

## PC08 - Game Design

Final Pseudocode and UML

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### 1) Pseudocode

#### # Set colors

Edibles color = green

font color = white

font = font type and size

Upload background image

#### # Player

Upload player (octopus) image

#### # Define classes and methods

Class 1: Player

Method 1: Draw player

Method 2: Allows the player to move across the screen with Arrow keys and W/A/S/D  
→ define X and Y wrap for screen wrapping along the axis

Class 2: Edibles

Method 1: Draws little green squares at random locations

Method 2: Squares disappear when octopus collides with them  
→ if Counter = 5, user wins: Winner! appears on screen

Class 3: Timer

Counts seconds passed

Closes the window when = 0

Class 4: Counter

Create a Counter that counts the number of green squares left on screen

#### # Instantiate objects

Edibles 1-5()

Player()

Timer()

# Animation Controls

# While Loop

Window fill blit (background image)

For loop to show objects in list (green squares)

For loop for collisions with objects in list

Redraw Octopus

Timer Countdown

Score display

Endgame conditionals:

- If (SquareCounter=0):  
Winner!
- If time runs out: Time's up!

Animation Control

Update window

Wait (add clock)

## 2) Universal Model Language (UML)

	Player (Octopus)
Attributes	Position: appears in the middle of the screen (w/2, h/2) Size of Image: 64 x 64 pixels Color: orange
Methods	Key task: movement with Arrow keys and W/A/S/D

	Edibles (small green squares)
Attributes	Position: appear at random positions between x = 100 y = 450 Size: 10

	Color: green
Methods	Key task: disappear when octopus collides with them

	Timer
Attributes	Position: (400,30) Font Size: 30 Font Type: Arial Black Color: white
Methods	A 30-seconds countdown that closes the window when time runs out

	Counter
Attributes	Position: (50,30) Font Size: 30 Font Type: Arial Black Color: white
Methods	Counts the number of green squares the octopus has eaten