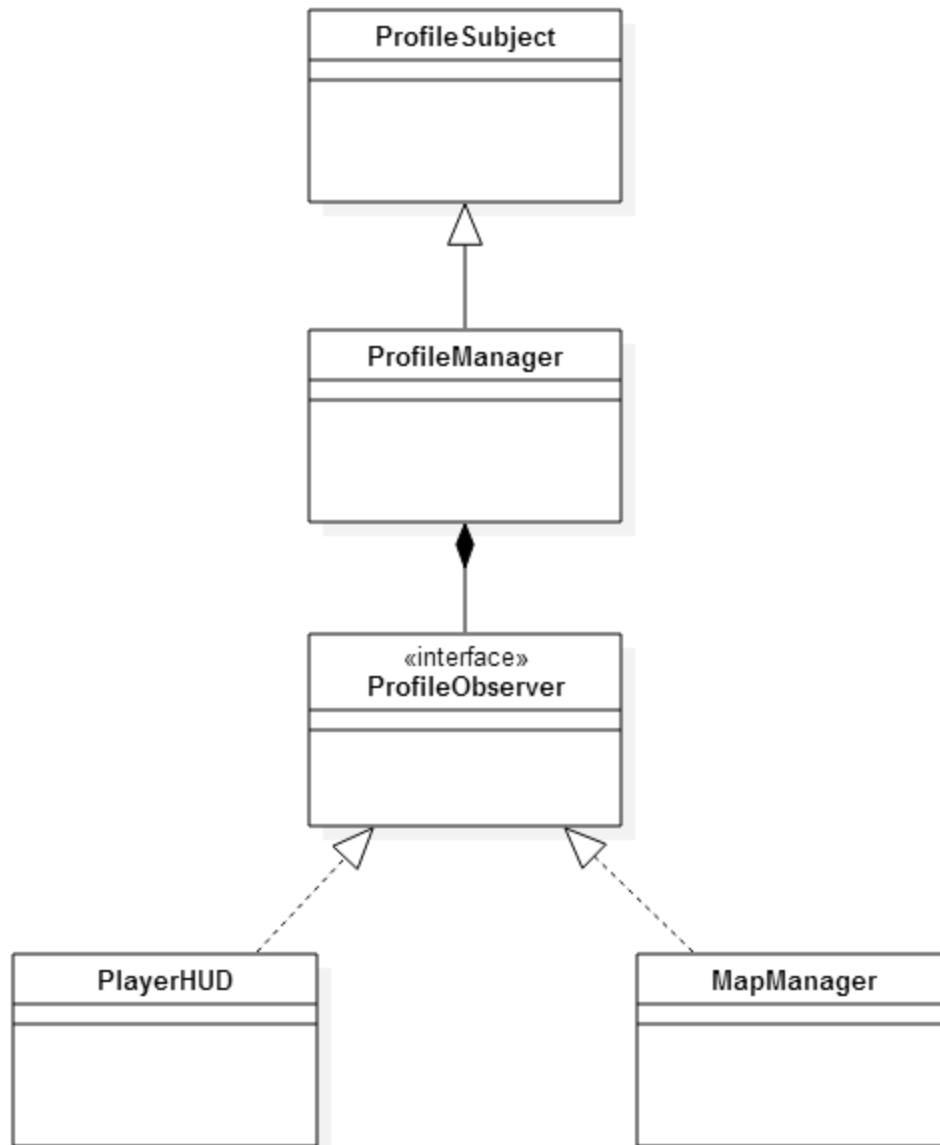
    «constructor»+InventorySlot()
    «constructor»+InventorySlot(filterItemType: int, customBackgroundDecal: Image)
    +decrementItemCount(): void
    +incrementItemCount(): void
    +add(actor: Actor): void
    +add(array: Array): void
    +getAllInventoryItems(): Array
    +clearAllInventoryItems(): void
    -checkVisibilityOfItemCount(): void
    +hasItem(): boolean
    +getNumItems(): int
    +doesAcceptItemType(itemUseType: int): boolean
    +getTopInventoryItem(): InventoryItem
    +swapSlots(inventorySlotSource: InventorySlot, inventorySlotTarget: InventorySlot, dragActor: InventoryItem): void
  
```

InventoryItem
-itemAttributes: int -itemUseType: int -itemShortDescription: String
«constructor»+InventoryItem(textureRegion: TextureRegion, itemAttributes: int, itemTypeID: ItemTypeID, itemUseType: int) «constructor»+InventoryItem() «constructor»+InventoryItem(inventoryItem: InventoryItem) +getItemTypeID(): ItemTypeID +setItemTypeID(itemTypeID: ItemTypeID): void +getItemAttributes(): int +setItemAttributes(itemAttributes: int): void +getItemUseType(): int +setItemUseType(itemUseType: int): void +getItemShortDescription(): String +setItemShortDescription(itemShortDescription: String): void +isStackable(): boolean +isSameItemType(candidateInventoryItem: InventoryItem): boolean

InventorySlotSource
-_dragAndDrop: DragAndDrop
«constructor»+InventorySlotSource(sourceSlot: InventorySlot, dragAndDrop: DragAndDrop) +dragStart(event: InputEvent, x: float, y: float, pointer: int): Payload +dragStop(event: InputEvent, x: float, y: float, pointer: int, payload: Payload, target: Target): void +getSourceSlot(): InventorySlot

InventorySlotTarget
«constructor»+InventorySlotTarget(actor: InventorySlot) +drag(source: Source, payload: Payload, x: float, y: float, pointer: int): boolean +reset(source: Source, payload: Payload): void +drop(source: Source, payload: Payload, x: float, y: float, pointer: int): void

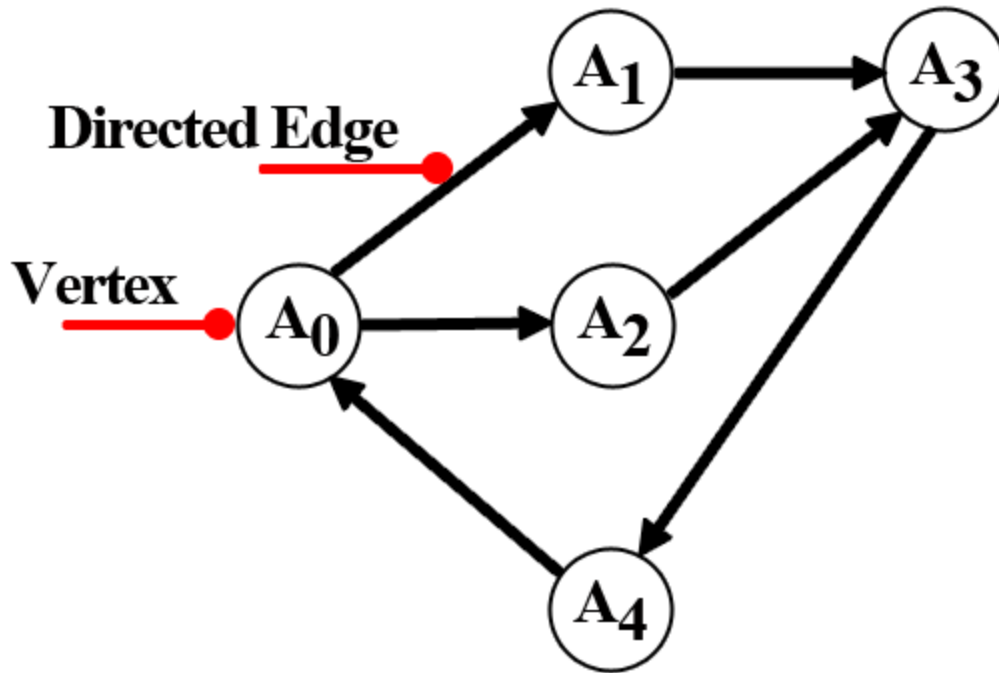




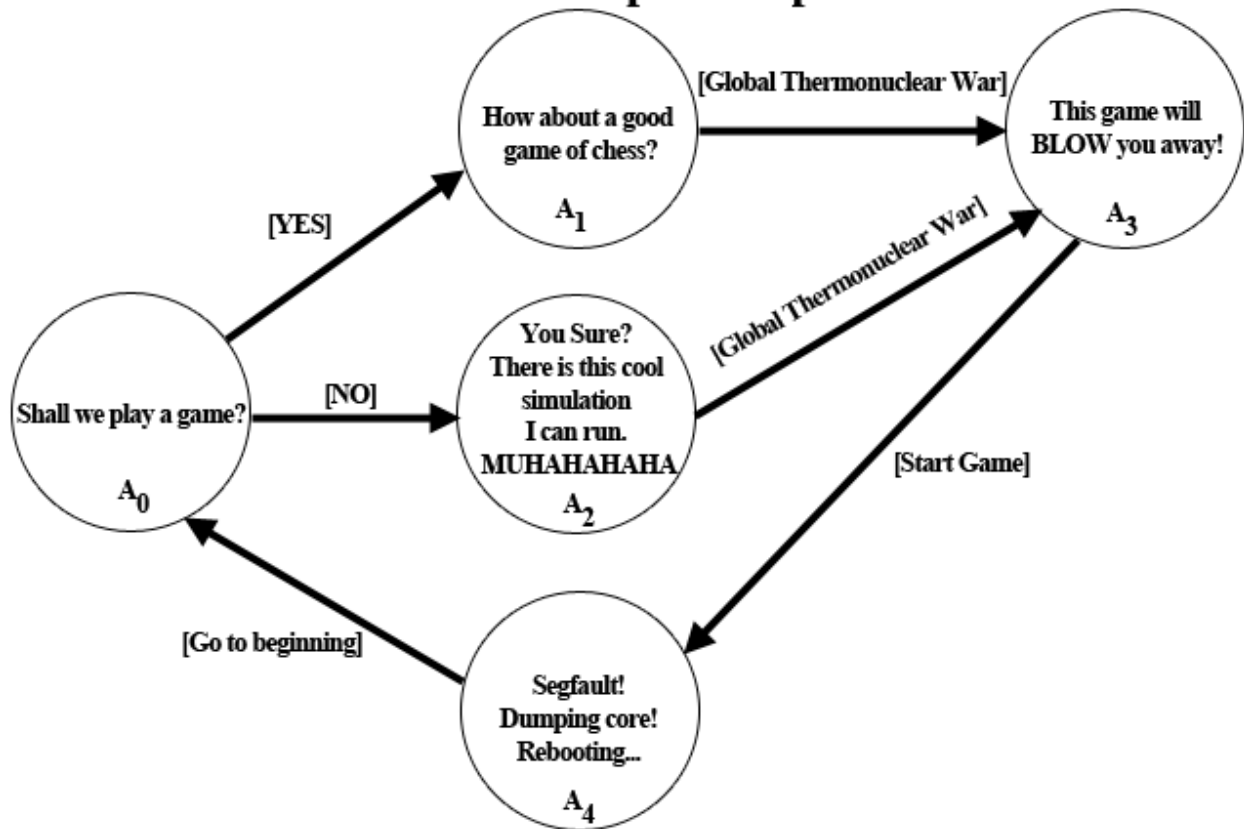
Chapter 5, Time to Breathe Some Life into This Town

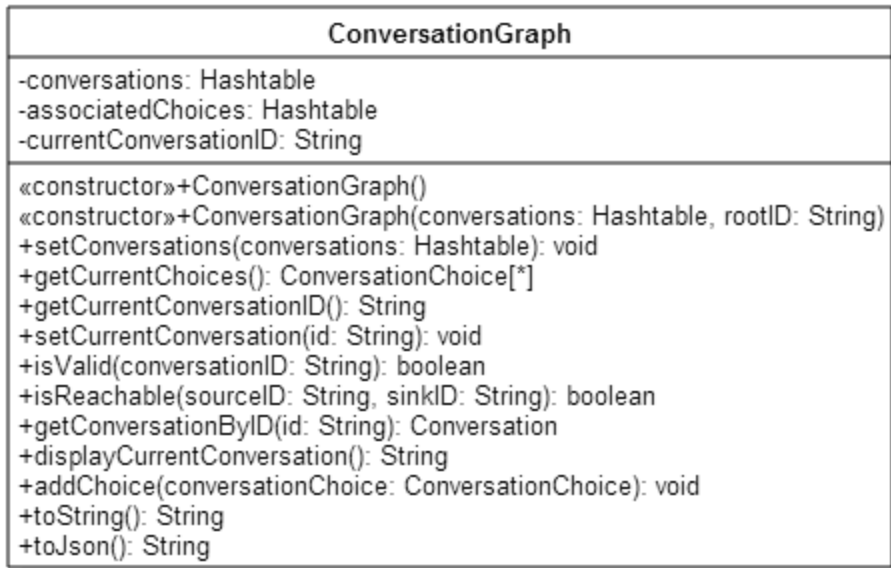
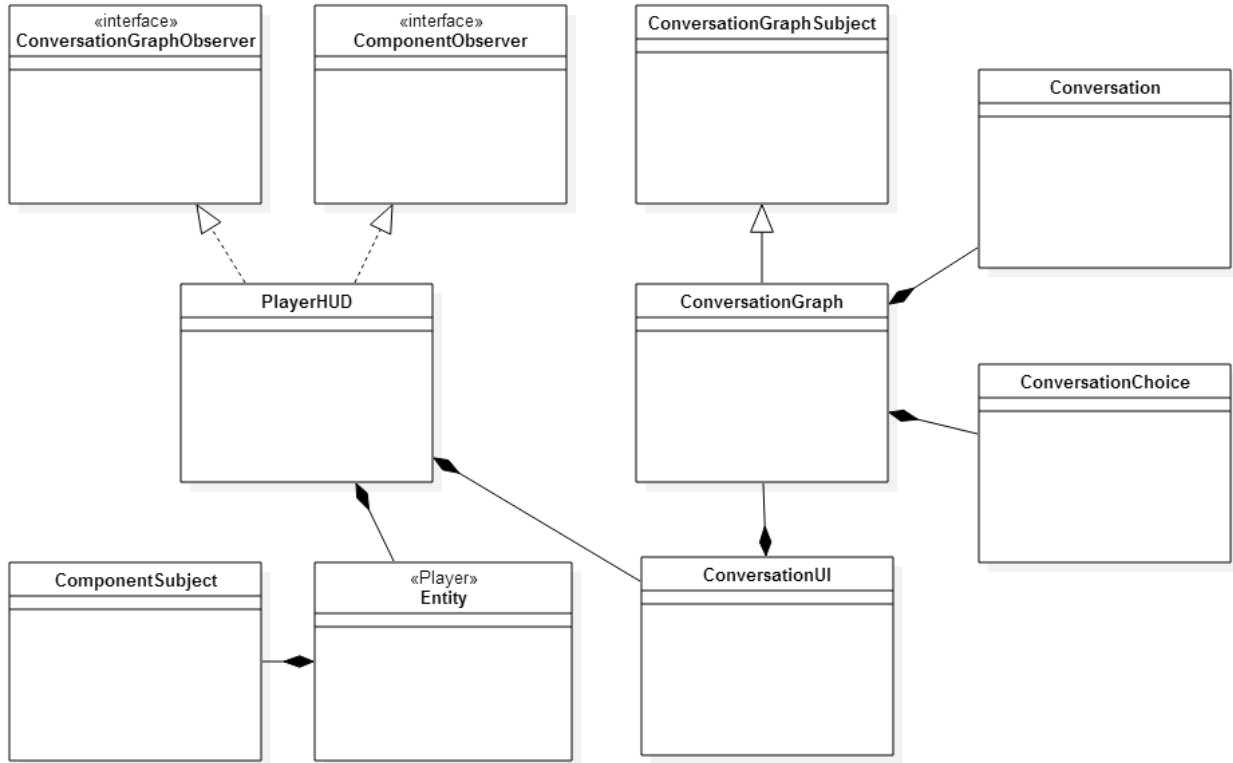


Directed Graph



Directed Graph Example





Conversation
-id: String -dialog: String = ""
«constructor»+Conversation() +getId(): String +setId(id: String): void +getDialog(): String +setDialog(dialog: String): void

ConversationChoice
-sourceId: String -destinationId: String -choicePhrase: String -conversationCommandEvent: ConversationCommandEvent
«constructor»+ConversationChoice() +getSourceId(): String +setSourceId(sourceId: String): void +getDestinationId(): String +setDestinationId(destinationId: String): void +getChoicePhrase(): String +setChoicePhrase(choicePhrase: String): void +getConversationCommandEvent(): ConversationCommandEvent +setConversationCommandEvent(choiceCommand: ConversationCommandEvent): void +toString(): String

«interface» ConversationGraphObserver
~onNotify(graph: ConversationGraph, event: ConversationCommandEvent): void

ConversationGraphSubject
-_observers: Array
«constructor»+ConversationGraphSubject() +addObserver(graphObserver: ConversationGraphObserver): void +removeObserver(graphObserver: ConversationGraphObserver): void +removeAllObservers(): void +notify(graph: ConversationGraph, event: ConversationCommandEvent): void

ConversationUI



Store Inventory

X



SELL

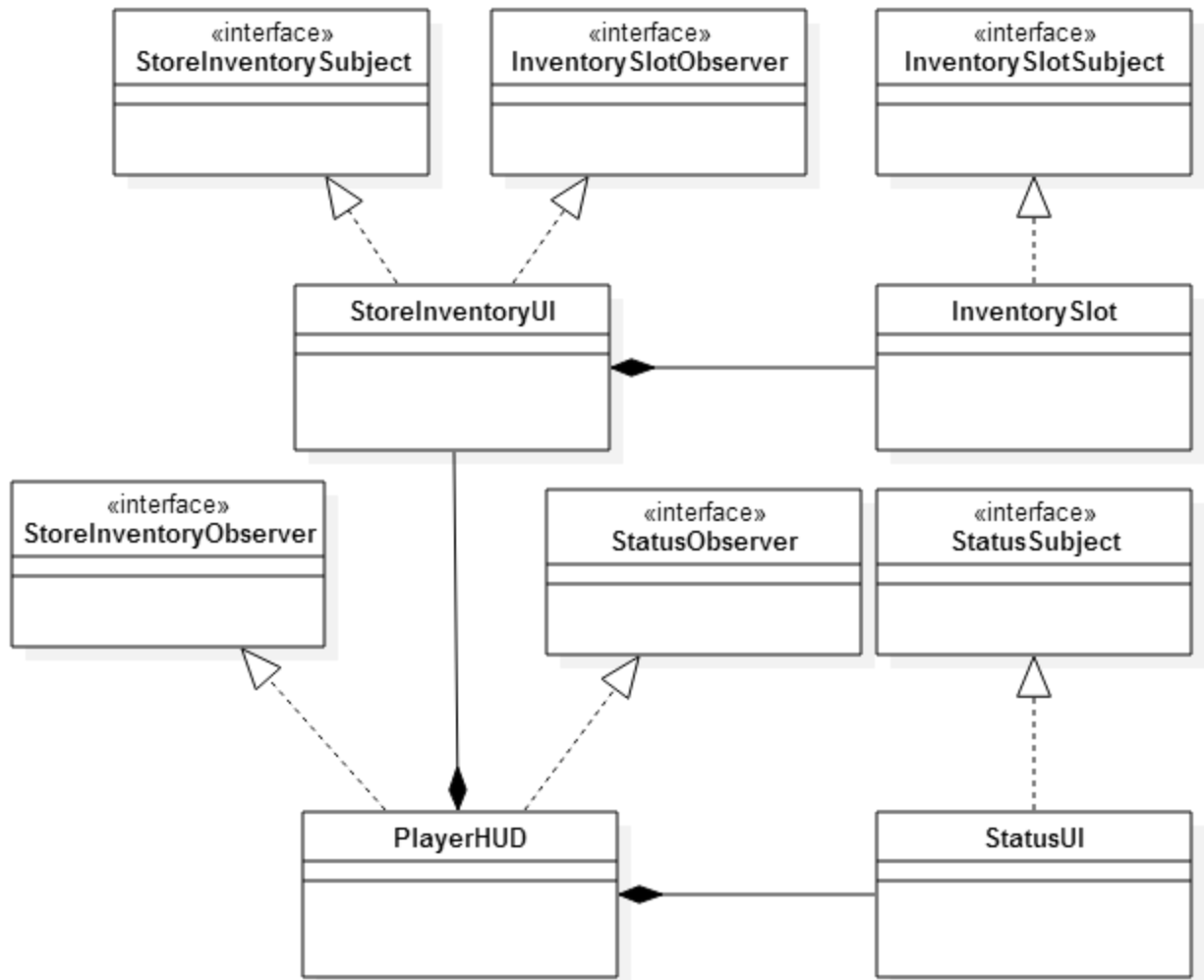
BUY

SELL : 10 GP

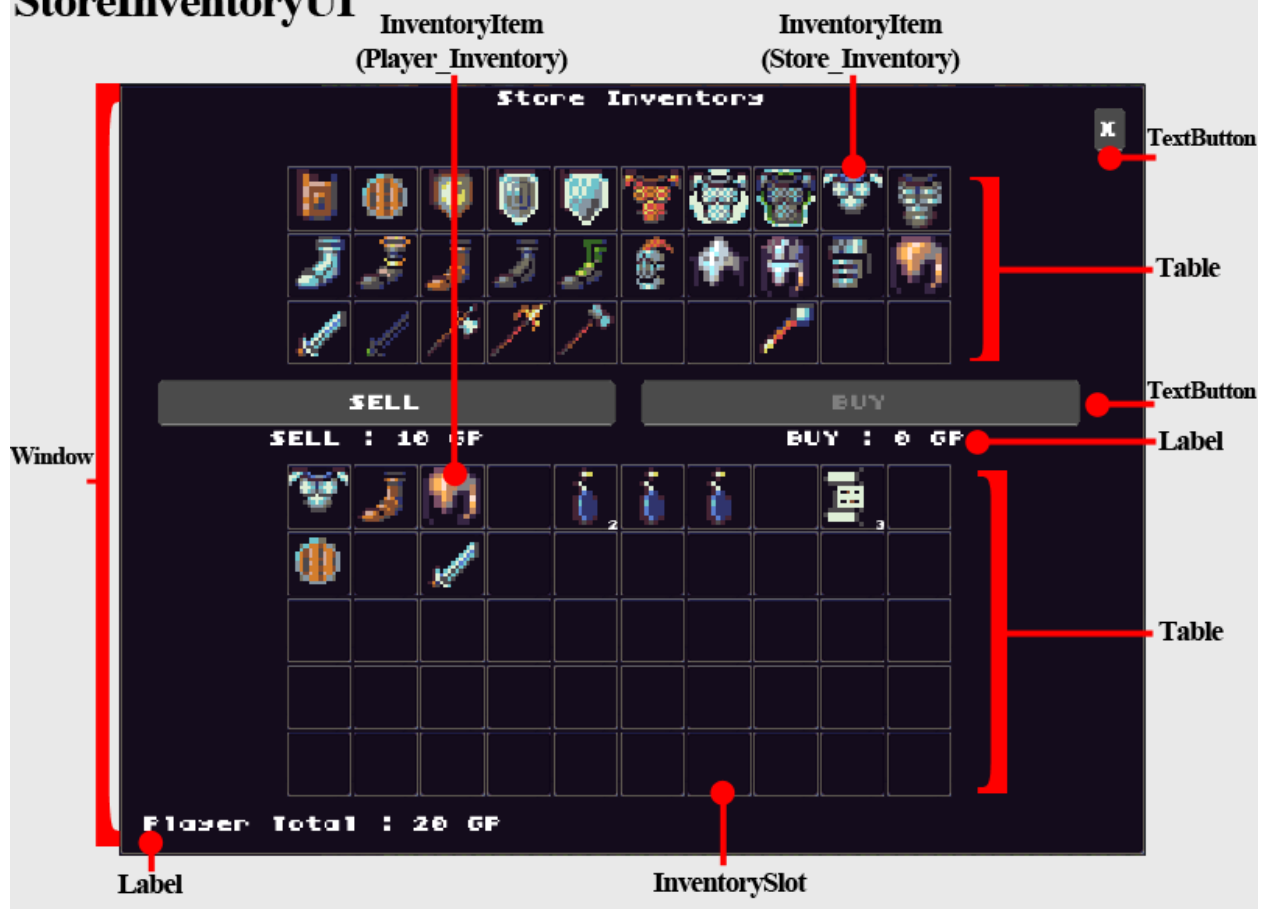
BUY : 0 GP



Player Total : 20 GP



StoreInventoryUI

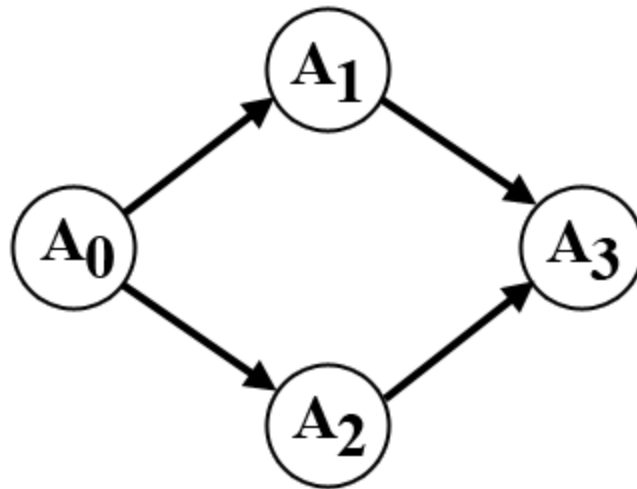


Chapter 6, So Many Quests, So Little Time...

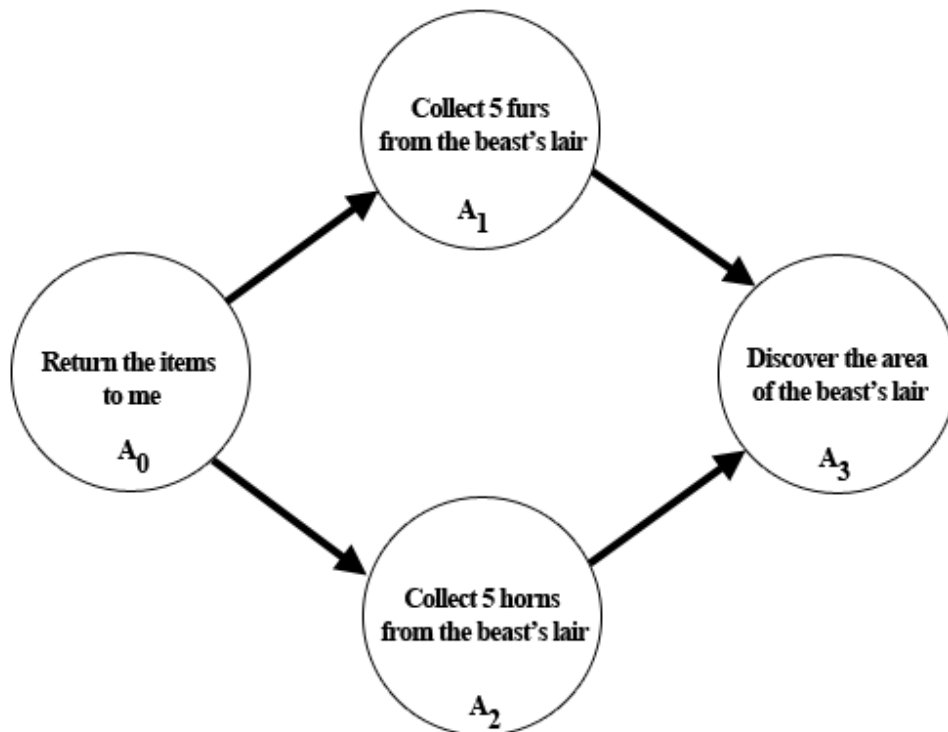


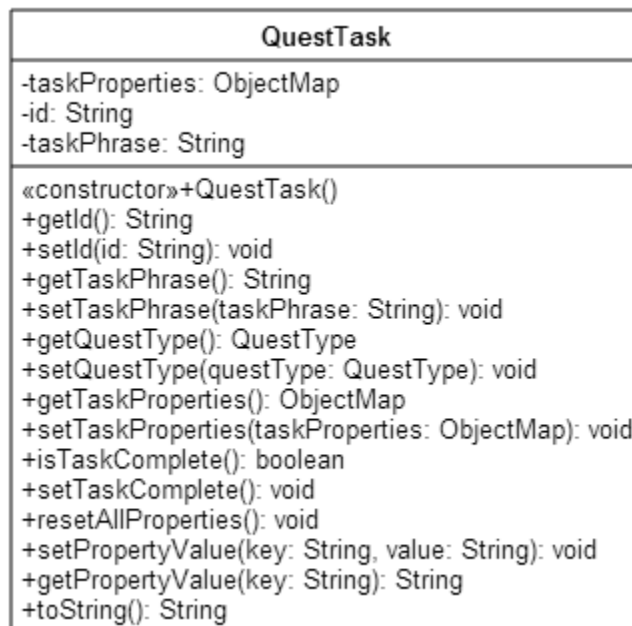
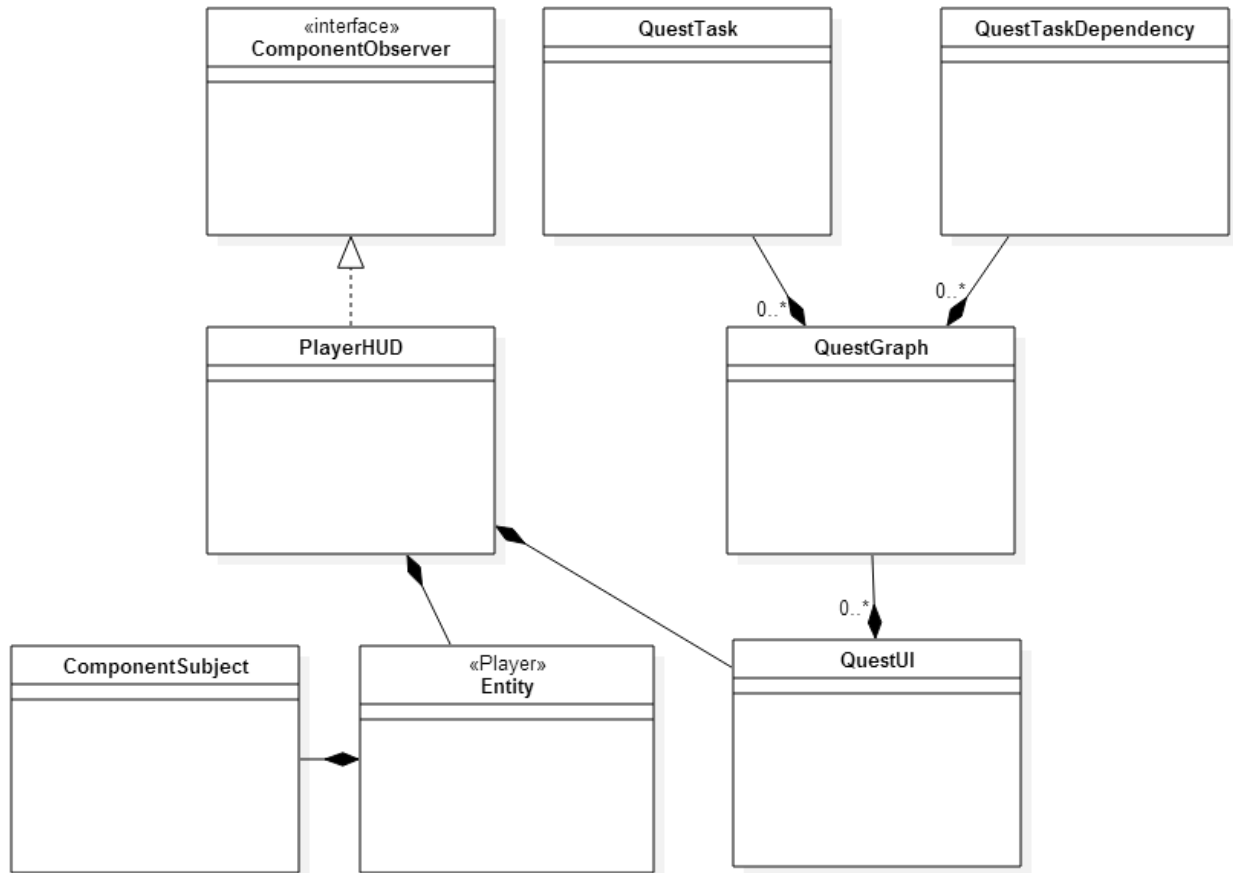
Dependency Graph

(Directed Acyclic Graph)

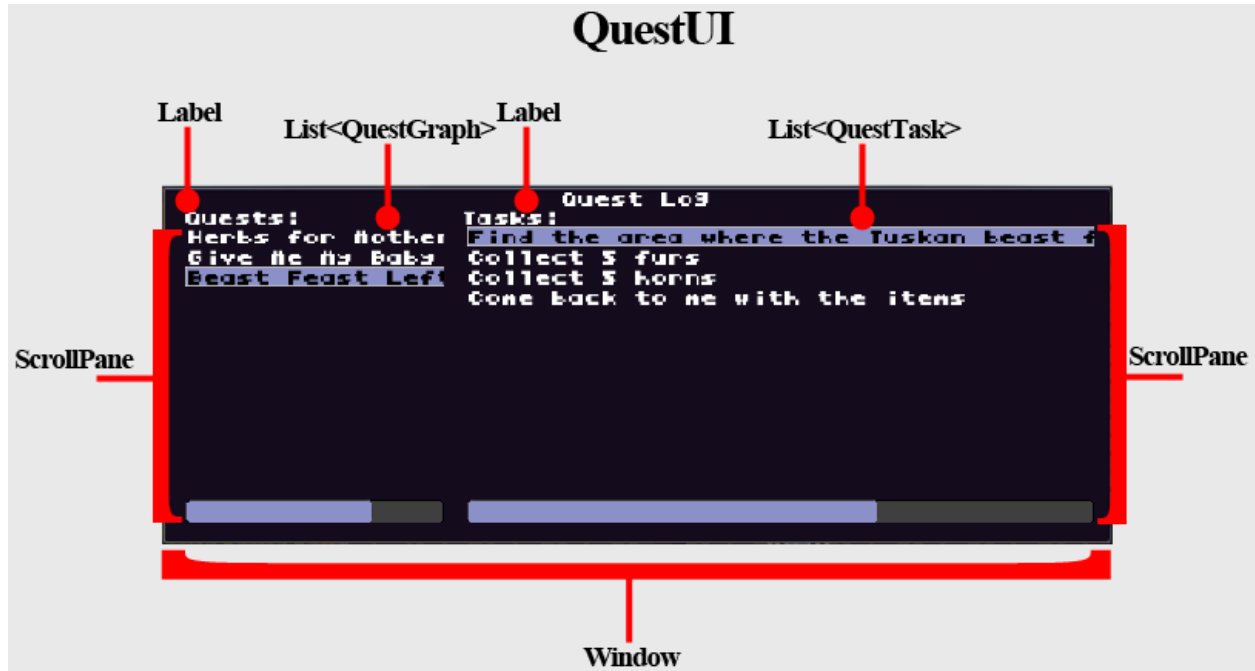


Dependency Graph Example



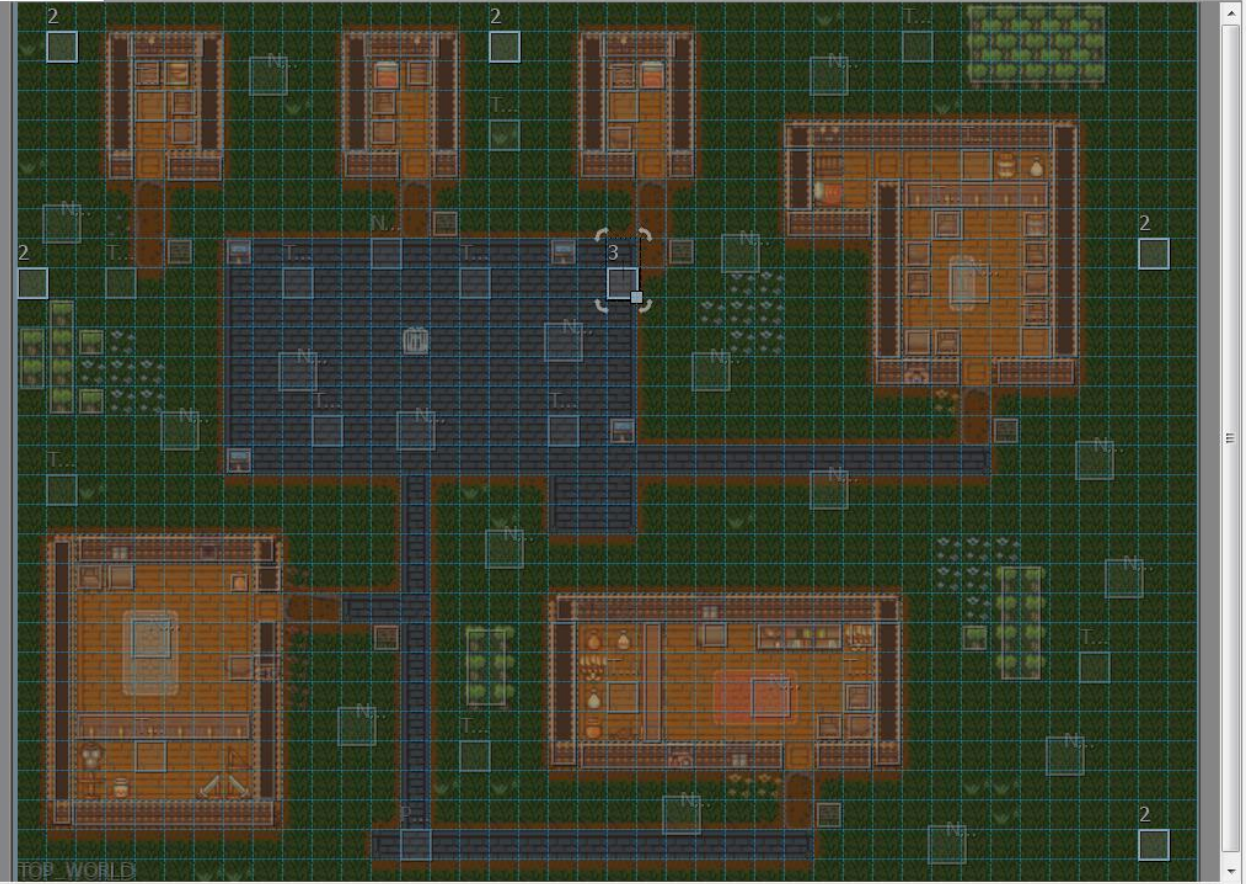


QuestTaskDependency
-sourceId: String -destinationId: String
«constructor»+QuestTaskDependency() +getSourceId(): String +setSourceId(sourceId: String): void +getDestinationId(): String +setDestinationId(destinationId: String): void









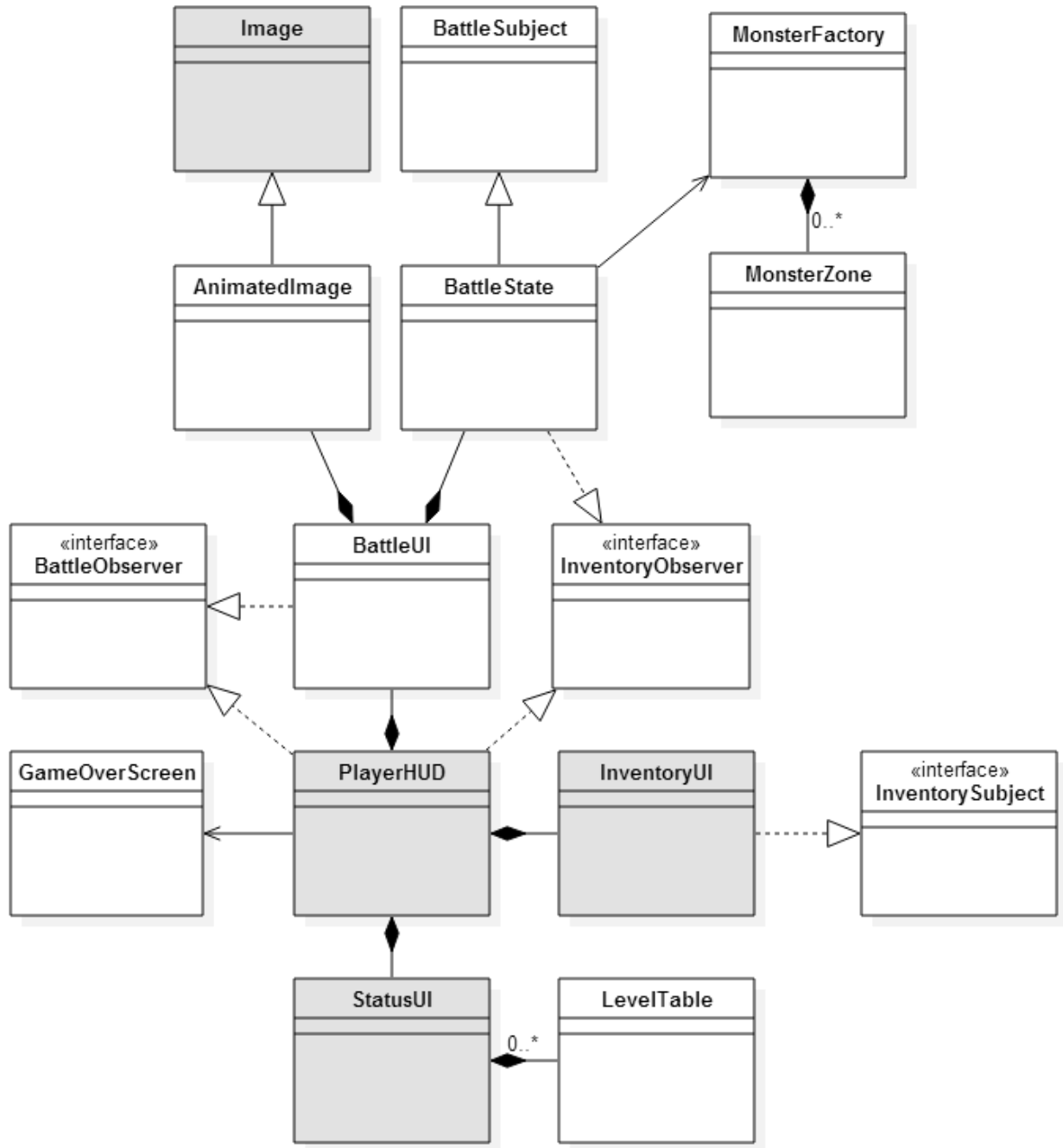






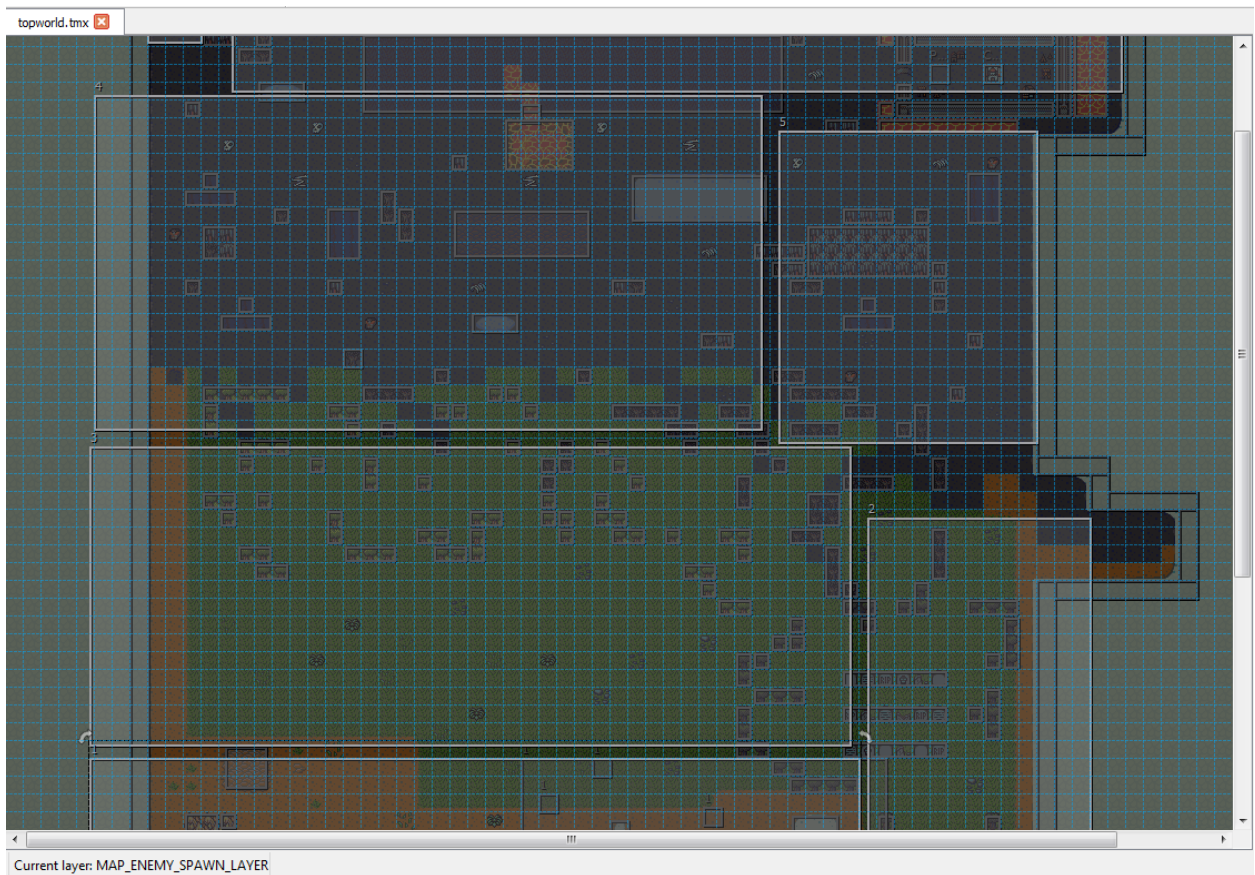
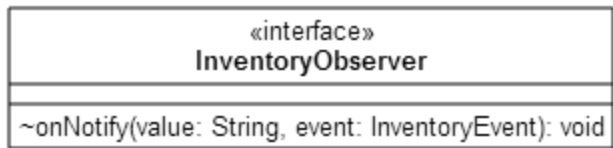
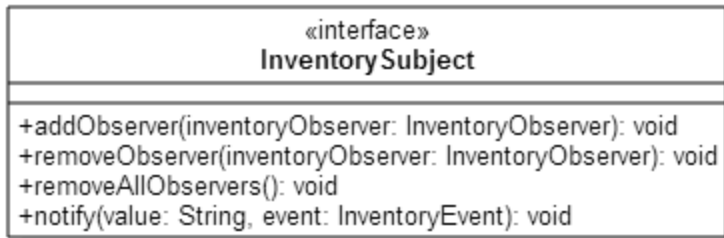
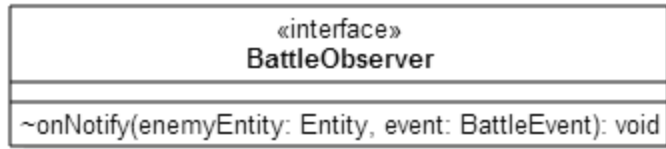
Chapter 7, Time to Show These Monsters Who's the Boss



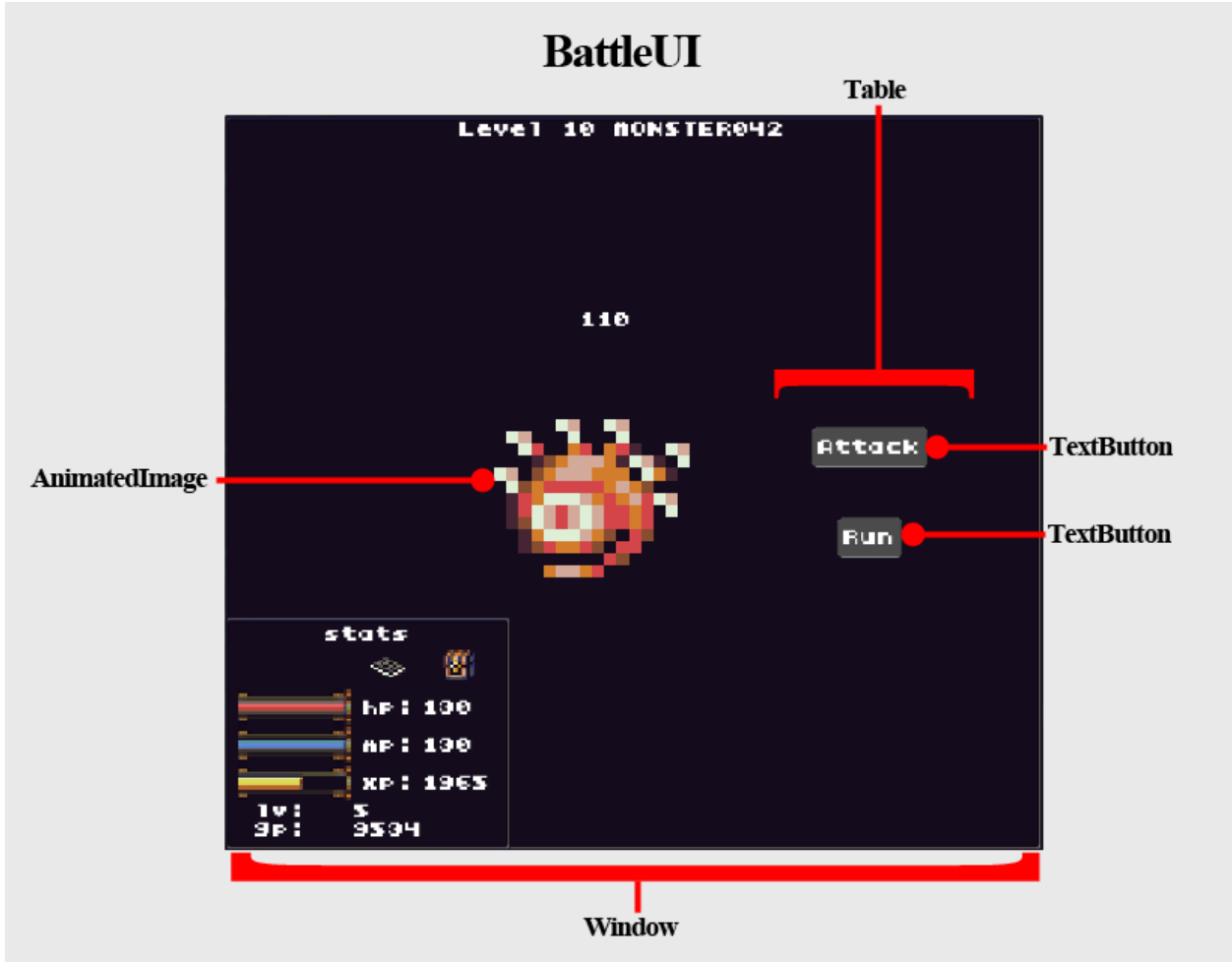


```

classDiagram
    class BattleSubject {
        -_observers: Array
        «constructor»+BattleSubject()
        +addObserver(battleObserver: BattleObserver): void
        +removeObserver(battleObserver: BattleObserver): void
        #notify(entity: Entity, event: BattleEvent): void
    }
  
```



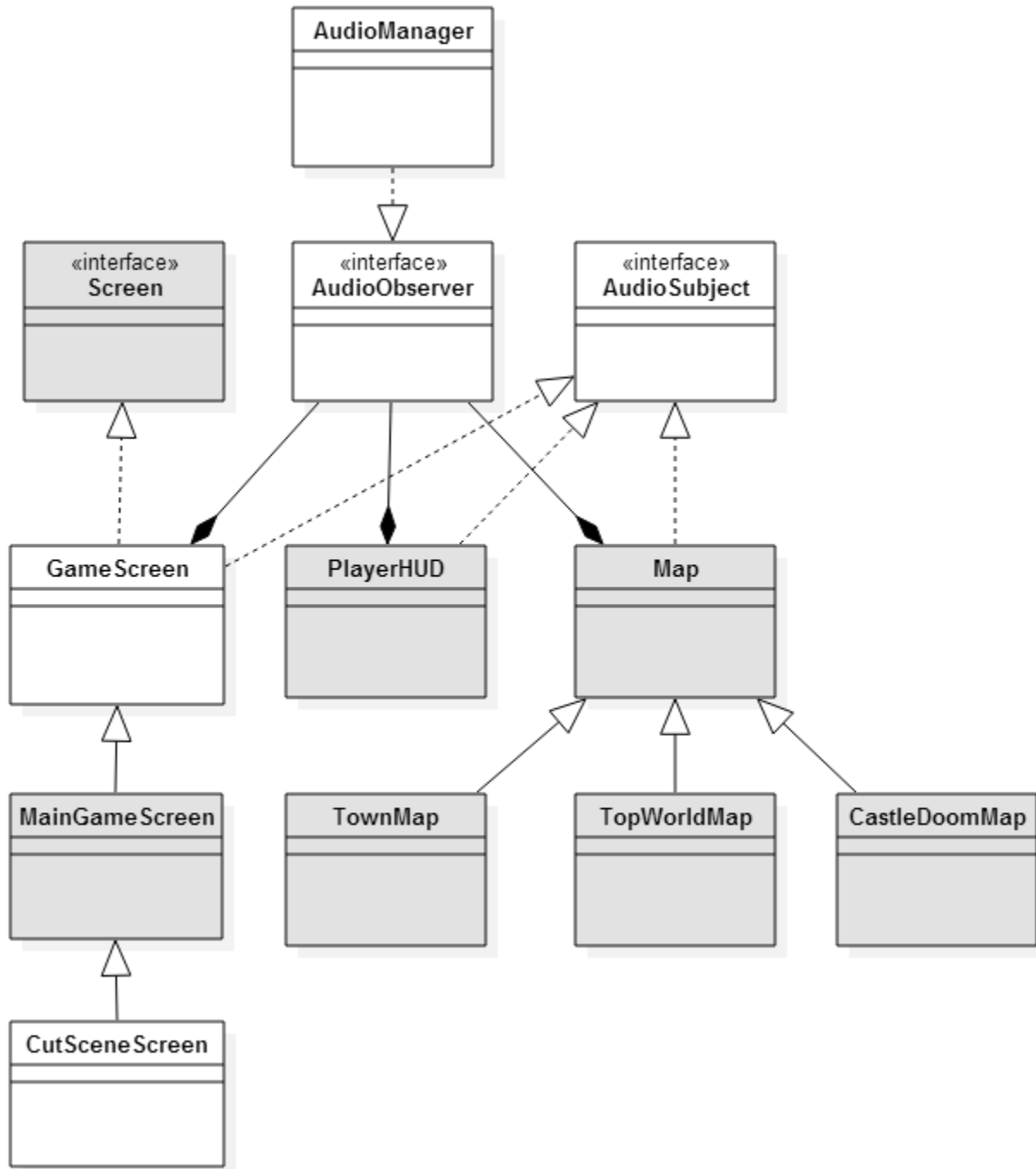
MonsterZone
-zoneID: String -monsters: Array
+getZoneID(): String +setZoneID(zoneID: String): void +getMonsters(): Array +setMonsters(monsters: Array): void +getMonsterZones(configFilePath: String): Hashtable

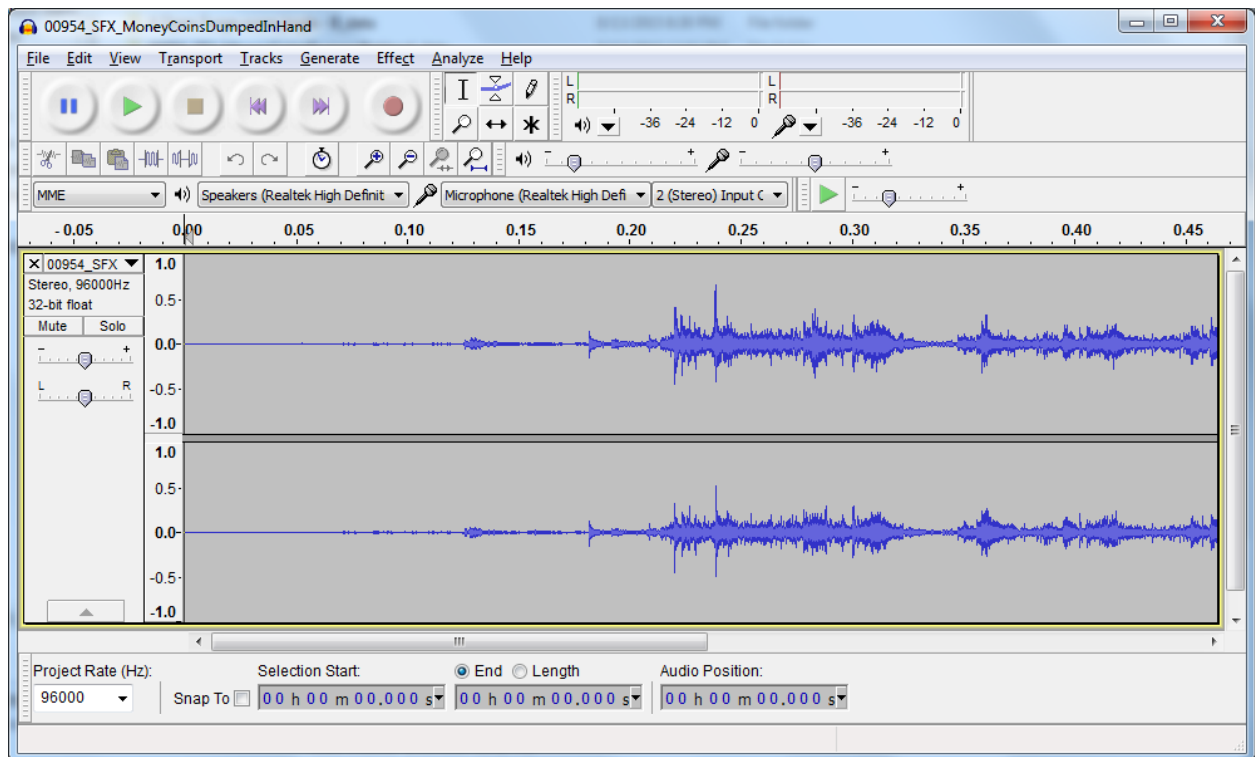


LevelTable
-levelID: String -xpMax: int -hpMax: int -mpMax: int
+getLevelID(): String +setLevelID(levelID: String): void +getXpMax(): int +setXpMax(xpMax: int): void +getHpMax(): int +setHpMax(hpMax: int): void +getMpMax(): int +setMpMax(mpMax: int): void +getLevelTables(configFilePath: String): Array



Chapter 8, Oh, No! Looks Like Drama!





«interface»
AudioObserver

~onNotify(command: AudioCommand, event: AudioTypeEvent): void

«interface»
AudioSubject

+addObserver(audioObserver: AudioObserver): void
 +removeObserver(audioObserver: AudioObserver): void
 +removeAllObservers(): void
 +notify(command: AudioCommand, event: AudioTypeEvent): void

BLACKSMITH: We have planned
this long enough. The time
is now! I have had enough
talk...



#AGE: You both need to
concentrate, wait... Oh no,
something is wrong!!



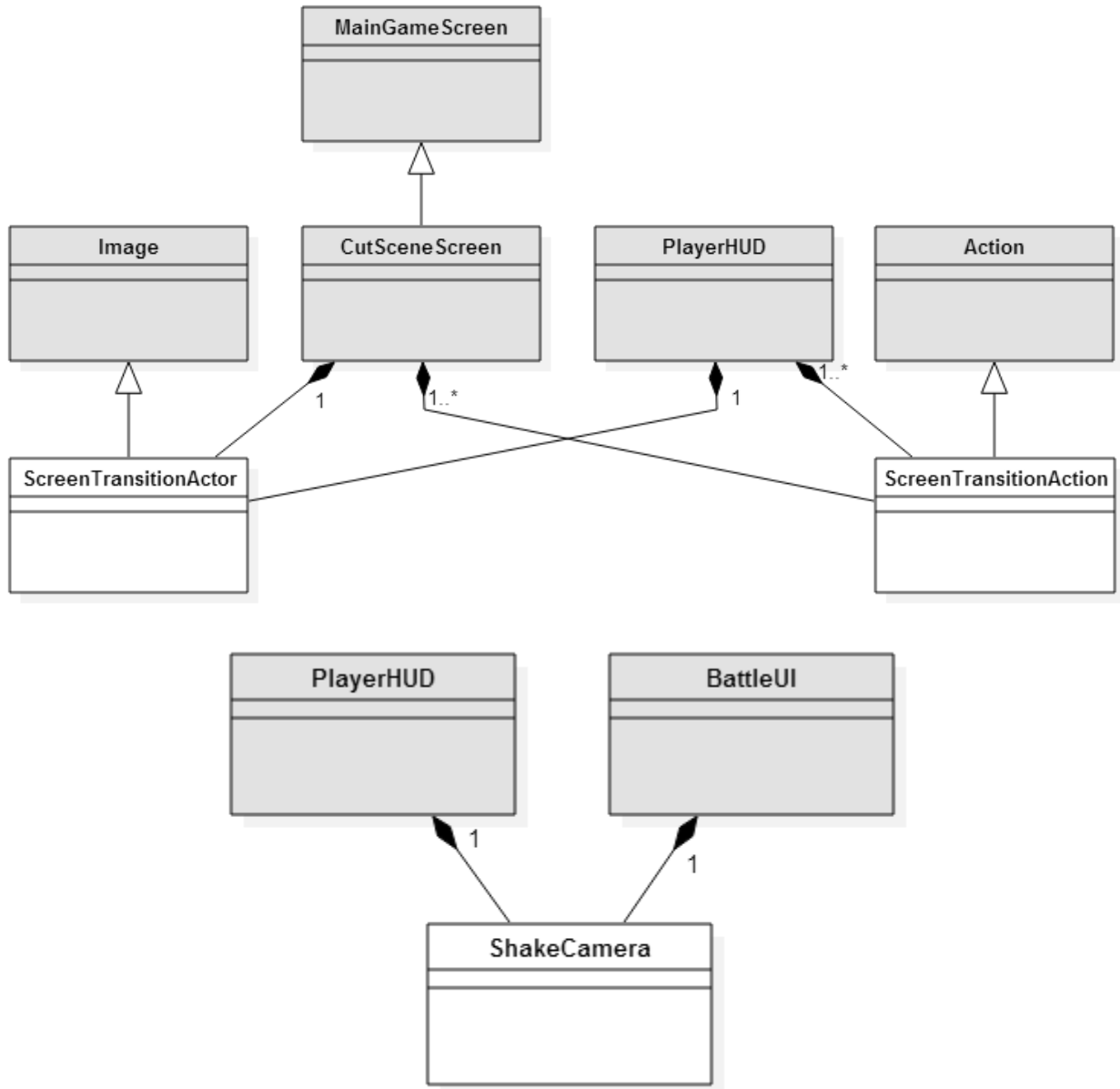


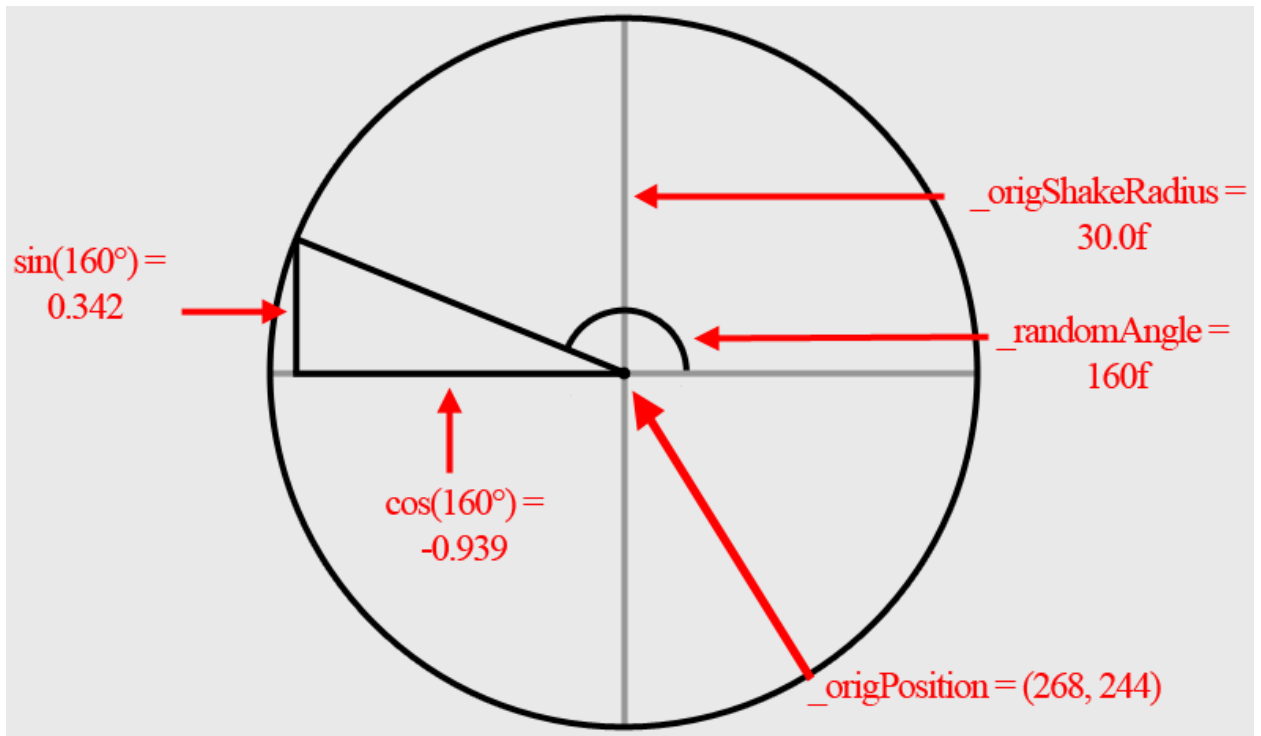


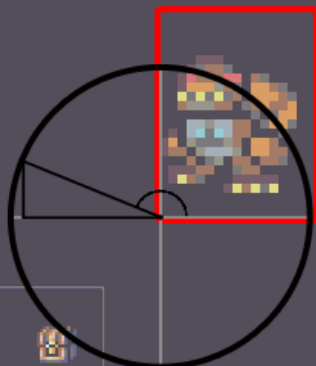
DEMON: I will now send my
legions of demons to destroy
these sacks of meat!



Chapter 9, Time to Set the Mood





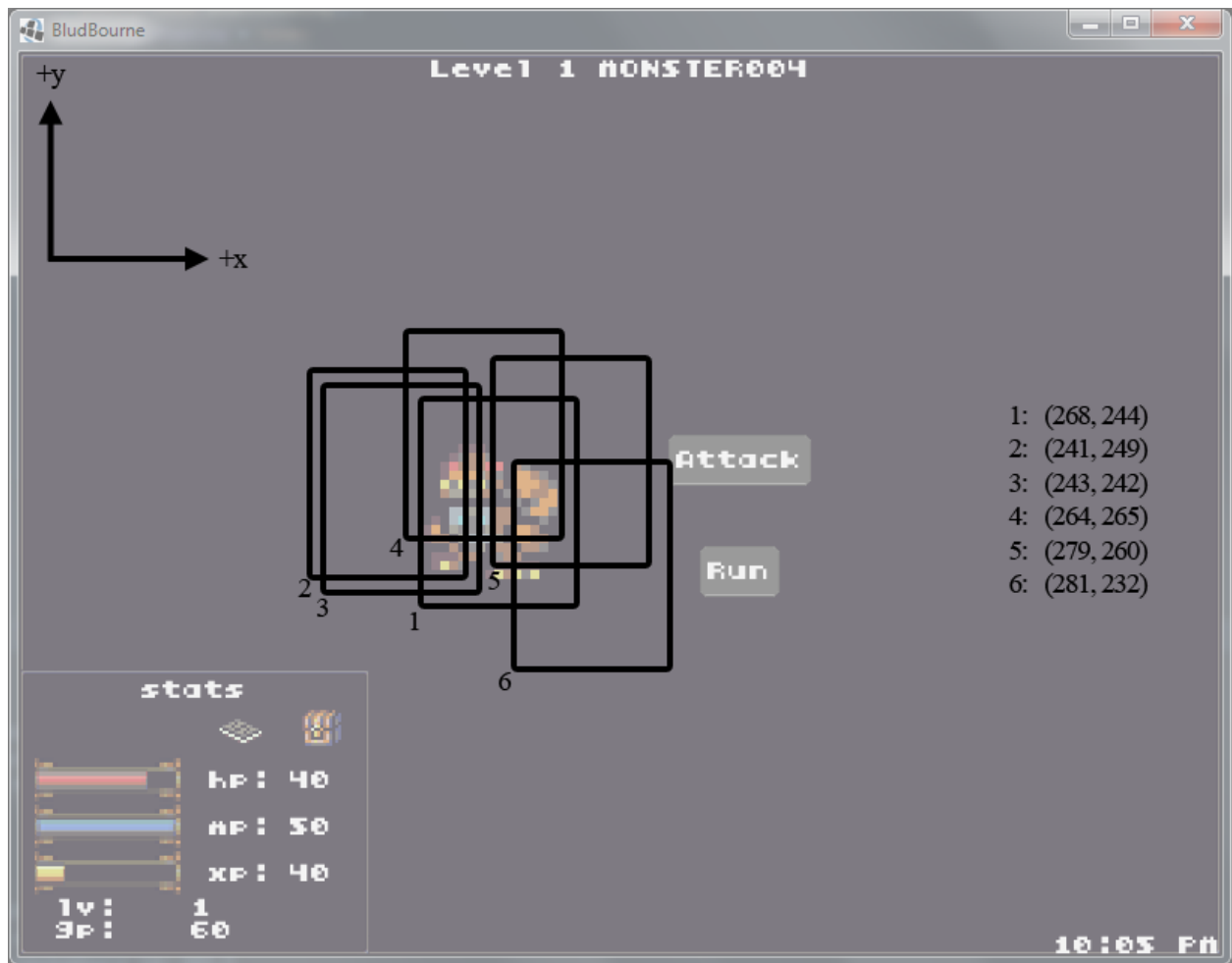


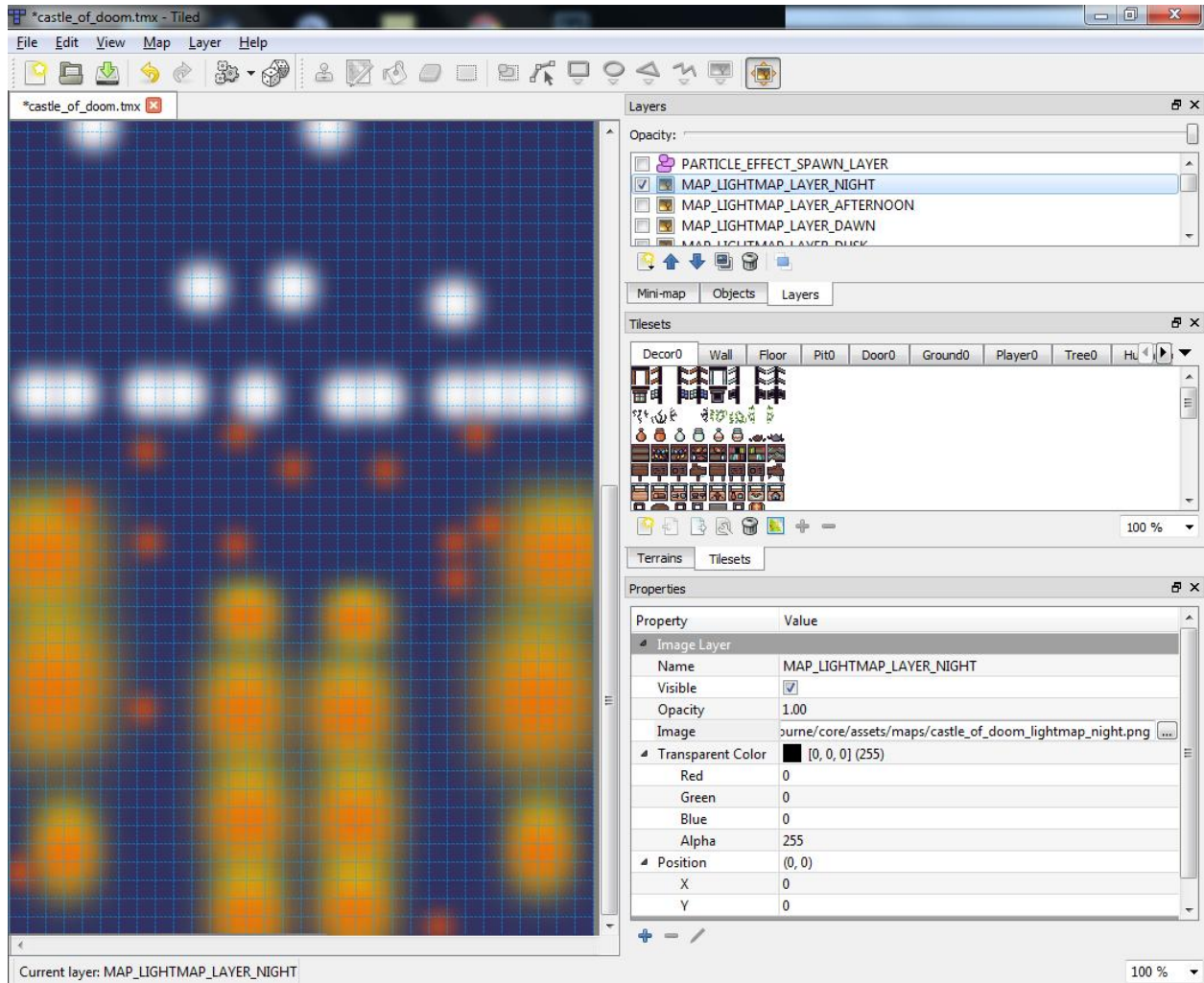
Attack

Run

stats

	HP: 40
	MP: 50
	XP: 40
lv: 1	
sp: 60	

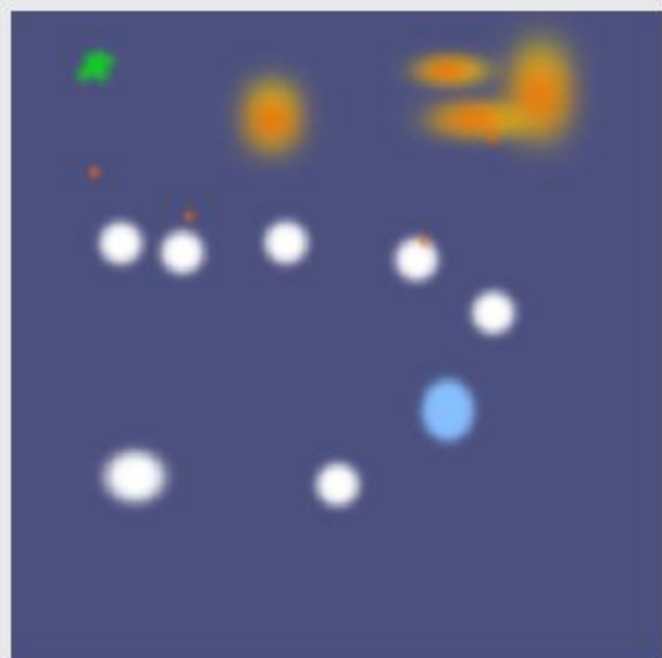




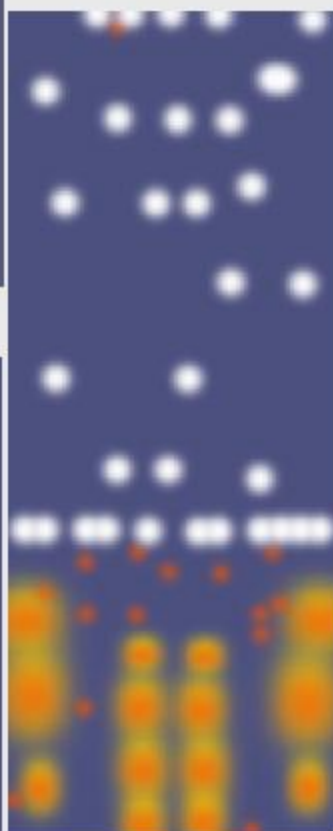
Lightmaps in BludBourne



TOWN

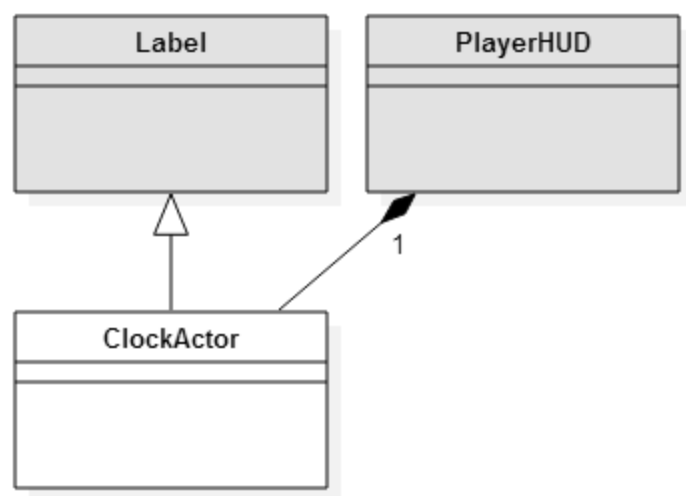


TOP WORLD



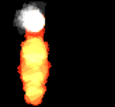
CASTLE
OF
DOOM

		SOURCE					
		GL_ZERO	GL_ONE	GL_DST_COLOR	GL_ONE_MINUS_DST_COLOR	GL_SRC_ALPHA	GL_ONE_MINUS_SRC_ALPHA
DESTINATION	GL_ZERO						
	GL_ONE						
	GL_DST_COLOR						
	GL_ONE_MINUS_DST_COLOR						
	GL_SRC_ALPHA						
	GL_ONE_MINUS_SRC_ALPHA						



Particle Editor

FPS: 60
Count: 212
Max: 222
100%



Editor Properties

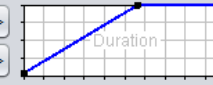
Pixels per meter
Value: 1

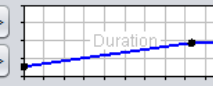
Zoom level
Value: 0.3

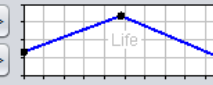
Delta multiplier

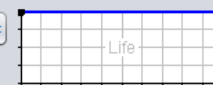
Emitter Properties


Spawn Shape used to spawn particles.
Shape: square

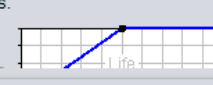
Spawn Width Width of the spawn shape, in world units.
High: 0
Low: 0
Duration graph:  Relative

Spawn Height Height of the spawn shape, in world units.
High: 0
Low: 0
Duration graph:  Relative

Size Particle size, in world units.
High: 7
Low: 0
Life graph:  Relative

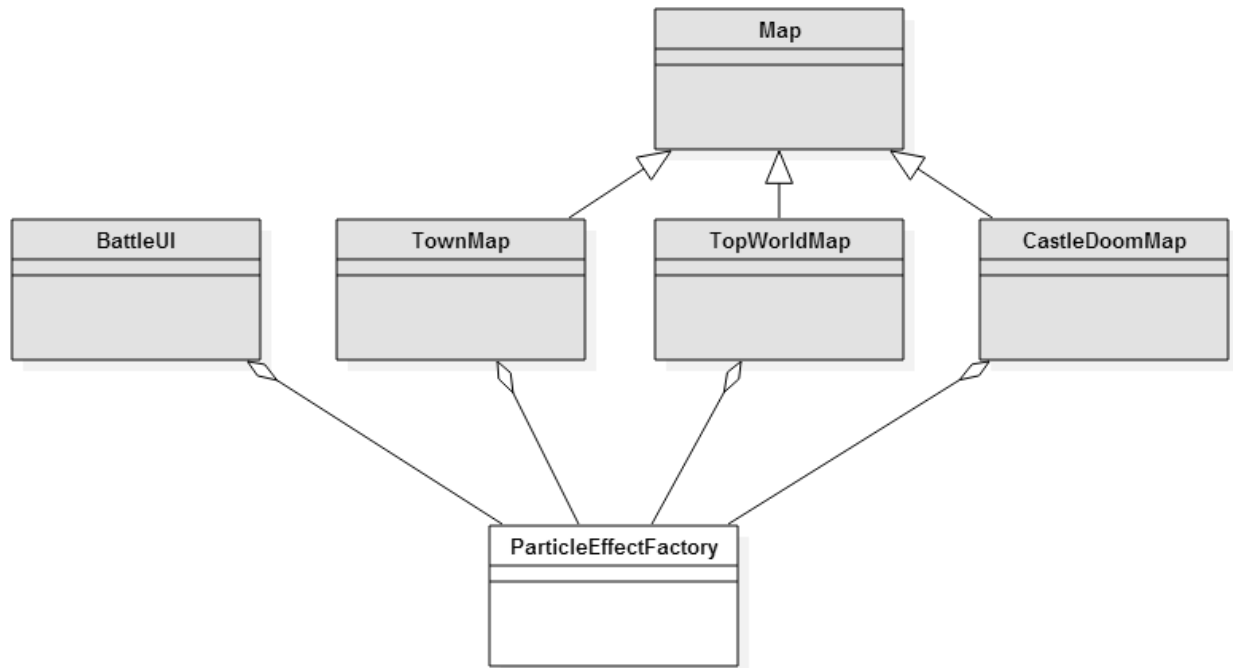
Velocity Particle speed, in world units per second.
High: 0 2
Low: 0
Life graph:  Relative

Angle Particle emission angle, in degrees.
High: 90 135
Low: 90
Life graph:  Relative

Rotation Particle rotation, in degrees.
High: 90
Life graph:  Relative

Effect Emitters

Emitter	
Untitled	<input checked="" type="checkbox"/>
Smoke	<input checked="" type="checkbox"/>





$$\sin \theta = \frac{\textit{opposite}}{\textit{hypotenuse}}$$

$$\cos \theta = \frac{\textit{adjacent}}{\textit{hypotenuse}}$$

$$\tan \theta = \frac{\textit{opposite}}{\textit{adjacent}}$$

Chapter 10, Prophecy Fulfilled, Our Hero Awaits the Next Adventure

