Norfair
System Calls
:: sysClearScreen

The sysClearScreen system call sets the color value of all pixels in the Norfair console window to black.

**Arguments:** None

**Returns:** Nothing

**Syntax:**

```plaintext
call sysClearScreen
```
:: sysPelGet

The sysPelGet system call reads the color value of a given pixel in the Norfair console window.

Arguments: The x and y coordinate values of the location of the pixel to be read. These values are passed to the sysPelGet system call on the stack.

Returns: This function places the 8-bit color of the specified pixel onto the top of the stack.

Syntax:

push xvalue ; pass in x of pixel
push yvalue ; pass in y of pixel
call sysPelGet
pop colorofpel ; pop off color of pixel for later use
:: sysPelSet

The sysPelSet system call sets the color of a given pixel in the Norfair console window to the value specified.

**Arguments:** The x and y coordinate values of the location of the pixel to be set, and the new color value of the pixel to be written. These values are passed to the sysPelSet system call on the stack.

**Returns:** Nothing

**Syntax:**
```
push colorofpel    ; pass in new color of pixel
push xvalue        ; pass in x of pixel
push yvalue        ; pass in y of pixel
call sysPelSet
```
:: sysPseudoRand (aka sysPRNG)

The sysPseudoRand system call generates a pseudo-random value in the range [0..255].

**Arguments:** None.

**Returns:** This function places the generated pseudo-random value onto the top of the stack.

**Syntax:**
```
call sysPseudoRand
pop prandval       ; pop off pseudo-random value for later use
```
This program writes a series of pixels of pseudo-random color values to pseudo-random locations on the Norfair console window.

entry:
   ldi r31,1
   eor r30,r30

MakeThatCall:
   call RandPels
   add r30,r31
   cpi r30,3
   brbc 1, MakeThatCall

sink:
   rjmp sink

RandPels:
   push r16 ; x
   push r17 ; y
   push r18 ; color
   push r19 ; count
   push r1

   com r1 ; negone

   ldi r19,255

NextPel:
   call sysPRNG
   pop r18
   andi r18,0x0f
   call sysPRNG
   pop r16
   call sysPRNG
   pop r17
   push r18
   push r16
   push r17
   call sysPelSet ; set pel

   add r19,r1
   brbc 1,NextPel

   pop r1
   pop r19
   pop r18
   pop r17
   pop r16
   ret