Media Arts

- *Web-based media art is art created by an artist using the internet as a tool of creation.*
- *Artists can also use computer programs as a tool to create art.*
  - *Photoshop*
  - *Gimp*
  - *InkScape*
- *Artists can also write their own code using a programming language to create their own programs or tools to create art.*
  - *HTML*
  - *Python*
  - *C++*
  - *Java*

Media Arts

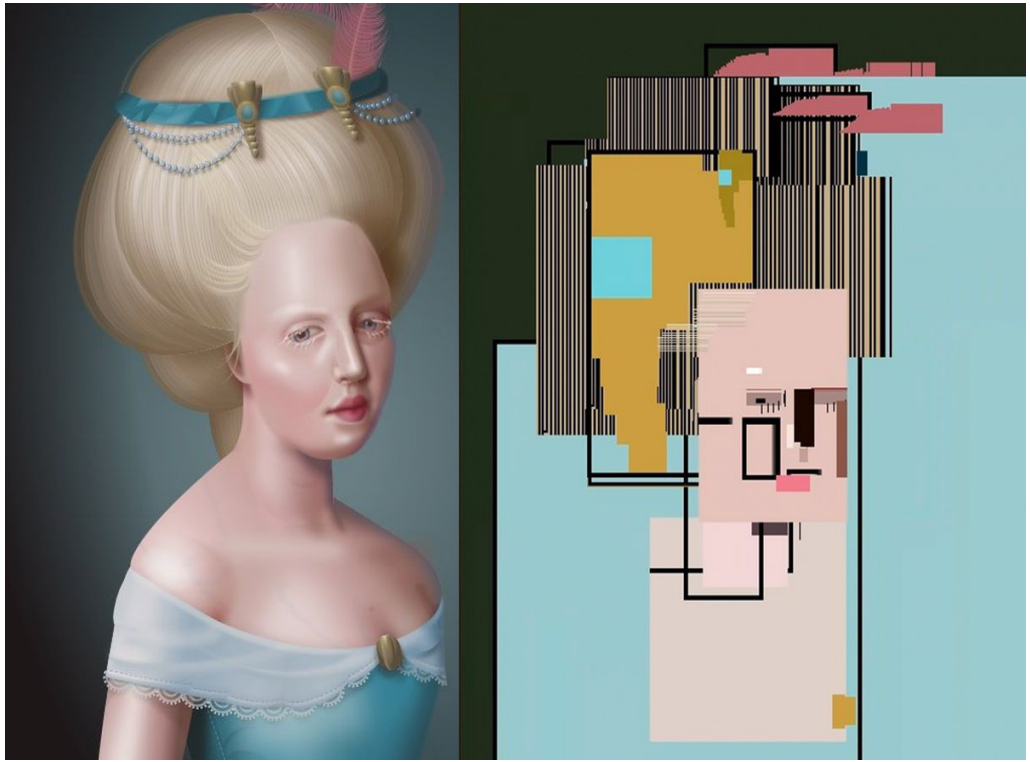
- The actual art created on the internet/computer/device, sometimes only exists on the internet/computer/device.
- Some of the art created on or for the internet cannot exist else where (in the same form) because of the hyper-inking or various technologies involved.
- The internet, with its multi-functions, is the tool for the artist, just as the brush, the paint, the charcoal, the pencil, or other media is.
- The programs used become the medium.
- The advantage of creating an internet or computer-based art work is that the tools used to create it also become the gallery to display the artwork.

Computer Coded Illustrations (from ASCII art to code)

```
                 ________
                 ( meow! )
      |\__/|     ¯)/¯¯¯¯¯
     (_ ^-^)
  _   )    (
( (  /      \   ( ( (
  (   )  || ||    ) ) )
  '----'  '--' '--'  >+++°>
```

Computer Coded Illustrations (from ASCII art to code)

- Programming developer and artist, Diana A. Smith, uses only code and style sheets (rules that tell a web page how to display your code) to create a computer art series where she creates gorgeous, rich illustrations where all the elements are hand-typed rather than drawn.



What is Coding?

- ***Code***
  - *The instructions in a computer program.*
  - *Instructions written by a programmer in a programming language are often called source code.*

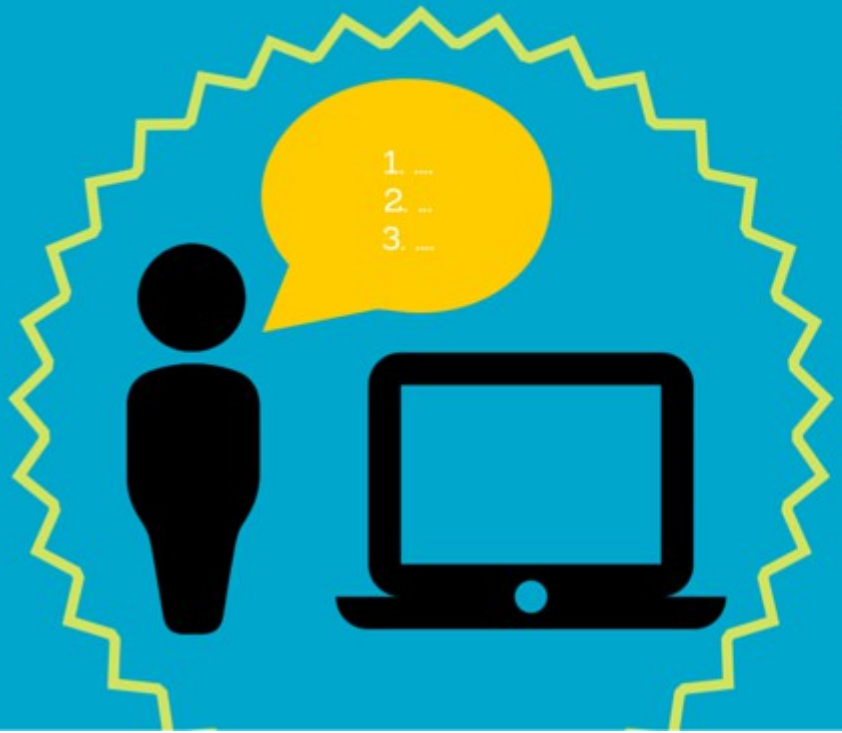
What is Coding?

- ***Program***
  - *The process of developing and implementing various sets of instructions to enable a computer to do a certain task.*
  - *These instructions are considered computer programs and help the computer to operate smoothly.*
  - *The language used to program computers is not understood by an untrained eye.*

What is Coding?

- ***Algorithm***
  - *a process or set of rules to be followed in calculations or other problem-solving operations, especially by a computer.*

Coding is...



Telling the computer exactly what to do... by giving it step by step instructions to follow

WHAT IS CODING?

- Coding is about logical reasoning skills, creative problem solving and discovery of new solutions, as well as creating new solutions - innovations.
- It is about breaking bigger problems into smaller ones to be able to solve the bigger problems and create bigger solutions.
- Coding is commanding computer what to do; programming and instructing, so that it knows what, how and when to do the things needed.

Types of Coding

- *Draw Programming (beginner)*
- *Block Programming (intermediate)*
- *Text Based Coding (Advanced)*

Draw Programing (beginner)

- *The simpler method of programming.*

- *Users draw lines to program their robot and can modify speed and colour.*

Ozobot (Drawing based coding)

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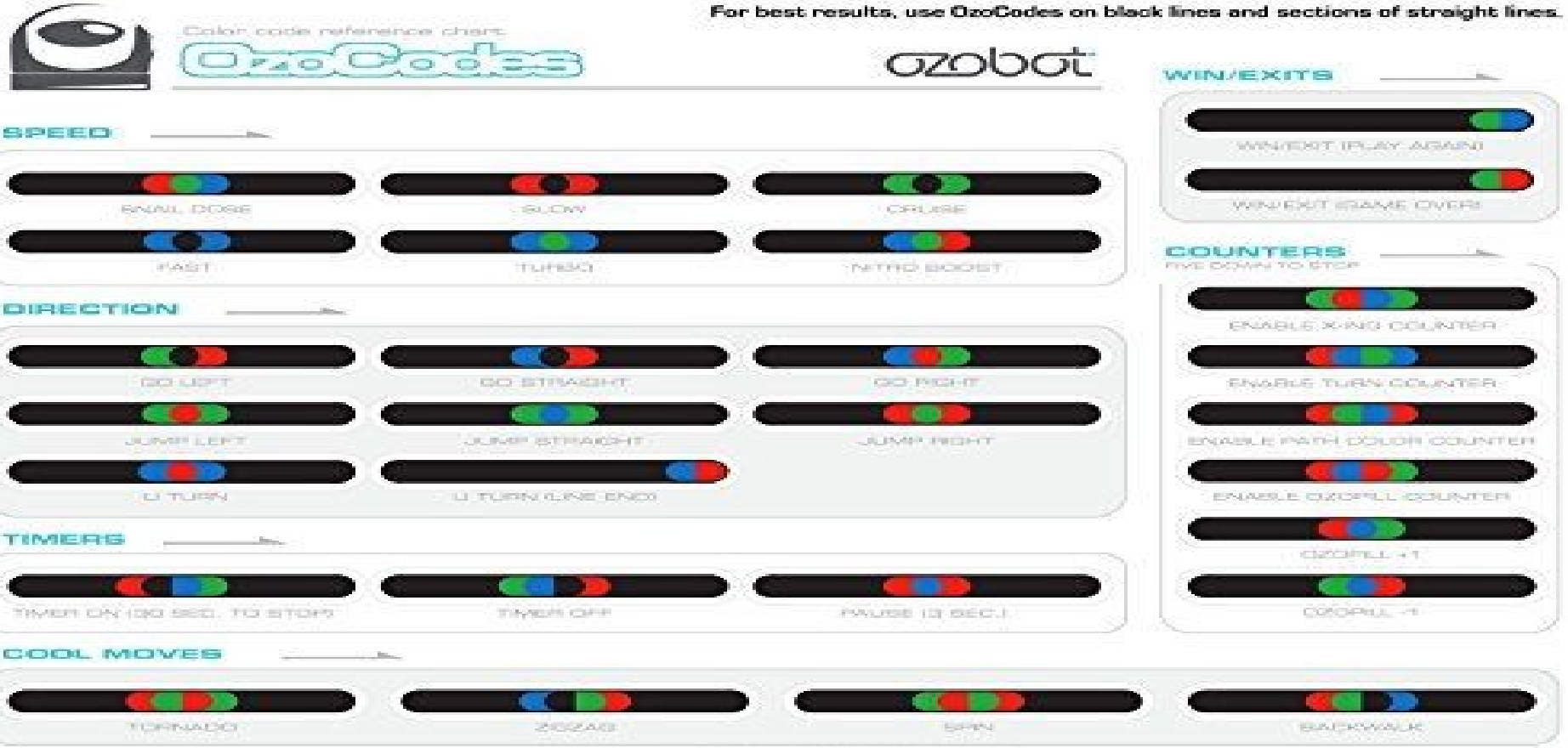
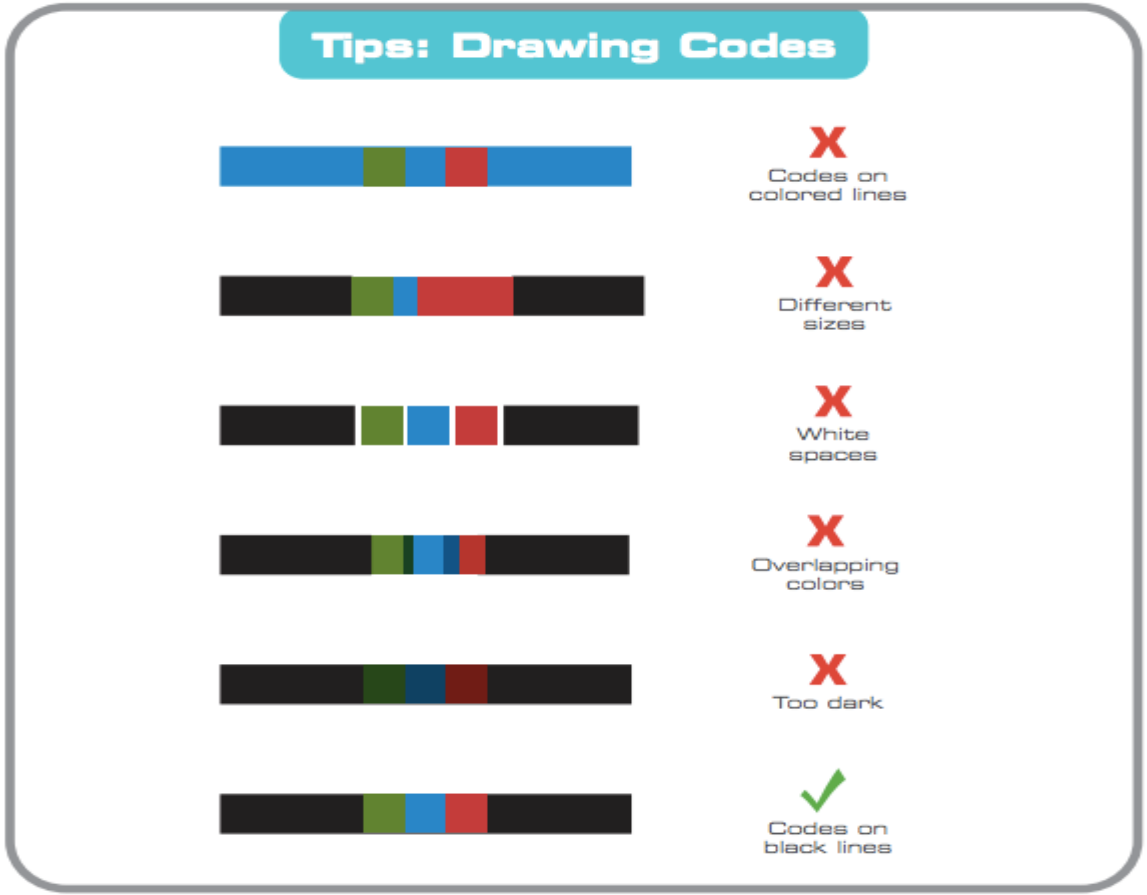
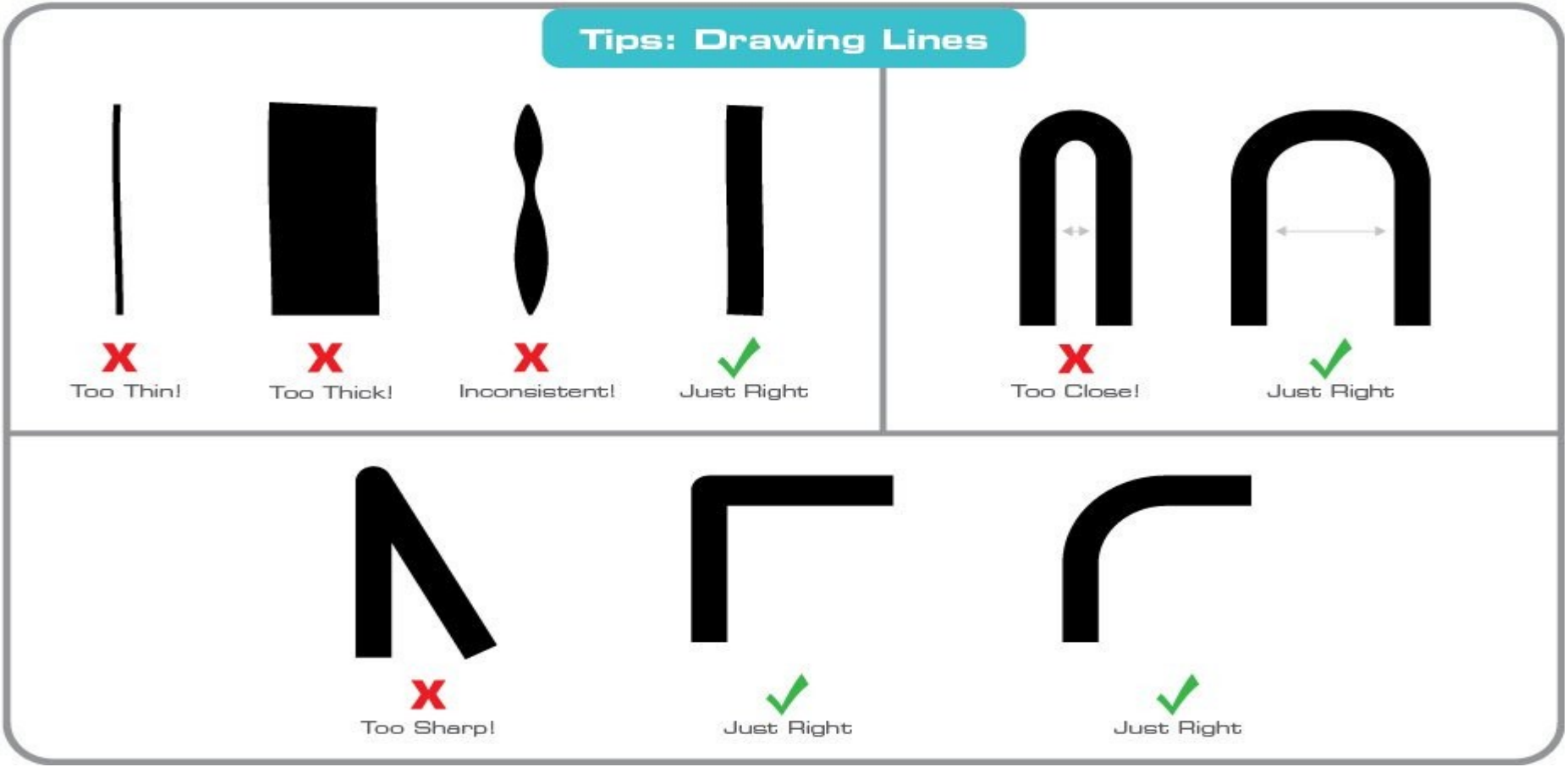


Ozobot (Drawing based coding)



Ozobot (Drawing based coding)



Block Programing (intermediate)

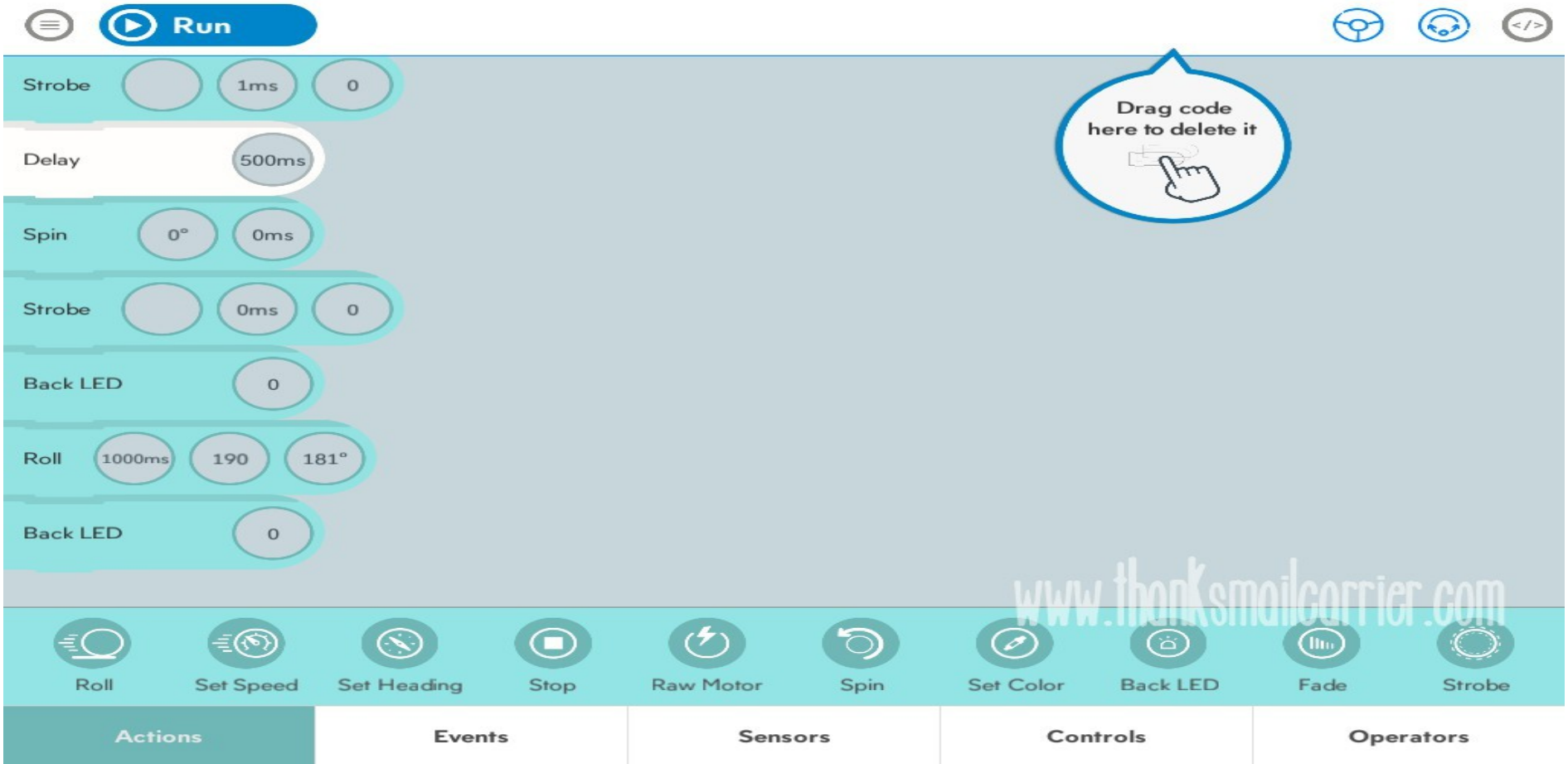
- *Coders can utilise the familiar block-based drag and drop interface to code their robot.*

- *Pre-programmed blocks allow for a wide variety of actions and variables.*

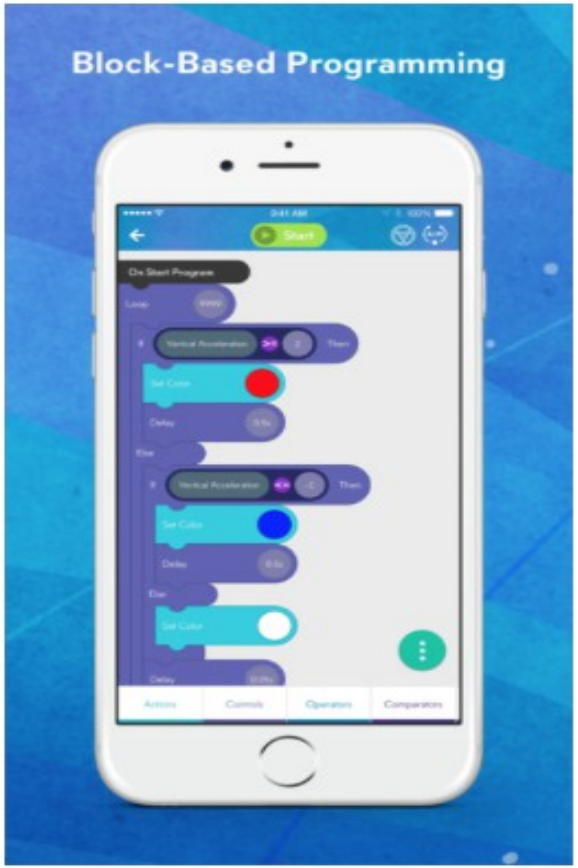
Scratch (block programming/coding)

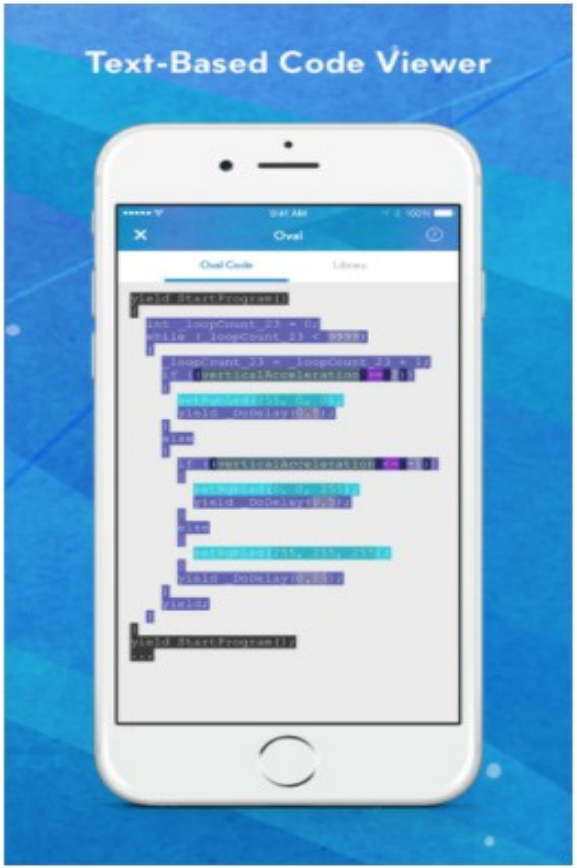
Scratch (block programming/coding)

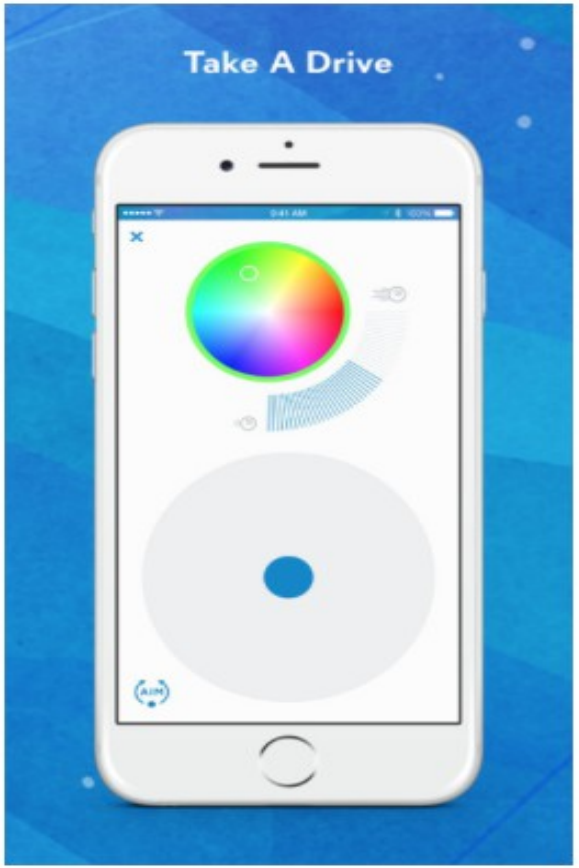
Sphero EDU app (block programming/coding)



Sphero EDU app (block programming/coding)







Text Based Coding (advanced)

- *Users can program with a text editor to write custom syntax.*

- *An integrated "wiki" will support users graduating from blocks to text; the same type of tool real developers use.*

HTML (Text based code)

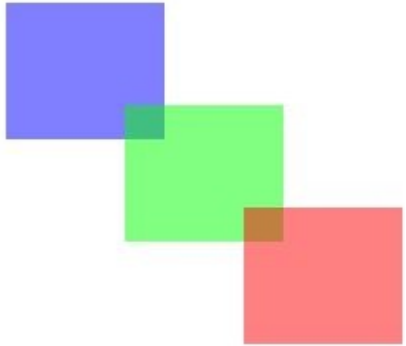
```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<link rel="shortcut icon" type="image/x-icon" href="favicon.ico">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
<title></title>

<style type="text/css">
body{
    font-family:"Lucida Grande", "Lucida Sans Unicode", Verdana, Arial, Helvetica, sans-serif;
    font-size:12px;
    background-color:#585858;
}
p, h1, form, button{border:0; margin:0; padding:0;}
.spacer{clear:both; height:1px;}
/* ----------- Form ----------- */
.myform{
    margin:0 auto;
    width:400px;
    height:190px;
    padding:12px;
       margin-left: auto ;
       margin-right: auto ;
    margin-top: auto;
}
    /* ----------- basic ----------- */
    #basic{
        border:solid 2px #DEDEDE;
    }
    #basic h1 {
        font-size:14px;
        font-weight:bold;
        margin-bottom:8px;
    }
    #basic p{
        font-size:11px;
        color:#666666;
        margin-bottom:20px;
        border-bottom:solid 1px #dedede;
        padding-bottom:10px;
    }
    #basic label{
        display:block;
        font-weight:bold;
        text-align:right;
        width:140px;
        float:left;
    }
```

Code Monster (Text based code)

A big clearRect() erases everything. Uncomment the big clearRect() (remove the //) and see what happens.

```
1  var size = 80;
2  var offset = 20;
3  var w = c.canvas.width;
4  var h = c.canvas.height;
5
6  c.fillStyle ="rgba(0, 0, 255, 0.5)";
7  c.fillRect(offset, offset, size, size);
8  offset = offset + 60;
9  c.fillStyle ="rgba(0, 255, 0, 0.5)";
10 c.fillRect(offset, offset, size, size);
11 // c.clearRect(0, 0, w, h);
12 offset = offset + 60;
13 c.fillStyle ="rgba(255, 0, 0, 0.5)";
14 c.fillRect(offset, offset, size, size);
15
```

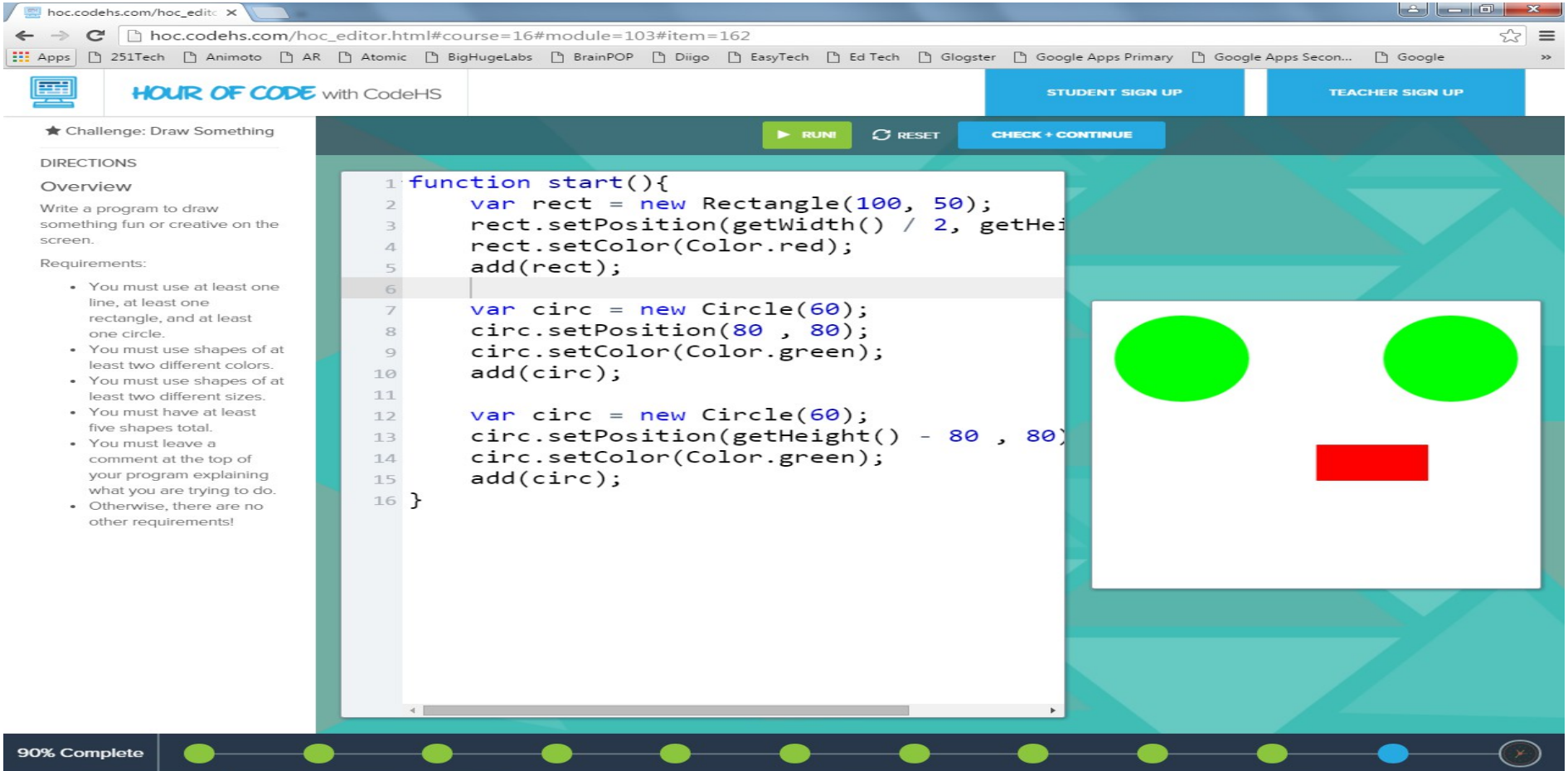


RESET

Erasing

BACK

Python (Text based code)



Python (Text based code)

IF YOU WANT TO:	USE THIS CODE:
make text bold	text
make text italic	text OR text
underline text	<u>text</u>
strikethrough text	~~text~~
force an extra space	
add a line break	
make a new paragraph	<p>
align text within a paragraph	<p align="center"> (or "left", "right")
insert an image	<img src="imagesource.jpg">
adjust image size	<img width="x" height="y">
insert a link	link
direct link to a new tab or window	link
insert a button	<img src="image source.jpg">
insert a table (for archive pages)	<table><tbody>all table content</tbody></table>
insert a new row within your table	<tr>row content</tr>
insert a new box within a row of your table	<td>box content></td>

Everybody in this country should learn how to program a computer…

…because it teaches you how to think.

Steve Jobs

It would be wonderful if every kid wrote computer programs and understood how computers work. It would certainly make you a better thinker.

Bill Gates

In fifteen years we'll be teaching programming just like reading and writing. We'll be looking back and wondering why we didn't do it sooner.

Mark Zuckerberg