

Reference – pencilcode.net

Movement

`fd 50` forward 50 pixels
`bk 10` backward 10 pixels
`rt 90` turn right 90 degrees
`lt 120` turn left 120 degrees
`home()` go to the page center
`slide x, y` slide right x and forward y
`moveto x, y` go to x, y relative to home
`turnto 45` set direction to 45 (NE)
`turnto obj` point toward obj
`speed 30` do 30 moves per second

Appearance

`ht()` hide the turtle
`st()` show the turtle
`scale 8` do everything 8x bigger
`wear yellow` wear a yellow shell
`fadeOut()` fade and hide the turtle
`remove()` totally remove the turtle

Output

`p = write 'hi'` adds HTML to the page
`p.html 'bye'` changes old text
`button 'go',` adds a button with
 `-> fd 10` an action
`read (n) ->` adds a text input with
 `write n*n` an action
`t = table 3,5` adds a 3x5 <table>
`t.cell(0, 0).` selects the first cell of the
 `text 'aloha'` table and sets its text

Other Objects

`$(window)` the visible window
`$('#p').eq(0)` the first <p> element
`$('#zed')` the element with id="zed"

Drawing

`pen blue` draw in blue
`pen red, 9` 9 pixel wide red pen
`pen null` use no color
`pen off` pause use of the pen
`pen on` use the pen again
`label 'X'` draw the letter X
`dot green` draw a green dot
`dot gold, 30` 30 pixel gold circle
`pen path` trace an invisible path
`fill cyan` fill traced path in cyan

Properties

`turtle` name of the main turtle
`getxy()` [x, y] position relative to home
`direction()` direction of turtle
`hidden()` if the turtle is hidden
`touches(obj)` if the turtle touches obj
`inside(window)` if enclosed in the window

Sets

`g = hatch 20` hatch 20 new turtles
`g = $('img')` select all as a set
`g.plan (j) ->` direct the jth turtle to go
 `@fd j * 10` forward by 10j pixels

Other Functions

`see obj` inspect the value of obj
`rt 90, 50` do a 90 degree arc of radius 50
`speed 8` do 8 moves per second
`tick 5, -> fd 10` go 5 times per second
`click -> fd 10` go when clicked
`random [3,5,7]` return 3, 5, or 7
`random 100` random [0..99]
`play 'ceg'` play musical notes

Colors

| | | | | | | |
|----------------------|----------------|----------------|------------------|-------------------|-----------------|----------------|
| white | gainsboro | silver | darkgray | gray | dimgray | black |
| whitesmoke | lightgray | lightcoral | rosybrown | indianred | red | maroon |
| snow | mistyrose | salmon | orangered | chocolate | brown | darkred |
| seashell | peachpuff | tomato | darkorange | peru | firebrick | olive |
| linen | bisque | darksalmon | orange | goldenrod | sienna | darkolivegreen |
| oldlace | antiquewhite | coral | gold | limegreen | saddlebrown | darkgreen |
| floralwhite | navajowhite | lightsalmon | darkkhaki | lime | darkgoldenrod | green |
| cornsilk | blanchedalmond | sandybrown | yellow | mediumseagreen | olivedrab | forestgreen |
| ivory | papayawhip | burlywood | yellowgreen | springgreen | seagreen | darkslategray |
| beige | moccasin | tan | chartreuse | mediumspringgreen | lightseagreen | teal |
| lightyellow | wheat | khaki | lawngreen | aqua | darkturquoise | darkcyan |
| lightgoldenrodyellow | lemonchiffon | greenyellow | darkseagreen | cyan | deepskyblue | midnightblue |
| honeydew | palegoldenrod | lightgreen | mediumaquamarine | cadetblue | steelblue | navy |
| mintcream | palegreen | skyblue | turquoise | dodgerblue | blue | darkblue |
| azure | aquamarine | lightskyblue | mediumturquoise | lightslategray | blueviolet | mediumblue |
| lightcyan | paleturquoise | lightsteelblue | cornflowerblue | slategray | darkorchid | darkslateblue |
| aliceblue | powderblue | thistle | mediumslateblue | royalblue | fuchsia | indigo |
| ghostwhite | lightblue | plum | mediumpurple | slateblue | magenta | darkviolet |
| lavender | pink | violet | orchid | mediumorchid | mediumvioletred | purple |
| lavenderblush | lightpink | hotpink | palevioletred | deeppink | crimson | darkmagenta |