Class Diagrams Grammar Game

Enemy

- enemy_id: uuid

+ move_path(Vector2D)

+ move_follow_player(Vector2D)

+ detection(DetectionCone): bool

enemy damages player if collided with

PlayerCharacter

- health: int
- sprite: SpriteRenderer
- inventory: list<Item>
+ body: RigidBody2D

+ move_char ():
+ drain_health():
+ curent_location(): Vector2D
+ interact_item(): bool
+ interact_door(): bool
+ use_item(): Item
+ display_inventory()
+ collect_item(bool): bool

has and uses

Is in the vicinity of the interactable

DetectionCone

+ cone_collision: ConeCollider2D
+ is_detected: bool

+ on_trigger_enter(Collider2D player): bool

+ on_trigger_exit(Collider2D player): bool

<<Interface>>
Interactable

+ interactable_type: int
+ collision: BoxCollider2D
+ sprite: SpriteRenderer

+ is_collided(): bool

Door

- is_locked: bool
- question: string
- door_id: uuid

+ unlock_door(Item): bool

Item

- is_correct_key: bool

- item_id: uuid

+ remove_item()

has and uses in inventory

chooses the answer the item holds

Chooses the question the door holds

QuestionManager

- current_question: string

- correct_answer: string

- incorrect_answer: string

- scene_id: Scene

- diff: Difficulty

+ check_correct_answer(): bool

+ choose_question(diff: Difficulty): string

+ choose_answer(diff: Difficulty): string

+ get_answer(): string

+ load_next_scene(scene_id: Scene): string

QuestionBank

- question_dictionary_easy: dict<string question, string answer>

- question_dictionary_med: dict<string question, string answer>

- question_dictionary_hard: dict<string question, string answer>

has and uses

has and uses

<<enumeration>>
Difficulty

EASY,
MEDIUM,
HARD