Tabnine

# Introduction

Established this log for experiments with Tabnine – an AI Coding Assistant.

# March 10, 2023

Working on a game – solving the associated research problems so that I can more smoothly demo the coding with Tabnine. It’s taking way too long.

Today, I expended a lot of time learning that ctx.GetImageData gets data for the entire Canvas. That should have been obvious since there is nothing that ties the GetImageData call to any particular image. Since I was able to do this with ProcessJS, I made the bad assumption that since ProcessJS ‘s equivalent call did what I wanted, the related Canvas call would as well.

**Examine assumptions!**

# March 13, 2023

* Added collision detect for Bales and Cows.
* Coded Cow behavior after collisions.
* Created rear-view of the Cow artwork.
* Investigated key-handling and why the animation speeds up on hitting the space bar.

# March 15, 2023

* Trying to finish up the prototype.
* Fixed a bug where pressing the space bar causes the browser to scroll up. I used the following technique that I found in ProcessJS>
* I

// This prevents the default browser action on a given key.

function suppressKeyEvent(e) {

if (typeof e.preventDefault === "function") {

e.preventDefault();

} else if (typeof e.stopPropagation === "function") {

e.stopPropagation();

}

return false;

}

# March 18, 2023

* I did convert the prototype inheritance to classes – cool stuff.
  + Now looking at font-meme to get an Indiana Jones font
* Added 4 levels of difficulty.

# March 20, 2023

* <https://fontmeme.com/indiana-jones-font/> lets you generate an image file with your message in the desired font.
* I generated a nice splash screen
* Made initial check-in to git.
* Added an ending bit of humor on Game Over
* Added bale-throwing animation and sound.
* Cleaned up a bit – deleted unneeded files.
* Made level 4 harder

# March 23, 2023

* How to make sure that Cows have a free field of fire? The algorithm currently allows only the Cows in the bottom row to fire. The rational being “Cows don’t shoot other Cows” But, why not let the Cows with a free line of fire have a go?



* Here is my first try at the new algorithm:

For each cow

. If the cow is at a lower row

. If the cow is in the way - means its x is near our cow’s x

. . . return false

. Endif

End

# March 24, 2023

* Our ‘when to fire’ algorithm is resulting in a big safe corridor for the Player. Let’s change this algorithm so that the Cows fire within the corridor but are more likely to do so when closer to the Player.

if (10/distance + Math.random()) {

fire!

}

# April 5, 2023

Trying to debug the cow game on mobile. I found an ancient video explaining how to do this using Android Studio and the developer debug bridge.

* Installed Android Studio
* Need to open ‘terminal’ and run

Adb forward tcp:9222 localabstract:chrome\_devtools.remote

* Adb wasn’t found – it’s not installed as part of Android Studio.
* Installed adb (et. Al.) from <https://developer.android.com/tools/releases/platform-tools>
* Now I get:

>Adb forward tcp:9222 localabstract:chrome\_devtools.remote

\* daemon not running; starting now at tcp:5037

\* daemon started successfully

adb.exe: error: no devices/emulators found

* So, adb doesn t see my phone and I haven’t installed any emulators yet.

# April 6, 2023

Timeout for AI learning.

* Create an Animated Talking AI Avatar <https://youtu.be/kYueHEcqdmM>
* Top 5 AI Generated Talking Avatar Tools (D-ID Alternatives) <https://youtu.be/U0HNdsxC8YU>
* AI Animation: Tutorial Animate your AI images with a consistent character <https://youtu.be/3wQBsFftbv8>

## USB Debugging

* Still doesn’t work
* I do have a data connection to phone and can see files.
* But, adb command still doesn't work:

# April 7, 2023

Here is procedure for USB Debugging on the S10e:

* On the phone:

# April 10, 2023

Requestfullscreen requires a user gesture.

# April 17, 2023

Bug: When you click on New Game before canvas is displayed the Player and the buttons are too high.

Fixed: Repositioned these the Player and Buttons on a screen resize.!

# April 20, 2023

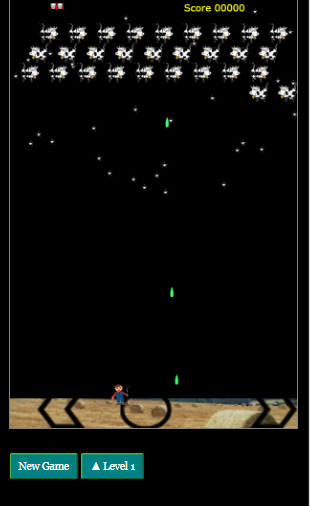
TODO:

Bug: Buttons too small on mobile

Bug: Screen too short on mobile

Bug: Need multitouch

## Touch Implementation

* Put an ‘x’ in the upper right and a touch on it will exit fullscreen
* A touch on the area middle of the screen will pause.
* A touch on the arrow buttons will move the farmer right and left.
* A touch on the round button will cause the farmer to throw a bale of hay at the cows.

## Touch Design Notes

The API features four event types:

* touchstart – fired when a touch point is placed on the touch surface.
* touchmove – fired when a touch point is moved along the touch surface.
* touchend – fired when a touch point is removed from the touch surface.
* touchcancel – fired when a touch point has been disrupted in an implementation-specific manner (for example, too many touch points are created).

## Overall Design

* The API identifies touches by a number so that you can know which touch and event relates to.
* We’ll keep a list of active touches and use the API touch ID in the intended manner.
* For the ‘fire’ button and move buttons, we’ll repeat the action every ***n*** milliseconds if the button remains ‘pushed’. Some experimentation is required to determine the right value for ***n***.

## Event Registration

* Call canvas.addEventListener for each event type:

// Register touch event handlers

canvas.addEventListener("touchstart", touchStart, false);

canvas.addEventListener("touchmove", touchMove, false);

canvas.addEventListener("touchcancel", touchCancel, false);

canvas.addEventListener("touchend", touchEnd, false);

## Touchstart Processing

* The browser calls touchStart with a single event parameter.
* First of all, we call event.preventDefault() to stop emulated click processing.
* Identify the action associated with the touch.
* Next, add the touch to the currentTouches

touchstart(e) {

//

}

# April 25, 2023

Trying to sort out screen layout before, during, and after game play in both the desktop and mobile case.