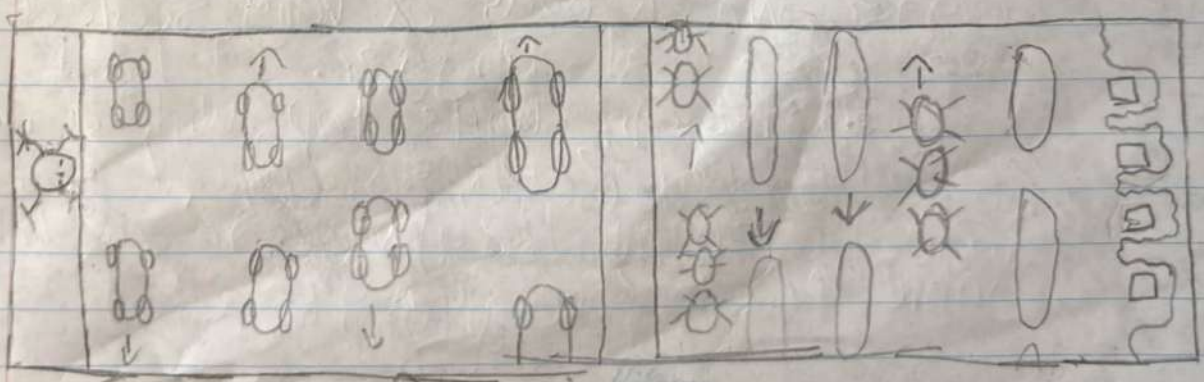
Assignment 3: 2D Game Project

- My first initial thought for this 2D game project ever before checking the assignment page was to possibly do something related to frogger.

- After reviewing the assignment page I believe I do want to do something related to frogger.

("Frogger is a 1981 arcade action game developed by Konami and published by Sega".
→ Wikipedia)

- The point of the game is to guide a frog to each of the empty area at the top, where you must avoid things like cars and travel across a river

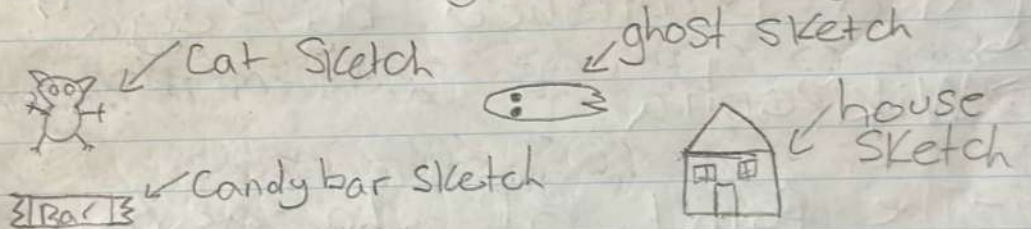


Frogger Drawing

I do not want to do a complete copy of frogger as the game has already been made before.

I was thinking of doing a spin on the game. Halloween is coming up and it might be fun to do something for it.

My idea is to make the frog a black cat instead. Make the cars rectangled ghost. Then the logs can be candy bars. Then the ending could be a house you must get to.



I was first introduced to frogger when I way young by a mini arcade machine that had frogger on it called the Excalibur Electronics Frogger. Which was a very scaled down version of Frogger. It had a translucent white top with a LCD mounted at the top which required you to have to play the game in a lit room or in sunlight.

I would like to be able to add audio to the game but I don't believe it is required for this assignment and I personally feel like I will already have enough stuff to troubleshoot with this assignment.

Frogger Screen:

- Black cat that you are moving (in starting location)
- Find color pallete good for Halloween
- Safe zones (Rectangles)
  - #1 (0, 740, 600, 60) #2 (0, 370, 600, 60)
- Elipse (300, 785, 20, 30) -> Body
  Elipse (300, 760, 20, 20) -> Head

Ghosts starting locations

Line 1 Ghost 1 Rec (480, 460, 100, 30)
Circle (480, 475, 15)
Triangle (580, 460, 580, 470, 590, 465)
Triangle (590, 470, 580, 480, 590, 475)
Triangle (580, 480, 580, 490, 590, 485)

Line 1 Ghost 2

Rec(120,460,100,30)
Circle(120,475,15)
Triangle(220,460,270,470,230,465)
Triangle(220,470,220,480,230,475)
Triangle(220,480,220,490,230,485)

Line 2 Ghost 1

Rec(180,560,100,30)
Circle(280,575,15)
Triangle(180,560,180,570,170,565)
Triangle(180,570,180,580,170,575)
Triangle(180,580,180,590,170,585)

Line 2 Ghost 2

Rec(410,560,100,30)
Circle(510,575,15)
Triangle(410,560,410,570,400,565)
Triangle(410,570,410,580,400,575)
Triangle(410,580,410,590,400,585)

Line 3 Ghost 1

Rec(370,660,100,30)
Circle(370,675,15)
Triangle(470,660,470,670,480,665)
Triangle(470,670,470,680,480,675)
Triangle(470,680,470,690,480,685)

Line 3 Ghost 2

Rec(80,660,100,30)
Circle(80,675,15)
Triangle(80,660,180,670,190,665)
Triangle(180,670,180,690,190,675)
Triangle(180,690,180,690,190,685)

Line 1 Candy bar

Color 1#
Rect(150,290,300,80)
Triangle(150,290,150,310,130,300)
Triangle(150,310,150,330,130,320)
Triangle(150,330,150,350,130,340)
Triangle(150,350,150,370,130,360)
Triangle(450,290,450,310,470,300)
Triangle(450,310,450,330,470,320)
Triangle(450,330,450,350,470,340)
Triangle(450,350,450,370,470,360)

Color 2#
Rect(200,310,200,40)

Line 2 Candy Bar 1

Color 1#
Rect(50,190,200,100)
Triangle(50,190,50,210,30,200)
Triangle(50,210,50,230,30,220)
Triangle(50,230,50,250,30,240)
Triangle(50,250,50,270,30,260)

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Triangle(50,270,50,290,30,280)
Triangle(250,190,250,210,270,200)
Triangle(250,210,250,230,270,220)
Triangle(250,230,250,250,270,240)
Triangle(250,250,250,270,270,260)
Triangle(250,270,250,290,270,280)

color 2#
  Rect(80,220,140,40)

Line 2 Candy Bar 2

color 1#
  Rect(350,190,200,100)
  Triangle(350,190,350,210,330,200)
  Triangle(350,210,350,230,330,220)
  Triangle(350,230,350,250,330,240)
  Triangle(350,250,350,270,330,260)
  Triangle(350,270,350,290,330,280)
  Triangle(550,190,550,210,570,200)
  Triangle(550,210,550,230,570,220)
  Triangle(550,230,550,250,570,240)
  Triangle(550,250,550,270,570,260)
  Triangle(550,270,550,290,570,280)

color 2#
  Rect(380,220,140,40)
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Line 3 Candy Bar

color 1#
Rect(20,90,280,100)
Triangle(20,90,20,110,0,100)
Triangle(20,110,20,130,0,120)
Triangle(20,130,20,150,0,140)
Triangle(20,150,20,170,0,160)
Triangle(20,170,20,190,0,180)
Triangle(300,90,300,110,320,100)
Triangle(300,110,300,130,320,120)
Triangle(300,130,300,150,320,140)
Triangle(300,150,300,170,320,160)
Triangle(300,170,300,190,320,180)

color 2#
Rect(50,120,220,40)

These are all the coordinates I should have for the start of the game. My plan is to load these drawings at the start then make them move in their wanted location. The ghosts each row will move left then right then left. And you will have to avoid the ghosts as the cat. Then after the ghosts you must climb onto the candy bars one after another to make it to the end.

My plan for the code to make the drawings work properly in the game is when the ghost or candy bar goes off a certain point, respawn it to the other side then continue in a cycle. This should work as long as I can figure out how to respawn the drawing.

Overall this should be a quite challenging project as there will be lots of bumps I must overcome in the code. But this should be fun!

Road ↴

Rectangle(0,430,600,310)

Witch potion juice area ↴

Rectangle(0,90,600,280)

Win Area ↴

Rectangle(0,0,600,90)

After a while of some stressing I seem that for right now it may be better for me to just do regular shapes for the different items throughout the game. This is because I feel like doing regular shapes may ease some stress off me for what I am doing.

I will make all the items rectangles

Classes

(Player)
- Draw player
- Move
- Item collision

(Ghosts)
- Draw ghosts
- Move

(Wizard potion)
- Draw potion location

(Candy bars)
- Draw candy bars
- Move

(End location)
- Draw end location

These should be all the classes I need

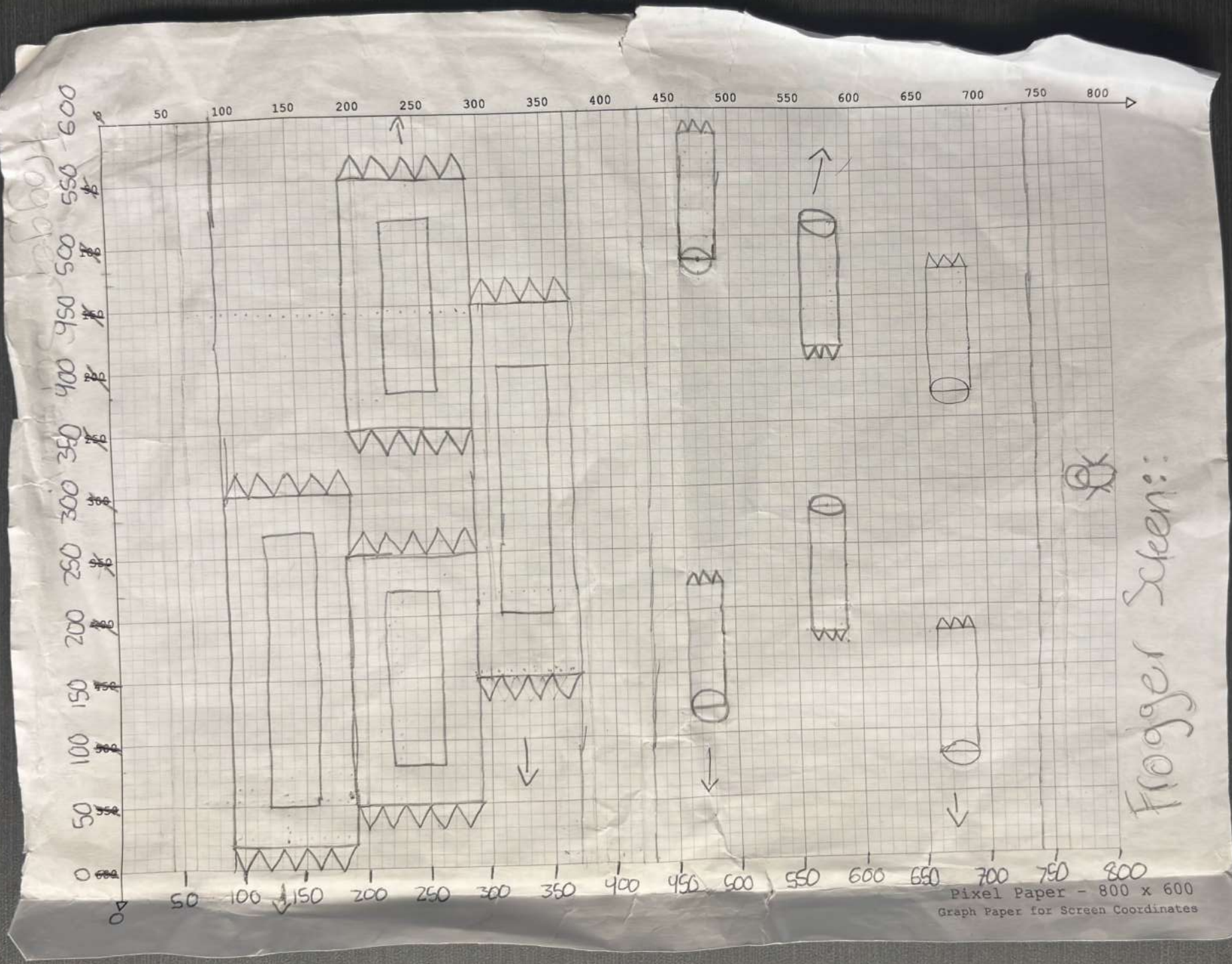
After a lot of work on this assignment there were a couple things I couldn't figure out. One being able to display all ghosts in one class and candy bars in one class. I have decided to create a class for each row of the ghosts and candy bars for now as it is working. I do realize this is not the best practice for coding but I will have to make do for it now.

Another problem I ran into is that I initially thought that for the witchpotionjuice if I were to display the candy bars over top of it, it would not detect that the player is on the juice even though they are on the candy bar. I will ask Ralph next class about this issue. Hopefully it's an easy fix!!

During one of my classes I asked Brandon about my code and he was able to give me some advice on how I could fix the code.

First I needed to make the candy bars actually have collision then to make an statement that would set is gap over to false if player is on top of a candy bar.

I was able to implement this idea into my code and now everything seems to work.


Frogger Screen::
Pixel Paper - 800 x 600
Graph Paper for Screen Coordinates