

CRC Cards for Plague by Team 7

Renderer

Rendering	
<ul style="list-style-type: none">• Renders everything the player can see on their screen• Controls what the player can view in terms of their current perspective	Position Direction Avatar Images GUI Virus

Images	
<ul style="list-style-type: none">• Stores all the images, colours, and Strings needed in the game as static objects• Provides some utility methods for the renderer to get right images	Avatar Direction

Side	
<ul style="list-style-type: none">• Represents four sides of an object (to render)• Decides which side of images to use	

GUI

GUI	
<ul style="list-style-type: none">• Displays the main window and displays all the components needed to play the game• Shows player's inventory, health, virus type & position in the map• Display the time in the game world• Gets the IP address typed by the user	Rendering ClientUI Avatar Virus Images

AlertBox	
<ul style="list-style-type: none">• Pop up a dialog that will display messages to the user	GUI ClientUI

Client

ClientUI	
<ul style="list-style-type: none">• Serves as a controller between the Client and GUI.• Records information of the player at this client side.• Implements all the listeners(Action/Mouse/Key) so whenever the user makes an action, it delegates the Client to send packet to Server.• Updates the GUI and Renderer according to the data received from server.	Rendering Client Virus Avatar GUI ClockThread AlertBox

ClockThread	
<ul style="list-style-type: none">• This class is responsible for syncing the update of GUI and Renderer	ClientUI

Client	
<ul style="list-style-type: none">• Communicates with Receptionist to exchange information with server.	ClientUI

ParserUtilities	
<ul style="list-style-type: none">• Parses the message received by the client from the server.	ClientUI Avatar Position Direction

Server

ServerMain	
<ul style="list-style-type: none">• Starts the server and makes a new game• Doesn't handle any game logic• Joins in and disconnects clients	Game Receptionist InitialGameLoader ServerGui

ServerGui	
<ul style="list-style-type: none">• Display information about the Server. E.g. Port number and IP address	ServerMain

Receptionist	
<ul style="list-style-type: none">• A single thread that helps handle the communication with each client.• Receives events from clients via a socket• Checks which packet is sent by the client and performs the action the client wants accordingly.	Game ServerMain Packet

Packet	
<ul style="list-style-type: none">• Specifies the kind of packet• Convert byte to packet• Convert Packet to byte	

Player

Player	
<ul style="list-style-type: none">• Holds player's status such as: health, position, virus, items, UserID and name• Handles logics for playre's actions such as drinking antidotes, extinguishing torch, unlock chest.	Virus Position Avatar Antidote Item Destroyable Key Torch Tradable Container Lockable

Position	
<ul style="list-style-type: none">• Represents the geographical information of the player in the game• Has the (x, y) coordinates, direction of player and the ID of current area.	Direction

Avatar	
<ul style="list-style-type: none">• Represents the Avatar for each player	

Direction	
<ul style="list-style-type: none">• Represents four directions• Returns a random direction• Returns the left or right side of the current direction	

Virus	
<ul style="list-style-type: none">• Represents the type of virus a player carry• Returns a random virus	

Game

Item	
<ul style="list-style-type: none">• An object that can be picked up from or put into containers.• Can be placed into the player's inventory	

Key	
<ul style="list-style-type: none">• Is used to unlock lockable containers or rooms• Unique and can be used only once	

Antidote	
<ul style="list-style-type: none">• Matches a certain type of virus• Can be drank by players, so he can prolong/shorten his health.	Virus

Bag	
<ul style="list-style-type: none">• One-use-container that can contain loot inside	Item Player

Torch	
<ul style="list-style-type: none">• Increases visibility when it's night time• Has a time limit• Can be turned on or off	

World

Area	
<ul style="list-style-type: none">• Represent the world map or a room• Spawn each player to a random position in the map	MapElement

Room	
<ul style="list-style-type: none">• Represents hidden rooms in the game.• It can be locked or unlocked	

Obstacle	
<ul style="list-style-type: none">• Represents a position in the map where a player cannot walk onto or pass through	

TransitionSpace	
<ul style="list-style-type: none">• A portal that connects two areas in the game, e.g. a door from which the player can get into a hidden room.	Direction Position

Chest	
<ul style="list-style-type: none">• Holds loot• Can be locked/unlocked.• Player can take loot out or put any item back in.• Contains more items than other containers.	Item Player

Cupboard	
<ul style="list-style-type: none">• Holds loot• Can be locked/unlocked.• Player can take loot out or put any item back in.• Contains fewer items	Item Player

ScrapPile	
<ul style="list-style-type: none">• Holds loot• Player can take loot out or put any item back in.• Contains fewer items	Item Player

GroundSpace	
<ul style="list-style-type: none">• Represents a ground in the game	

Data Storage

InitialGameLoader	
<ul style="list-style-type: none">• Makes a new game object and initializes all the objects needed for the game.• Loads the gameWorld map and other maps.• Distributes the items to random chests	Position GroundSpace TransitionSpace Cupboard ScrapPile Chest Virus Keys Antidotes Bag

XMLFunctions	
<ul style="list-style-type: none">• Saves the current game state into an XML file• Loads the game from an XML file and convert it to a Game object	GameAdapter

GameAdapter	
<ul style="list-style-type: none">• Alternate version of Game class, specifically used only for XML parsing only.• Returns an original copy of the Game object.• Keeps track of all the alternate objects used in the Game.	PositionAdapter TransitionSpaceAdapter ItemAdapter TorchAdapter GroundSpaceAdapter KeyAdapter ObstacleAdapter AreaAdapter

AreaAdapter	
<ul style="list-style-type: none">• Alternate version of Area class, specifically used only for XML parsing only.• Returns an original copy of the Area object.	MapElementAdapter

PlayerAdapter	
<ul style="list-style-type: none">• Used for parsing Player object to an XML file.• Keeps track of all the Player's information• Returns an original copy of the PlayerObject	PositionAdapter Virus ItemAdapter Avatar

PositionAdapter	
<ul style="list-style-type: none">• Alternate class for Position class, specifically used only for XML parsing only• Returns the original copy of the Position object.	Position

TransitionSpaceAdapter	
<ul style="list-style-type: none">• Used for parsing the TransitionSpace object to XML• Returns the original copy of the TransitionSpace object• Keeps track of the current and destination position in the map.	MapElementAdapter PositionAdapter TransitionSpace

MapElementAdapter	
<ul style="list-style-type: none">• Alternate class for MapElement interface, specifically used only for XML parsing only	

TorchAdapter	
<ul style="list-style-type: none">• Used for parsing the torch object to XML• Returns an original copy of the Torch object• Need to know the time limit and if it is used or not	ItemAdapter Torch

ItemAdapter	
<ul style="list-style-type: none">->Alternate super class for Item, specifically used only for XML parsing only	

ChestAdapter	
<ul style="list-style-type: none">• Used for parsing the chest object to XML• Returns an original copy of the Chest object• Keeps track of the keyID and if it's locked	ObstacleAdapter Chest

GroundSpaceAdapter	
<ul style="list-style-type: none">• Alternate class for GroundSpace used for XML parsing only.	MapElementAdapter

AntidoteAdapter	
<ul style="list-style-type: none">• Used for parsing the antidote object to XML• Returns an original copy of the Antidote object	Virus ItemAdapter

BagAdapter	
<ul style="list-style-type: none">• Used for parsing the bag object to XML• Returns an original copy of the bag object	ItemAdapter Antidote

CupboardAdapter	
<ul style="list-style-type: none">• Used for parsing the Cupboard object to XML• Returns an original copy of the Cupboard object• Keeps track of the keyID and if it's locked	ObstacleAdapter Cupboard

ObstacleAdapter	
<ul style="list-style-type: none">• Alternate superclass for Obstacle, specifically used only for XML parsing only• Returns original Obstacle object	Obstacle

KeyAdapter	
<ul style="list-style-type: none">• Used for parsing the key object to XML• Returns an original copy of the key object	ItemAdapter Key

ScrapPileAdapter	
<ul style="list-style-type: none">• Used for parsing the scrapPile object to XML• Returns an original copy of the scrapPile object• Needs to know the list of items it has.	ObstacleAdapter ScrapPile