README – Test Programs

- Test 1: Hello World
  - This program uses the kernel routine "chrout" to print "HELLO WORLD" to screen and waits for user input using the kernel routine “chrin” before returning to BASIC.
  - It tests the use of kernel routines and the storage and access of string data.

- Test 2: Clear Screen
  - This program iterates through screen memory (7680 – 8186) locations, displaying spaces in each location which, in essence, clears the screen.
  - It tests the use of screen codes and how they are interpreted when stored into screen memory.

- Test 3: Timer Routine
  - This program uses one of the Vic timers to delay execution while printing characters to screen.
  - It tests the capabilities of timer 2 for use as a simple delay-of-execution tool.

- Test 4: Character Color Change
  - This program displays a series of ball graphics to screen, changing their color each step, iterating through every color the Vic has to offer.
  - It explores the ability of the Vic to display characters of varying color at different locations on screen through storing values directly into character color memory.

- Test 5: Screen Effects Test (Crazy Screen)
  - This Program changes all character codes in screen memory and all character/background/border colors each iteration of the loop.
  - It explores the challenges associated with making a large volume of changes to screen and color memory simultaneously and tests the ability of the Vic to process such changes efficiently without introducing visual artifacts.
  - A timer delay is introduced between each iteration so the effect is not overwhelming.

- Test 6: Multi-Color Mode
  - This program prints a series of identical graphics at the top of the screen that use multi-color mode. It then cycles through the range of auxiliary colors available when in multi-color mode.
  - It tests the ability of the Vic to render more than two colors simultaneously within a single 8x8 cell.

- Test 7: SOUND
  - This program outputs a fun and engaging background sound.
  - It tests the ability of the Vic to play different sounds on different speakers simultaneously.

- Test 8: Background and Border Color Effects
  - This program further explores the ability of the Vic to create effects that rely on background and border colors. It changes these colors in ways that create a static-like effect on screen.

- Test 9: Move Sprite
  - This program uses a kernel routine to extract key presses from the input buffer.
  - It uses this information to move a ball graphic throughout the screen spaces
  - It tests the use of the keyboard buffer to gather user input to use in a meaningful way.

- Test 10: Large Custom Sprite
  - This program draws a large custom sprite to screen. It alters the memory locations which the Vic identifies with screen graphic codes to enable us to use screen codes to display custom graphics.
  - This tests the ability of the Vic to render large sprites using custom graphics.

- Test 11: Interrupt Handling
  - This routine enables interrupts triggered by timer 2, starts a countdown on timer 2, and changes the character at the top left of the screen each time the interrupt occurs. Notice that you can still use the Vic as the interrupt handler services IRQs intermittently.
  - It tests the ability to use timer 2 to trigger interrupts as well as the interrupt handling scheme in general.

- Test 12: Custom Sprite Animation
  - This program explores the ability of the Vic to render animations. Specifically it is looking for visual artifacts resultant of performing the minimum viable animation sequences required for street fighter.
  - This means that I need to animate two fighters of the desired size simultaneously.
  - Use the left and right keys to walk across the screen and the up key to kick.

- Test 13: Interrupt Driven Music
  - This program tests the ability of the Vic to render tones through a timer driven irq handler.