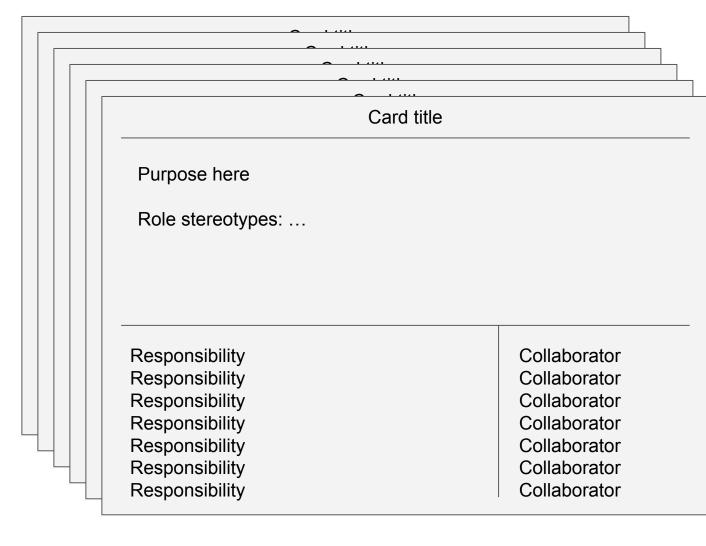
Instructions for the Candidate - Responsibility - Collaborator whiteboard template

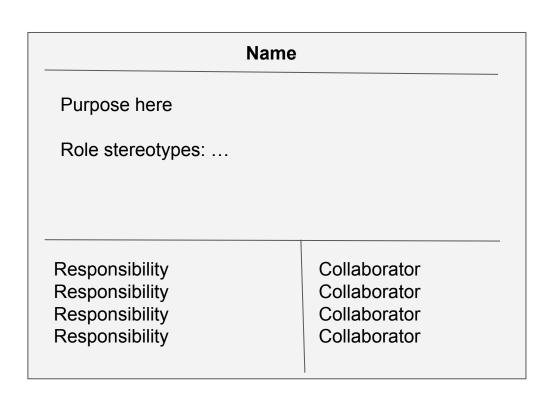
- 1. Find all the candidates, copying and pasting template card to the right: only fill in the name for now
- 2. Place related concepts close to each other, to get a feel for the various domain areas
- 3. Think if you need all the cards delete cards that are redundant / unnecessary after further team discussion
- 4. Fill in role stereotypes, then purposes (1-3 sentences max)
- 5. Fill in responsibilities (purpose / role stereotypes will help you)
- 6. For each responsibility, think aloud who would the candidate
- need to talk to in order to achieve it: those are collaborators

 7. Keep doing steps 3-6 until happy you didn't miss something

 8. Turn identified concepts into your design (UML class diagrams
- and/or behavioural diagrams).

Use CTRL+ALT+(plus/minus) to zoom in/out as needed.





Designer Story:

- We are developing a single player computer game to be run as a desktop application running locally
- Once the game starts the player will get a short tutorial/introduction to the game then they will be free to move around the map.
- There are '7 days' where the user needs to study to gain points.
- The user needs to eat, rest and complete recreation activities around the map to recover their energy to study more.
- Once the 7 days are over if the player has a high enough score they have passed their exams and win the game.

Themes:

- Desktop interface
- A map layout that considers where the player is and locations of interest
- The player will be able to complete tasks at the locations on the map (Study, rest, recreation) and gain points for doing so
- A timer that splits the game up in to 7 days in game
- End of the 7th day with a win condition

Iteration 1

Character

Represents the avatar the user is controlling that is somewhere on the map.

Role stereotypes: Information holder

Grid Responsibility Movement Responsibility Collaborator Responsibility Collaborator

Movement

Updates the position of the character by moving them

Role stereotypes: Information Updater?

Knows PlayerPosition Responsibility Responsibility Responsibility

PlayerPosition Grid?

Character

Animations

Represents the animations that play when a character interacts with something

Role stereotypes: ..

Responsibility Responsibility

Interaction Character Responsibility Collaborator Responsibility Collaborator

Energy	,
The amount of 'energy' a cha Representing the amount of t do.	
Role stereotypes: Information	holder
Decides whether an action can happen	Collaborator Collaborator

Responsibility Responsibility

Responsibility

Collaborator

Collaborator

Money Amount of 'money' a character has left. Determines whether a player can do certain actions Role stereotypes: .. Collaborator Decides whether a player Collaborator can buy something Collaborator Responsibility Collaborator Responsibility Responsibility Interaction Allows the user to do an action by interacting with a

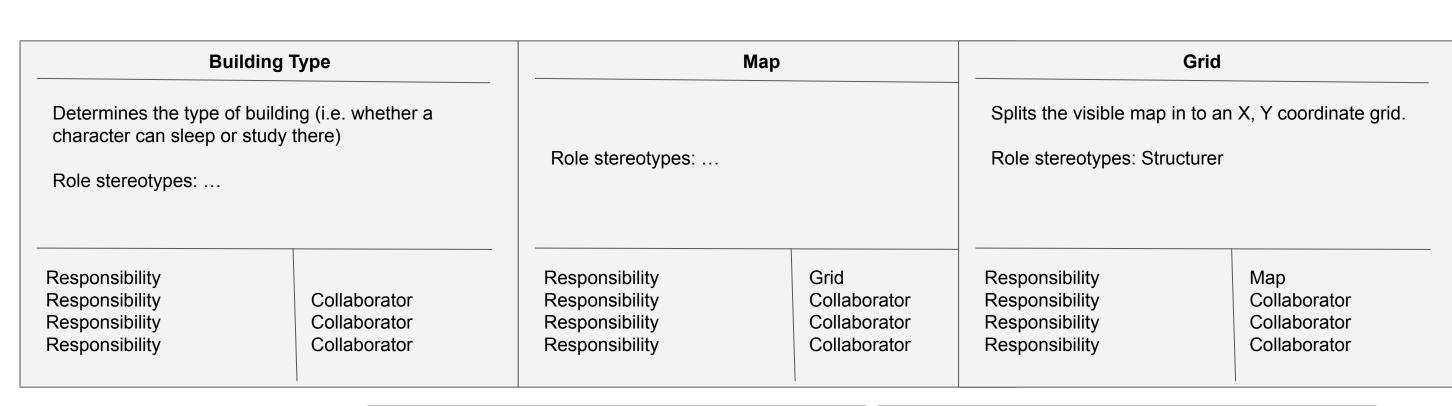
point of interest on the map.

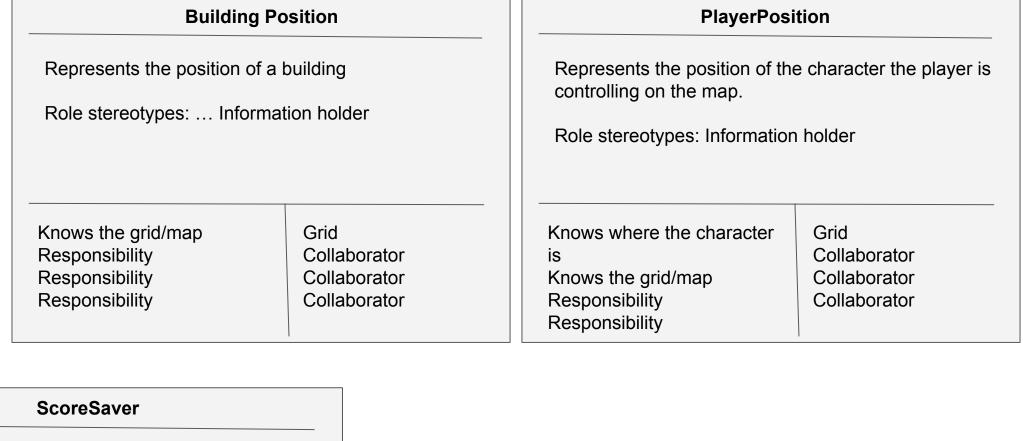
Role stereotypes:

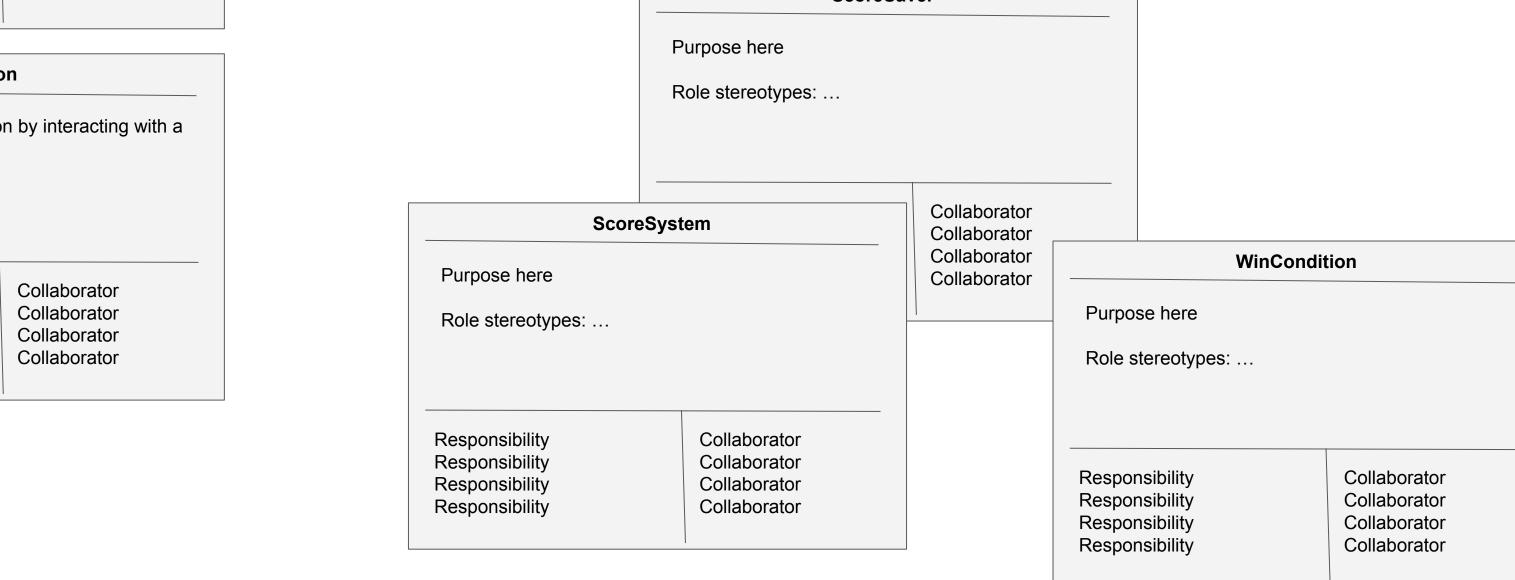
Responsibility Responsibility

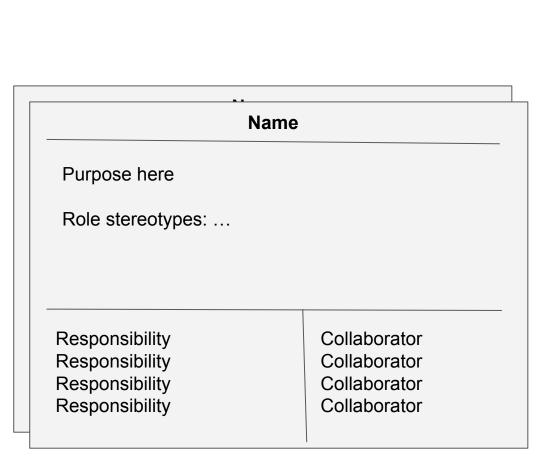
Responsibility

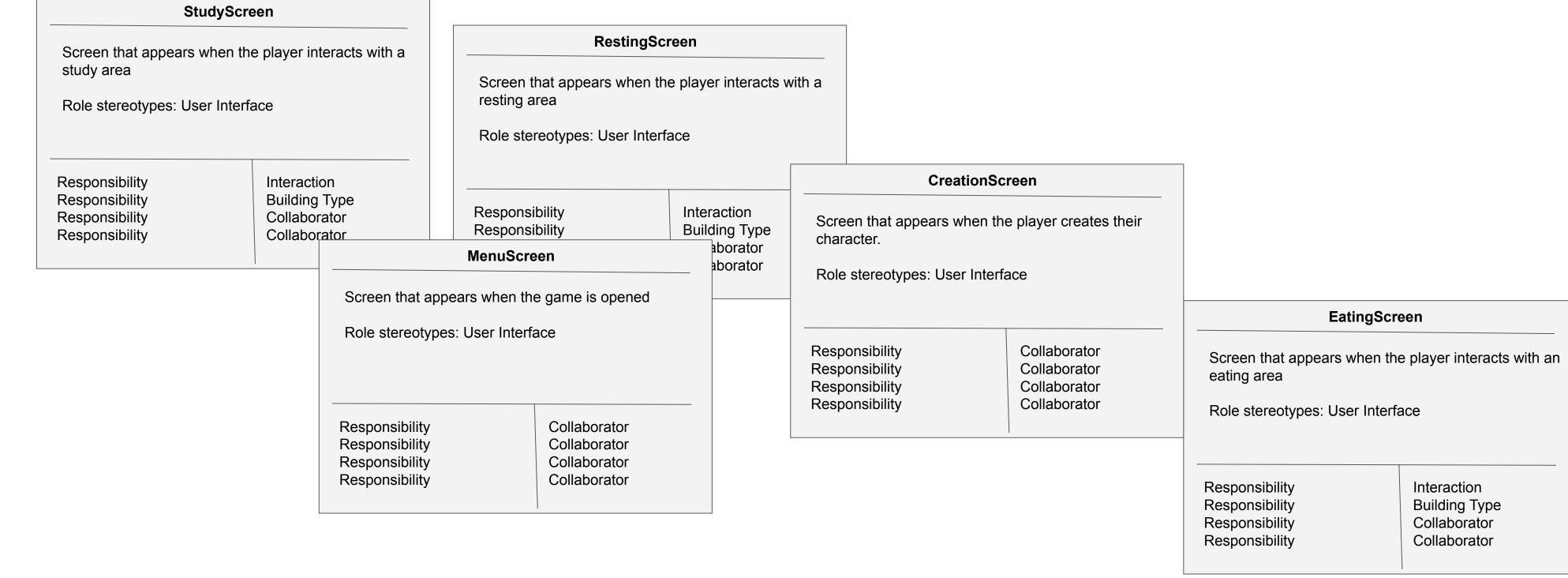
Responsibility





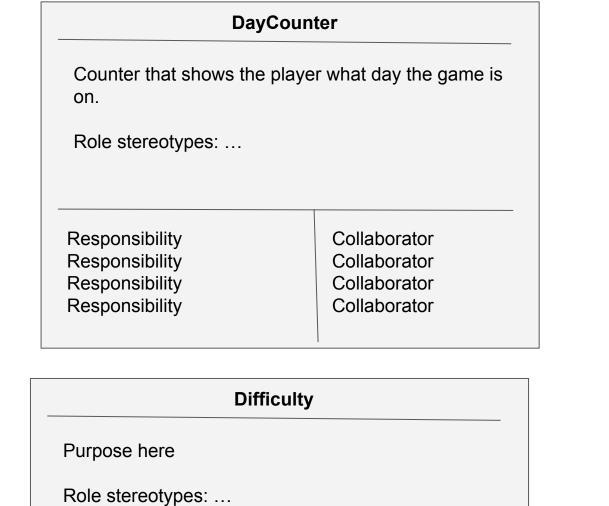






GameSaver Method that saves the game so that the player can continue another time Role stereotypes: . Collaborator Responsibility Responsibility Collaborator Collaborator Responsibility Collaborator Responsibility

Leaderbo	ard
Screen that displays the lead	erboard
Role stereotypes:	
Responsibility	Collaborator



Collaborator

Collaborator

Collaborator

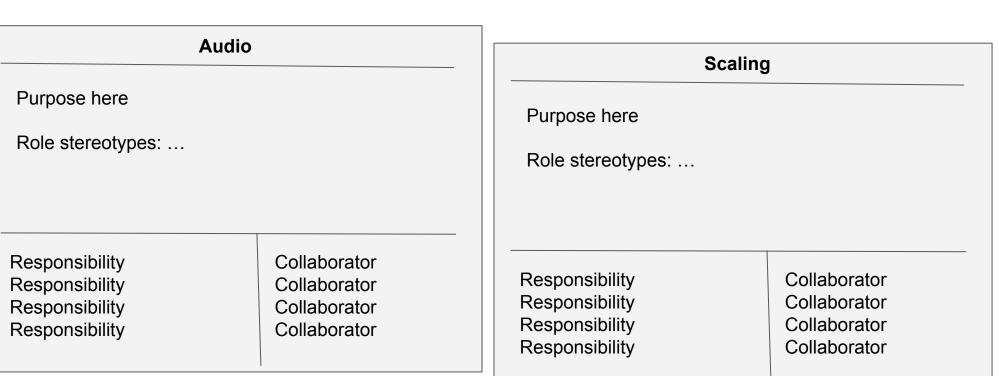
Collaborator

Responsibility

Responsibility

Responsibility

Responsibility



Keyboa	rd
Purpose here	
Role stereotypes:	
Responsibility Responsibility Responsibility Responsibility	Collaborator Collaborator Collaborator Collaborator

Iteration 2

Base class for most game objects, includes a render and update function that will be extended by child classes

Role stereotypes: Controller, Coordinator

Responsibility
Responsibility
Responsibility
Responsibility
Responsibility
Responsibility
Responsibility

Handling the positions of the buildings on the map that can be interacted with by the player to trigger an event.

Role stereotypes: Structurer

Represents a building Renders the building on the screen with the text Handles interactions with the building

Renders the building Collaborator

Purpose here

Responsibility Responsibility

Responsibility

Responsibility

Role stereotypes: ..

Collaborator

Collaborator Collaborator

Collaborator

Responsible for tracking and managing time and energy values while making sure there is enougleach for events. Role stereotypes: Information Holder, Coordinat Controller, Interfacer, Service Provider Knows and can edit time, nours and energy values Knows energy required for an event Collaborator Collaborator Collaborator	TimeEnerg	У
Controller, Interfacer, Service Provider Knows and can edit time, hours and energy values Knows energy required for an event Collaborator Collaborator	nergy values while making	5 5
Knows and can edit time, Event PlayerController Collaborator an event Collaborator	3 .	•
nours and energy values Knows energy required for an event Collaborator Collaborator	Jontroller, Interfacer, Servic	
Knows energy required for Collaborator Collaborator		e Providei
n event Collaborator	nows and can edit time,	Event
	nows and can edit time, ours and energy values	Event PlayerController
Theore it all days have	nows and can edit time, ours and energy values nows energy required for	Event PlayerController Collaborator

EndScreen		Screen	S
Screen displaying the players game. Role stereotypes: User Interfa		Purpose here Role stereotypes:	
Responsibility Responsibility Responsibility Responsibility	Collaborator Collaborator Collaborator Collaborator	Responsibility Responsibility Responsibility Responsibility	Collaborator Collaborator Collaborator Collaborator

MenuSe	creen	Мар	Screen
Screen displaying the incurrent day. Role stereotypes: User I	tro/pause menu alongside the	Screen displaying the n Role stereotypes: User	nap, buildings and the player. Interfaces
Responsibility Responsibility Responsibility Responsibility	Tracker Collaborator Collaborator Collaborator	Responsibility Responsibility Responsibility Responsibility	Player Controller Building Collaborator Collaborator

Ever	nt
Base Class for all events. In each child event extends up corresponding event type	
Role stereotypes: Informati Service provider	on Holder, Interfacer,
Knows name, time cost, energy cost, enjoyment/study level, fatigue and type of event	Building Tracker TimeEnergy Collaborator

StudyEve	ent	RestEv	ent		EatEve	ent
Event/popup that appears whe with a building tied to studying Role stereotypes: User Interface	g. Uses Energy	Event/popup that appears we with a building tied to resting Progresses to next day Role stereotypes: User Inter	g. Increases		Event/popup that appears w with a building tied to eating Money Role stereotypes: User Inter	. Increases Energy, U
Knows the Players energy Responsibility Responsibility Responsibility	Tracker PlayerController Building Collaborator	Knows the Players energy Moves to the next day Responsibility Responsibility	Tracker PlayerCo Building Collabora		Knows the Players energy Responsibility Responsibility Responsibility	Tracker PlayerController Building Collaborator
	explaining the c	TutorialEvent at appears before the game starts, core gameplay loop and controls. es: User Interfacer		with a buildi Energy	RecreationEvent p that appears when the player inting tied to a recreational activity. Ut	

Knows the Players energy

Responsibility

Responsibility

Responsibility

Tracker

PlayerController Building

Collaborator

Tracker

Building

Collaborator

PlayerController

Responsibility Responsibility Responsibility

Responsibility

	GUI
Displays information of day, number of events	on the screen (Score, currents)
Role stereotypes: Use	er Interfacer
Role stereotypes: Use	er Interfacer
Role stereotypes: Use	er Interfacer ScoreSystem
Responsibility	ScoreSystem

Final Iteration

Purpose here
Role stereotypes: ...

Responsibility

Purpose here
Role stereotypes: ...

Responsibility
Responsibility
Responsibility
Responsibility
Responsibility
Responsibility
Responsibility
Responsibility
Responsibility

Stores information about and manages in game time

Role stereotypes Information Holder, Controller,
Service Provider

Checks if all days have passed
Stores and provides info about remaining time
Checks and decreases time for actions to occur

Main
Collaborator
Collaborator
Collaborator
Collaborator

Time

Handles the main gameplay loop including managing event and interactions, score calculation and file writing for the scores.

Role stereotypes: Controller, Interfacer, Service Provider

Initiating events Managing Interactions Handles saving score Gives input and output functionality for the player

Main

Handles the main gameplay loop including managing managing managing managing file writing managing file writing managing and file writing managing file writing managing event and file writing file score calculation and file writing managing event and file writing for the scores.

Manages the attributes of the player character such as money and energy.

Role stereotypes: Information Holder, Controller, Service Provider

Store and manage energy Store and manage money Checks if enough energy for interactions

Main Collaborator Collaborator Collaborator Collaborator

Represents and stores info about events that can occur in the game.

Role stereotypes Information Holder, Structurer, Service Provider

Store and provide: event time and energy cost, enjoyment/study level, monetary cost and type.

Main
Collaborator
Collaborator
Collaborator

CollisionDetector

Detects and stops the user from moving onto an object they should not be able to move onto.

Role stereotypes: ...

Responsibility

The main screen where the gameplay takes place.

Role stereotypes: Controller, Interfacer, Service Provider

Initialize the game screen and objects
Load and renders tilemap
Update game state based on player inputs

GameObject
Building
PlayerController

Purpose here
Role stereotypes: ...

Responsibility

MenuScreen Menu screen seen on startup where the user can start the game. Role stereotypes: Controller, Interfacer, Service Provider **EndScreen** Initialize menu screen Purpose here Detect user input to start the Role stereotypes: .. Transition to the game Collaborator Responsibility Responsibility Collaborator Collaborator Responsibility Responsibility Collaborator

Base class for most game objects, includes a render and update function that will be extended by child classes

Role stereotypes: Controller, Coordinator

Responsibility
Responsibility
Responsibility
Responsibility
Responsibility
Responsibility
Responsibility

Handling the positions of the buildings on the map that can be interacted with by the player to trigger an event.

Role stereotypes: Structurer

Represents a building Renders the building on the screen with the text Handles interactions with the building

Renders the building on the screen with the text Handles interactions with the building

Allows movement of the players character around the map. Has the players location and handles collision with the buildings

Role stereotypes: Player Object

Knows when close to buildings Building Collaborator Collaborator Responsibility

PlayerController