stream : std::ofstream - textures : vector<SDL Texture*> - soundEffects: vector<Mix Chunk*> - latest : time_t - $\mathrm{music}: \mathrm{vector} < \mathrm{Mix} \ \mathrm{Musi} \overline{\mathrm{c}^*} >$ - date : char [20]- latestStatus : Status $+ \sim \text{Logger}() : \text{void}$ - setDateString(full?) : void \sim ResourceManager() : v - checkTimestamp(): bool + printShared(): void + getDateString(full?): C-String + getCurrentDateString(full?): C - init() : Status getLatestStatus():Status| registerTexture(path) : u32 | getTextureHandle(id: u32) : TextureHandle getTexture(id: u32): SDL Texture*- init(pathToFile : String) : Status (!) getTextureOriginalSize(id: u32) : Size - init(pathToFile : C-String) : Status (!) - createFallbackTexture() : SDL_Texture* - print(Args...) : void $-\operatorname{debug}(\operatorname{Args...})$: void $m_{resourceManager}$ $-\inf_{\mathbf{O}}(\operatorname{Args...})$: void - $\operatorname{warn}(\operatorname{Args...})$: void $+ \operatorname{error}(\operatorname{Args...}) : \operatorname{void}$ ${ m input}{ m Handler}$ - fatal(Args...) : void+ $\overline{\mathrm{trace}(\mathrm{Args...})}$: $\overline{\mathrm{void}}$ Program keyboardState: u8 flags : ProgramFlags ≠ numberOfKeyboardKeys: u32 <mark>су</mark>: u64 startTimestamp: u64 window: SDL Window* windowParameters: WindowParameters t: SDL Renderer* backgroundColor : Color otin mouse Position : Point otin otin mouse Position : PointmouseButtons: u32 ≠ audioParameters: AudioParameters ger: Logger \sim Program(): void - initSystems() : Status (!) Frequency(): u64 $ext() : SDL_Renderer^*$ $\begin{array}{c} \textbf{getWindowSize()}: \ \textbf{ResourceManager\&} \\ \textbf{getNumberOfK} \end{array}$ - getNumberOfKeys(): u32getKeyboardState(): const u8* \mathbf{Game} MainRegistry : InputHandler - world : World ry(): MainRegistry& Renderer(): GameRenderer& InputHandler(): InputHandler& - init() : Status (!) $+ \operatorname{run}() : \operatorname{void}$ me(): u64registry renderer ${f Game Renderer}$ ${f MainRegistry}$ - uiElements: ListArray<UIElement*> overrides : BitArray - fps: u32 $+ ext{ MainRegistry()}: ext{this} \ + \sim ext{MainRegistry()}: ext{void}$ rt: i64 l: i64 **a**: i64 overhead: i64 frameTime: i64 - scalingFactor : double - lastFrameAt: u64 - numberOfFramesRendered: u64 calls Blocks::init - cameraPosition : Point + GameRenderer(): this - moveCamera(offX: i32, offY: i32): void - registerUIElement(element: UIElement*): vo - renderInPlace(game: Game*) : v + getTimeSinceLastFrame(): u64 + getCameraPosition(): Point gets blockID for init Blocks ${\rm vector}{<}{\rm Block*}{>}$ k(block: Block*): void BlockID(): u32 ithID(id: u32): Block* it(blockID: u32) : u32

 \mathbf{Logger}

 ${f Resource Manager}$

Funkcje oznaczone kolorem magenta są wirtualne, a funkcje oznaczone kolorem fioletowym są abstrakcyjne. Z kolei funkcje i atrybuty oznaczone kolorem pomarańczowym zostaną zmienione. Oznaczenia kolorem niebieskim oznaczaja statyczność.

(!) oznacza, że wartość zwrócona nie powinna być zignorowana. "u8", "u16", "u32", "u64", "i8", "i16", "i32" oraz "i64" to skróty od typów liczbowych w standardzie języka C.

$\overline{\hbox{InputHandler}}$ ${f GameObject}$ - latestEvents : EventBuffer uuid : UUID $^{ label{flags: u64}}$ $- getLatestEvent() : const SDL_Event\&$ $-\operatorname{processInput}(\operatorname{game}\colon\operatorname{Game}^*):\operatorname{voic}$ $\frac{1}{2}$ name: \mathbb{C} - \mathbb{S} - GameObject(objectID: u32, name:ng): this GameObject(objectID: u32): this # setName(name: String) : void # setName(name: C-String) : void + getUUID() : u64 $ightharpoonup \operatorname{setUUID}(\operatorname{uuid}\colon\operatorname{u64}): ag{0.1}$ getInstanceID(): u32 $\operatorname{setInstanceID}(\operatorname{instance:}\ \operatorname{u32}): \ \operatorname{vol}$ - getTypeID() : u32 $\stackrel{\downarrow}{=}$ setTypeID(type: u32) : + getFlags(): u64 # setFlag(flag: u32): void # setFlags(flags: u64): vo # clearFlag(flag: u32): vo # clearFlags(): void # flipFlag(flag: u32): void + isFlagSet(flag: u32): bool

RenderableObjectBase

- textureHandle: TextureHandle

+ RenderableObjectBase(objectID: u32): this
+ RenderableObjectBase(objectID: u32, name: C-String)
: this
+ RenderableObjectBase(objectID: u32, textureHandleIndex: u32): this
+ RenderableObjectBase(objectID: u32, name: C-String, textureHandleIndex: u32): this
+ render(): void
+ isVisible(): void
+ setInvisible(): void
+ setInvisible(): void
+ getTexture(): SDL_Texture*
+ bindTexture(textureHandleIndex: u32): this

Block

blockAABB: AABB

+ Block(objectID: u32): this
+ Block(objectID: u32, name: C-String): this
+ Block(objectID: u32, textureHandleIndex: u32): this
+ Block(objectID: u32, name: C-String, textureHandleIndex: u32): this
+ render(): void (override)

World

chunks : HashMap<Point, Chunk*>

+ World(objectID: u32) : this
+ World(objectID: u32, name: C-String) : this
+ ~World() : void
+ get Chunk(which: Point) : const Chunk*
+ get Chunk(x: i32, y: i32) : const Chunk*
+ populateChunk(which: Point, blockID: u32) : Status
+ getBlockAt(x: i32, y: i32) : const Block*

getBlockAt(pos: BlockPos) : const Block*

printChunk(x: i32, y: i32): void

RenderableObject eq texturePortion : rectangle otin targetPortion : rectangle
otin
otin
otin# angle: double # flip : SDL RendererFlip RenderableObject(objectID: u32): this RenderableObject(objectID: u32, name: C-String): + RenderableObject(objectID: u32, textureHandleIndex: u32) : this + RenderableObject(objectID: u32, name: C-String, textureHandleIndex: u32): this + getTexturePortion() : const rectangle& - setTexturePortion(r: rectangle) : this + set TexturePortionOriginal(): $+ \, \operatorname{getTargetPortion}() : \operatorname{const} \operatorname{rectangle} \&$ + setTargetPortion(r: rectangle) : this + scaleX(scale: float) : this + scaleY(scale: float) : this + scale(scale: float) : this + scaleX(scaleX: float, scaleY: float): this + rotate(degrees: double) : v + setPositionOnScreen(x: int, y: int): this + setPositionOnScreenCentered(x: int, y: int) : this - unflip() : this + flipHorizontally(): this + flipVertically() : this

UIElement

+ UIElement(objectID: u32): this
+ UIElement(objectID: u32, name: CString): this
+ UIElement(objectID: u32, textureHandleIndex: u32): this
+ UIElement(objectID: u32, name: C-Strin
textureHandleIndex: u32): this
+ onHover(): void
+ onKeyPress(key: SD_Keycode): void
+ onMouseClick(button: u8): void