

CRC (Class-Responsibility-Collaboration card)

Class name: GameObject	Subclasses: UIElement, CameraController, Collectable, NPC, TileMap, Player, Printer, ExamPage, Screen related classes, Bob
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none">• Store object's position• Define update behaviour for game object• Manage cleanup of game objects• Check for supported component types	<ul style="list-style-type: none">• BaseComponent• Engine

Class name: UIElement	Superclass: GameObject
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none">• Handle the position of UI elements on the screen	

Class name: Achievements	Superclass: UIElement
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none">• Manage and track player achievements• Display achievement information on the UI	<ul style="list-style-type: none">• UIElement

Class name: GameTimer	Superclass: UIElement
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none">• Track the game time and update it while playing• If time runs out, transition to the game state to Lose• Display the time and events	<ul style="list-style-type: none">• Game• EventCounter

Class name: CameraController	Superclass: GameObject
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> Follow the game target by managing camera movement 	<ul style="list-style-type: none"> GameObject

Class name: Collectable	Subclasses: SpeedCollectable, Item, Beer Superclass: GameObject
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> Represent objects that the player can collect 	

Class name: SpeedCollectable	Superclass: Collectable
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> Increase player speed when collected 	<ul style="list-style-type: none"> Player

Class name: LongBoiAmulet	Superclass: Collectable
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> Represent the Long Boi Amulet as a collectable When collected, apply Amulet effect to the player for 5 seconds 	<ul style="list-style-type: none"> Player Assets Collectable

Class name: RaspberryPi	Superclass: Collectable
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> Represent Raspberry PI as a collectable Only visible and collectable after reveal() is called When collected, provide message and sound feedback 	<ul style="list-style-type: none"> Player Assets GameMessageHandler Game

Class name: Sunglasses	Superclass: Item
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> • Represent the sunglasses as an item collectable. • Manage pickedUp state and notify player on pickup 	<ul style="list-style-type: none"> • Player • Assets • Item

Class name: Item	Superclass: Collectable
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> • Differentiate between item type 	

Class name: TileMap	Superclass: GameObject
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> • Generate collision data from the tile map • Display the game map using the camera • Create entities from the tile map 	<ul style="list-style-type: none"> • Engine • Game • CameraComponent

Class name: NPC	Superclass: GameObject
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> • Check player interaction and required items • Trigger game progression based on player interaction 	<ul style="list-style-type: none"> • Player • Game

Class name: Bob	Superclass: GameObject
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> • Represent the Bob enemy character • Handle Bob movement and behaviour 	<ul style="list-style-type: none"> • Player • BobManager

Class name: KingBob	Superclass: Enemy
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> • Represent the King Bob enemy (Assessment 2 negative event/UR_Events) • Store deposit location and waypoint route 	<ul style="list-style-type: none"> • Player • MoveBetweenWaypointsState • Assets

Class name: Player	Superclass: GameObject
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> • Handle player movement and input • Interact with the game world • Pick up items 	<ul style="list-style-type: none"> • Item • Collectable • EventCounter

Class name: Beer	Superclass: Collectable
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> • Cause player confusion when collected 	<ul style="list-style-type: none"> • Player • GameMessageHandler

Class name: ExamPage	Superclass: GameObject
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> • Move and interact with the player as a projectile 	<ul style="list-style-type: none"> • Player • Engine

Class name: Printer	Superclass: GameObject
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> • Shoot exam pages at regular intervals 	<ul style="list-style-type: none"> • ExamPage • Engine

Class name: MenuScreen	Superclass: BaseMenuScreen
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> •Display the main menu interface •Handle user actions on the main menu 	<ul style="list-style-type: none"> •Game •LevelScreen

Class name: PauseScreen	Superclass: BaseMenuScreen
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> •Display the pause menu •Allow the player to resume, restart, or quit the game 	<ul style="list-style-type: none"> •Game •LevelScreen

Class name: LevelScreen	Superclass: Screen
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> •Set up and manage the main game level 	<ul style="list-style-type: none"> •Game •Engine •TileMap •Player

Class name: WinScreen	Superclass: BaseMenuScreen
Responsibilities	Class Collaborations (other classes):
<ul style="list-style-type: none"> • Display the win screen and final game results 	<ul style="list-style-type: none"> •Game •LevelScreen •MenuScreen •EventCounter