Application Diagram Persistence Diagram SaveReplay Exceptions Utility JsonUtils(): void currentLevel : String fileName: StringlevelNum: String - fileName : String - currentMove: MoveInfo +seperator(String, String...): String AssetNotFoundException - moveArray : ArrayList<ArrayDeque<MoveInfo>> LevelFactory - moveArray : ArrayList<ArrayDeque<MoveInfo>> + ASSETS: Map<Type, Image> + AssetNotFoundException(in String) CANVAS_SIZE: int + TICKS_PER_SECOND: int + FONTS: Map<String, Font> - FILE_FORMAT: String - getMoveInfo(String) : MoveInfo LABEL_DIMENSION: Dimension · LEVEL_FOLDER: String + getMoves() : ArrayList<ArrayDeque<MoveInfo>> LABEL_FONT: Font InvalidTypeException - levelCb: JComboBox<?> MAX_LEVEL: int timer: Timer MIN_LEVEL: int + InvalidTypeException(in String) startMenuMain: JFrame loadImage(in Class<E>, in Map<Type>) : <E extends Enum<E> & Type> void parseActors(in JsonObject): Actor[][] makeConstraints(in int, in int, in int, in int): GridBagConstraints - parsePlayer(in JsonObject): Player - makeConstraints(in int, in int, in int, in int): GridBagConstraints parseRows(in JsonArray): Object[][] initializeTimer(): void makeGenericInfoPanel(in String): JPanel - parseTiles(in JsonObject): Tile[][] - initalizeMenuBar(): void - parseTreasures(in JsonObject): Treasure[][] + returnToMenu(): void + readFile(in int): Board - levelComplete(): void + readReplayFile(in String): ReplayBoard - initializeStartMenu(): void KeyBoardInputListener - initalizeResizeable(): void - saveBoard(in String, in Board, in Time): void - board: Board + getTime(): int + getInfoPanel(): InfoPanel moveDirections : boolean[] + getBoard(): Board + chooseFile(): String + keyPressed(in KeyEvent): void + keyReleased(in KeyEvent): void + keyType(in KeyEvent): void Renderer Diagram ReplayPanel ChapsCanvas InfoPanel Maze Diagram + CANVAS_SIZE : int + WIDTH: int VIEW_DISTANCE: int - TICKS_PER_SECOND : int - TILE_WIDTH: int - FONT_SIZE_SCALAR : float - ICON_HEIGHT_SCALAR : float - TILE_HEIGHT: int - c : ChapsCanvas + BOARD_WIDTH: int - ICON_WIDTH_SCALAR: float - INVENTORY_ICONS : Map<Typ + BOARD_HEIGHT: int <<interface>> - replayWindow : ReplayWindow - board: Board - chipsLeft : int Type - timer : Timer + paint(in Graphics): void - hintText : String - inventoryPanel : JPanel + getType(): Class<? extends GameObject> startTicks(): void + getTileHeight(): int + getFilePath(): String - timeCounter : JLabel + getPlayer() : Player + getStringRepresentative(): String - timePanel : JPanel + setGui(in GUI) : void + getGui() : GUÍ - initializePanels(): void + isValid(in Direction, int Actor) : boolean GameObject - setupChipPanels(): void + getTargetTile(in Direction, in Actor) : Tile - setupInventoryPanel(): void # image : Image + getTileLayer() : Tile[][] - setupLevelPanel(): void - position : Position + getTreasureLayer() : Treasure[][] - type : Type - setupTimePanel(): void walkable: boolean + getActorLayer() : Actor[][] - preActionListeners : Map<EventType, List<GameObjectListener>> + updatePanel(): void + setTiles() : void - postActionListeners : Map<EventType, List<GameObjectListener>> + updateTime(int): void ReplayBoard + setTreasures() : void + isWalkable(): boolean - onTickListeners : List<GameObjectListener> + setActors() : void + setWalkable(boolean walkable) : void - currentQueue : ArrayDeque<MoveInfo> + processTick() : void - moveArray : ArrayList<ArrayDeque<MoveInfo>> TileType + getCurrentTick() : int + registerListener(in PrePost, in EventType, in GameObjectListener): void TreasureType ActorType + moveActor(in Direction, int Actor) : void + registerOnTickListener(in GameObjectListener) : void + processEvent(in GameObject[][], in PrePost, in Eve - name: String - name: String + processEvent(in PrePost, in EventType, in Board) : boolean name: String - clazz: Class<? extends Tile> - clazz: Class<? extends Tile> - clazz: Class<? extends Tile> + runTicks() : boolean + movePlayer() : void + processOnTickEvent(in Board) : void + getChipsLeft() : int walkable: boolean - slot: int - filePath: String + render(in Graphics, in int, in int) : void filePath: String - id: int - filePath: String + pickupChip() : void Extends + getImage() : Image - pickedUp : boolean + setTileAt(in int, in int, in Tile) : void - representative: String - consumeOnUse: boolean + getPosition() : Position + tilesToString() : String - id: int - id: int + getID(): int + setPosition(in Position) : void + isPickedUp(): boolean + getHintText() : String + getType() : Type + getName(): String + moveActorTo(in Position, in Position) : void + getID(): int + movePosition(in Direction) : void + getFilePath(): String + getID(): int + getStringRepresentative() : String + getName(): String + getName(): String + getType(): Class<? extends Tile> + getFilePath(): String + getStringRepresentative(): String + getFilePath(): String + getType(): Class<? extends Tile> + getType(): Class<? extends Tile> + getSlot(): int + isWalkable(): boolean - walkableTiles: Set<TileType> Player + consumeOnUse(): boolean -direction: Direction + INVENTORY_SIZE: int - nextMove: Direction + getDirection(): Direction nextForcedMove: Direction + setDirection(in Direction) : void + getWalkableTiles() : Set<TileType> + getMove(): Direction # getActorWalkableTiles() : Set<TileType> + setMove(in Direction): void + pickup(in Treasure): void + hasKey(in TreasureType): boolean + hasBoots(in TreasureType): boolean + useKey(in TreasureType): boolean + getInventory(): int[] + getNextForcedMove(): Direction setNextForcedMove(in Direction): void DoorTile - key: TreasureType - open : boolean Exceptions Listeners + getKey(): TreasureType **BombTile** BlueDoorTile GreenDoorTile YellowDoorTile RedDoorTile HiddenWallTile InvisibleWallTile SocketTile TrapTile BlueWallTile ActorNotFoundException InvalidLocationChangeException <<interface>> GameObjectListener + ActorNotFoundException(in String) + InvalidLocationChangeException(in String) + execute(in EventType): boolean LevelNotFoundException TileNotFoundException BlueButton **BrownButton** GreenButton RedButton ExitTile RecessedWallTile TeleportTile WallTile TimerWallTile HintTile + LevelNotFoundException(in String) + TileNotFoundException(in String) TreasureNotFoundException - TreasureNotFoundException(in String) BlueFreeTile FireTile ToggleWallTile WaterTile Treasures Movelnfo Direction ArrayUtil IceBoots SuctionBoots IceBoots Flippers moveType: int - x: int + toIntArray(Object[]): int[] - position: Position + toIntegerArray(Object[]): Integer[] - move: int + getMoveType(): Direction + getX(): int + getOffset(): Position + getPosition(): Position + getY(): int Treasure + getMove(): int + add(in Position): Position + inverse(): Direction + minus(in Position): Position KeyBlue KeyGreen KeyRed KeyYellow FireBoots ObjectFactory EventType **Actors** + makeActor(in int, in Position): <E extends Actor> E - makeActor(in Class<E>, in Position): <E extends Tile> E + makeTile(in int, in Position): <E extends Tile> E - makeTile(in Class<E>, in Position) PrePost + makeTreasure(in int, in Position): <E extends Treasure>

- makeTreasure(in Class<E>, in Position)