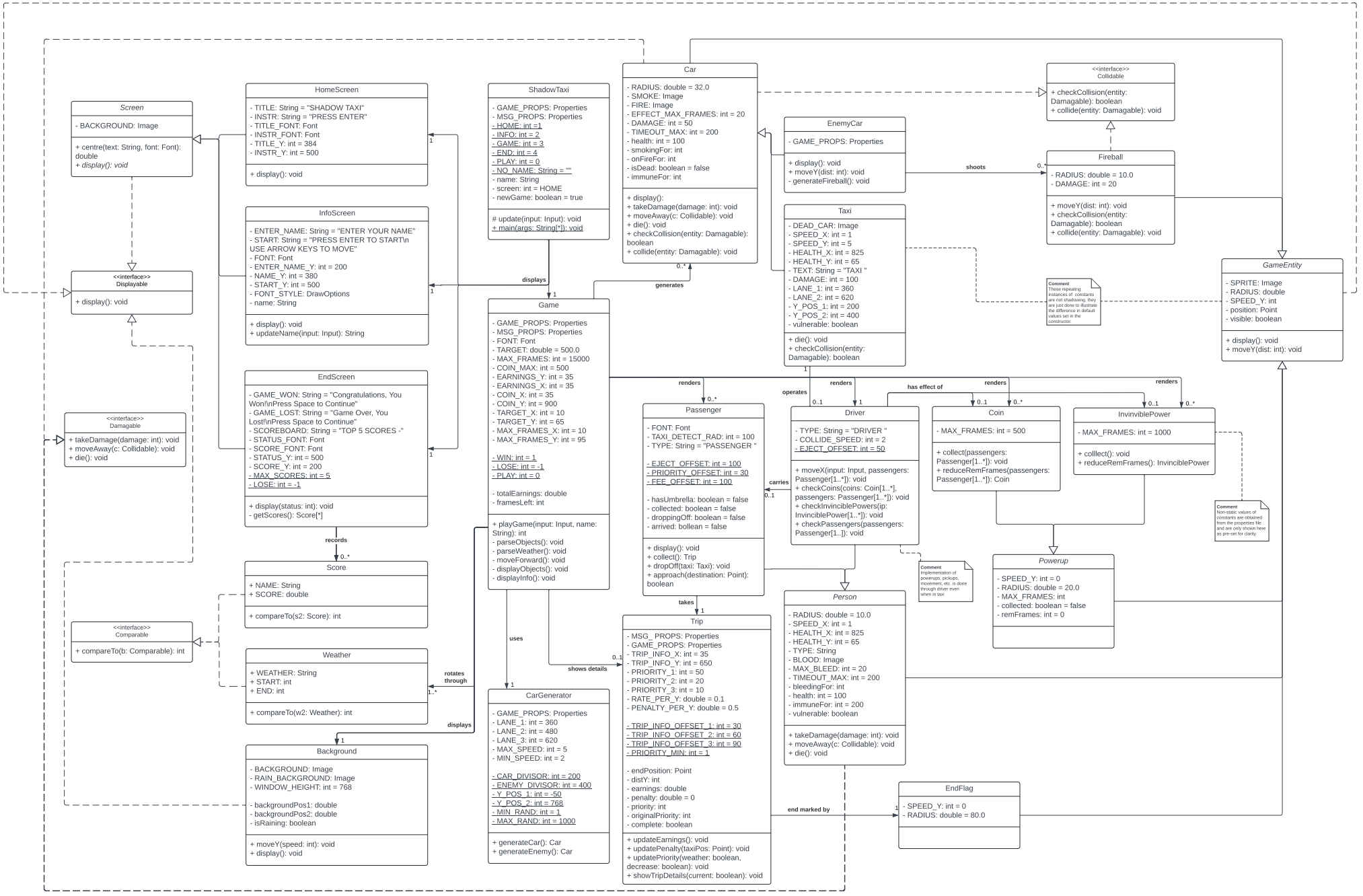
Screen
- BACKGROUND: Image
+ centre(text: String, font: Font): double
+ display(): void
HomeScreen
- TITLE: String = "SHADOW TAXI"
- INSTR: String = "PRESS ENTER"
- TITLE_FONT: Font
- INSTR_FONT: Font
- TITLE_Y: int = 384
- INSTR_Y: int = 500
+ display(): void
ShadowTaxi
- GAME_PROPS: Properties
- MSG_PROPS: Properties
- HOME: int =1
- INFO: int = 2
- GAME: int = 3
- END: int = 4
- PLAY: int = 0
- NO_NAME: String = ""
- name: String
- screen: int = HOME
- newGame: boolean = true
update(input: Input): void
+ main(args: String[*]): void
Car
- RADIUS: double = 32.0
- SMOKE: Image
- FIRE: Image
- EFFECT_MAX_FRAMES: int = 20
- DAMAGE: int = 50
- TIMEOUT_MAX: int = 200
- health: int = 100
- smokingFor: int
- onFireFor: int
- isDead: boolean = false
- immuneFor: int
+ display():
+ takeDamage(damage: int): void
+ moveAway(c: Collidable): void
+ die(): void
+ checkCollision(entity: Damagable): boolean
+ collide(entity: Damagable): void
<<interface>>
Collidable
+ checkCollision(entity: Damagable): boolean
+ collide(entity: Damagable): void
EnemyCar
- GAME_PROPS: Properties
+ display(): void
+ moveY(dist: int): void
+ generateFireball(): void
shoots
Fireball
- RADIUS: double = 10.0
- DAMAGE: int = 20
+ moveY(dist: int): void
+ checkCollision(entity: Damagable): boolean
+ collide(entity: Damagable): void
<<interface>>
Displayable
+ display(): void
InfoScreen
- ENTER_NAME: String = "ENTER YOUR NAME"
- START: String = "PRESS ENTER TO START\n USE ARROW KEYS TO MOVE"
- FONT: Font
- ENTER_NAME_Y: int = 200
- NAME_Y: int = 380
- START_Y: int = 500
- FONT_STYLE: DrawOptions
- name: String
+ display(): void
+ updateName(input: Input): String
displays
Taxi
- DEAD_CAR: Image
- SPEED_X: int = 1
- SPEED_Y: int = 5
- HEALTH_X: int = 825
- HEALTH_Y: int = 65
- TEXT: String = "TAXI "
- DAMAGE: int = 100
- LANE_1: int = 360
- LANE_2: int = 620
- Y_POS_1: int = 200
- Y_POS_2: int = 400
- vulnerable: boolean
+ die(): void
+ checkCollision(entity: Damagable): boolean
generates
Comment
These repeating instances of constants are not shadowing, they are just done to illustrate the difference in default values set in the constructor.
GameEntity
- SPRITE: Image
- RADIUS: double
- SPEED_Y: int
- position: Point
- visible: boolean
+ display(): void
+ moveY(dist: int): void
Game
- GAME_PROPS: Properties
- MSG_PROPS: Properties
- FONT: Font
- TARGET: double = 500.0
- MAX_FRAMES: int = 15000
- COIN_MAX: int = 500
- EARNINGS_Y: int = 35
- EARNINGS_X: int = 35
- COIN_X: int = 35
- COIN_Y: int = 900
- TARGET_X: int = 10
- TARGET_Y: int = 65
- MAX_FRAMES_X: int = 10
- MAX_FRAMES_Y: int = 95
- WIN: int = 1
- LOSE: int = -1
- PLAY: int = 0
- totalEarnings: double
- framesLeft: int
+ playGame(input: Input, name: String): int
- parseObjects(): void
- parseWeather(): void
- moveForward(): void
- displayObjects(): void
- displayInfo(): void
<<interface>>
Damagable
+ takeDamage(damage: int): void
+ moveAway(c: Collidable): void
+ die(): void
EndScreen
- GAME_WON: String = "Congratulations, You Won!\nPress Space to Continue"
- GAME_LOST: String = "Game Over, You Lost!\nPress Space to Continue"
- SCOREBOARD: String = "TOP 5 SCORES -"
- STATUS_FONT: Font
- SCORE_FONT: Font
- STATUS_Y: int = 500
- SCORE_Y: int = 200
- MAX_SCORES: int = 5
- LOSE: int = -1
+ display(status: int): void
- getScores(): Score[*]
records
Score
+ NAME: String
+ SCORE: double
+ compareTo(s2: Score): int
<<interface>>
Comparable
+ compareTo(b: Comparable): int
Weather
+ WEATHER: String
+ START: int
+ END: int
+ compareTo(w2: Weather): int
rotates through
uses
shows details
Background
- BACKGROUND: Image
- RAIN_BACKGROUND: Image
- WINDOW_HEIGHT: int = 768
- backgroundPos1: double
- backgroundPos2: double
- isRaining: boolean
+ moveY(speed: int): void
+ display(): void
CarGenerator
- GAME_PROPS: Properties
- LANE_1: int = 360
- LANE_2: int = 480
- LANE_3: int = 620
- MAX_SPEED: int = 5
- MIN_SPEED: int = 2
- CAR_DIVISOR: int = 200
- ENEMY_DIVISOR: int = 400
- Y_POS_1: int = -50
- Y_POS_2: int = 768
- MIN_RAND: int = 1
- MAX_RAND: int = 1000
+ generateCar(): Car
+ generateEnemy(): Car
Trip
- MSG_ PROPS: Properties
- GAME_PROPS: Properties
- TRIP_INFO_X: int = 35
- TRIP_INFO_Y: int = 650
- PRIORITY_1: int = 50
- PRIORITY_2: int = 20
- PRIORITY_3: int = 10
- RATE_PER_Y: double = 0.1
- PENALTY_PER_Y: double = 0.5
- TRIP_INFO_OFFSET_1: int = 30
- TRIP_INFO_OFFSET_2: int = 60
- TRIP_INFO_OFFSET_3: int = 90
- PRIORITY_MIN: int = 1
- endPosition: Point
- distY: int
- earnings: double
- penalty: double = 0
- priority: int
- originalPriority: int
- complete: boolean
+ updateEarnings(): void
+ updatePenalty(taxiPos: Point): void
+ updatePriority(weather: boolean, decrease: boolean): void
+ showTripDetails(current: boolean): void
end marked by
EndFlag
- SPEED_Y: int = 0
- RADIUS: double = 80.0
renders
Passenger
- FONT: Font
- TAXI_DETECT_RAD: int = 100
- TYPE: String = "PASSENGER "
- EJECT_OFFSET: int = 100
- PRIORITY_OFFSET: int = 30
- FEE_OFFSET: int = 100
- hasUmbrella: boolean = false
- collected: boolean = false
- droppingOff: boolean = false
- arrived: bollean = false
+ display(): void
+ collect(): Trip
+ dropOff(taxi: Taxi): void
+ approach(destination: Point): boolean
takes
carries
operates
has effect of
Driver
- TYPE: String = "DRIVER "
- COLLIDE_SPEED: int = 2
- EJECT_OFFSET: int = 50
+ moveX(input: Input, passengers: Passenger[1..*]): void
+ checkCoins(coins: Coin[1..*], passengers: Passenger[1..*]): void
+ checkInvinciblePowers(ip: InvinciblePower[1..*]): void
+ checkPassengers(passengers: Passenger[1..]): void
Comment
Implementation of powerups, pickups, movement, etc. is done through driver even when in taxi
Coin
- MAX_FRAMES: int = 500
+ collect(passengers: Passenger[1..*]): void
+ reduceRemFrames(passengers: Passenger[1..*]): Coin
InvinviblePower
- MAX_FRAMES: int = 1000
+ colllect(): void
+ reduceRemFrames(): InvinciblePower
Comment
Non-static values of constants are obtained from the properties file and are only shown here as pre-set for clarity
Powerup
- SPEED_Y: int = 0
- RADIUS: double = 20.0
- MAX_FRAMES: int
- collected: boolean = false
- remFrames: int = 0
Person
- RADIUS: double = 10.0
- SPEED_X: int = 1
- HEALTH_X: int = 825
- HEALTH_Y: int = 65
- TYPE: String
- BLOOD: Image
- MAX_BLEED: int = 20
- TIMEOUT_MAX: int = 200
- bleedingFor: int
- health: int = 100
- immuneFor: int = 200
- vulnerable: boolean
+ takeDamage(damage: int): void
+ moveAway(c: Collidable): void
+ die(): void