Phase 1 CRC

Main

Public static void Main Runs a session		

Session

Session

Public void run - calls Update and Draw in a loop
Private void Update
Private void Draw
Stores the player.

Main
OpenGL
Level
CollisionManager
EntityManager
InteractionManager
Player

InputController Takes keyboard input Session

Level

Stores all the information of a level

Stores an instance of GraphGenerator and uses it to generate the layout of the level.

Populates each state in the graph with a Room object.

Stores current room

Public Room GetCurrentRoom - returns the current room

Public void WalkThroughDoor - takes a value that represents which door the player has walked through. This updates the current room.

Session GraphGenerator Room

GraphGenerator

Generates a connected planar graph with given number of states.

Level

Room

Stores a collection of Entities that will be placed in that room (enemies, chests, items).

Stores the dimensions of the room. Stores the background image of the room. Level Drawable Enemy Item

Entity

Drawdata

Represents an image and coordinates to be drawn on screen. (and which layer to draw on)

Has a method draw() which returns drawdata to be drawn. Room Item Entity	Drawable		Interface
		Item	

Collidable

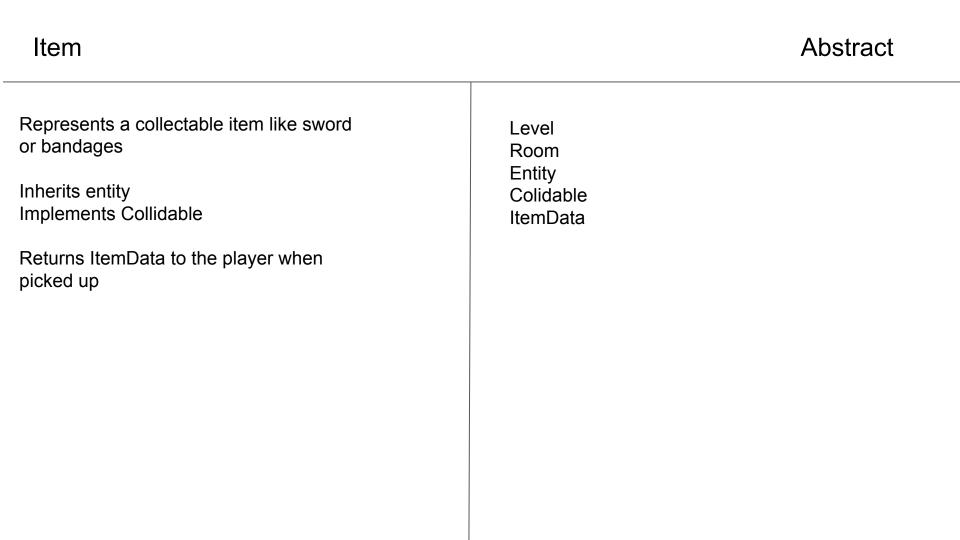
Interface

Has a method getHitBoxArray() which returns an array of circles. These circles represent that hitbox of whoever implements Collidable.

Contains functions that specify how to react when collided with any other object that also implements Collidable. For example, public void CollideWith(player), public void CollideWith(Rat), etc.

Player Enemy Item

Entity	Abstract
Represents an object on the screen which changes state over time Sprite (image representing the entity) Has an update function.	Level Room Drawable Enemy



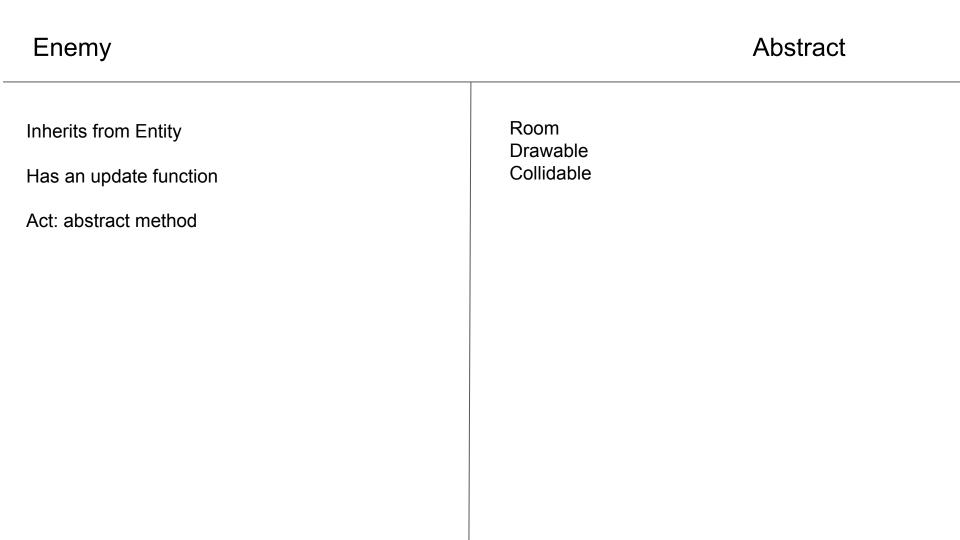
Sword

Implements Item. Item Contains sword image. Contains an instance of ItemData

Player

Inherits from Entity
Implements Drawable
Stores xp
Stores players health
Stores collection of ItemData (inventory)

Session Drawable Collidable



Rat

Inherits from Enemy

Has an update function, defined: "move toward player"

Deals damage on impact

Drops xp when killed (directly transferred to the player)

Room Drawable Collidable

Chest

Inherits from Entity
Allows interaction when collided with.
Spawns random items when opened.

Level Room Drawable Collidable

ItemData

Represents items that are not entities. All the details that the player class needs in order to use that item. For example, damage per shot, speed factor, type of ammo, image to be displayed in inventory, number of available uses, etc.

Player Item