



Coding Made Easy!

Journey



starwood
Hotels and
Resorts

CodeScholar.ly



BROOKLYN

COMPUSA

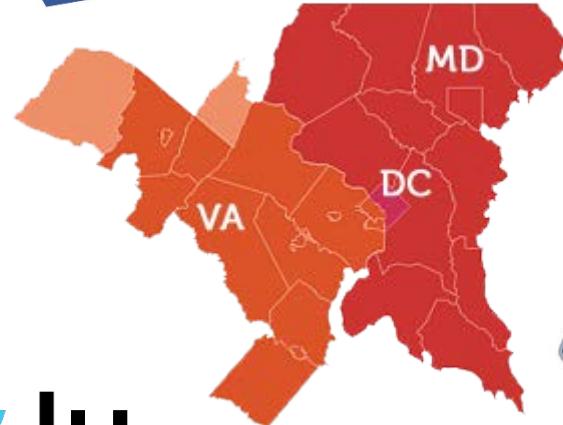
CHARLOTTE

Bank of America



FIRST UNION®

International CES SX SW



What Should You Learn first!

HTML



CSS



JS



Learning Roadmap

Phase I	Phase II	Phase III	Phase VI	Phase VI
Web-based Resources	C-Prompt	HTML	JavaScript	Phaserjs
Math Symbols	IDE's	CSS	Bootstrap	Threejs
Translating Symbols	Github			Meteorjs MongoDB

Information Overload



THE PERIODIC TABLE OF PROGRAMMING LANGUAGES

Visualisation of the evolution of popular programming languages

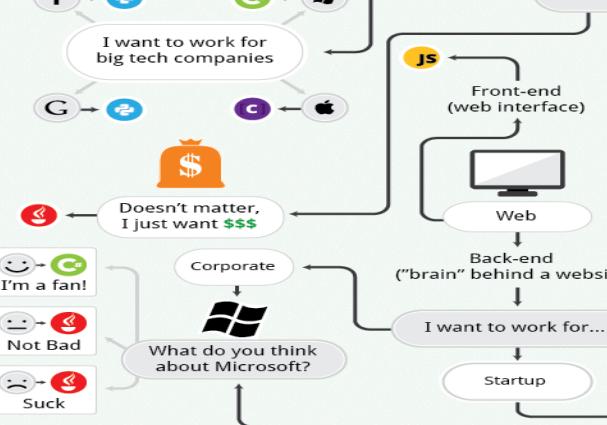
A Analytical Engine Order Code 1	THE PERIODIC TABLE OF PROGRAMMING LANGUAGES												E ENIAC Short Code 2
Ft Fortran 3	Ag ALGOL 4												Cb COBOL 5
													L LISP 6
Sn SNOWBALL 7	Bs BASIC 8	Sm Simula 9											B B 11
													Lg LOGO 12
Fo Forth 13	Pc Pascal 14	St Smalltalk 15	Sq SQL 16	Pg Prolog 17			C C 18	M Modula 19	MI ML 20	Sc Scheme 21			
Ad Ada 22	Cp C++ 23	Ef Eiffel 24	Oc Objective C 25	Ps PostScript 26	Tc Tcl 27	Ht HyperTalk 28	Pl Perl 29	Cl Common LISP 30	Er Erlang 31				
Vb Visual BASIC 32	Dp Delphi 33	Jv Java 34	Py Python 35	As AppleScript 36	Cf Coldfusion 37	Js JavaScript 38	Pp PHP 39	Fs F# 40	Hk Haskell 41				
Cs C# 42	Sl Scala 43	Gv Groovy 44	Rb Ruby 45	G GO 46	Cj Clojure 47								

Each row represents roughly a decade, starting on the second row with the 1950's up to the 2000's on the final row. The first row is pre-1950 with the two mechanical programming systems from which all others have evolved - the first from around 1837 created by Charles Babbage and Ada Lovelace.

The colours denote the programming paradigm that the language in question originally supported or the primary paradigm for which it is known. Some languages may have evolved to support other paradigms over time which are not shown.

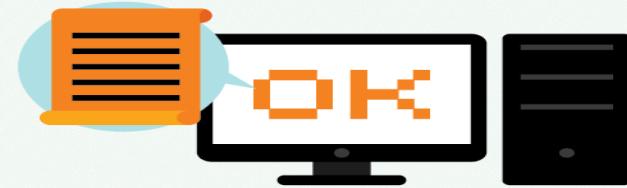
- Mechanical
- Functional
- Imperative
- Dynamic
- Object Oriented
- Concurrent
- Scripting
- Multi-paradigm
- Declarative

WHICH PROGRAMMING LANGUAGE SHOULD I LEARN FIRST?



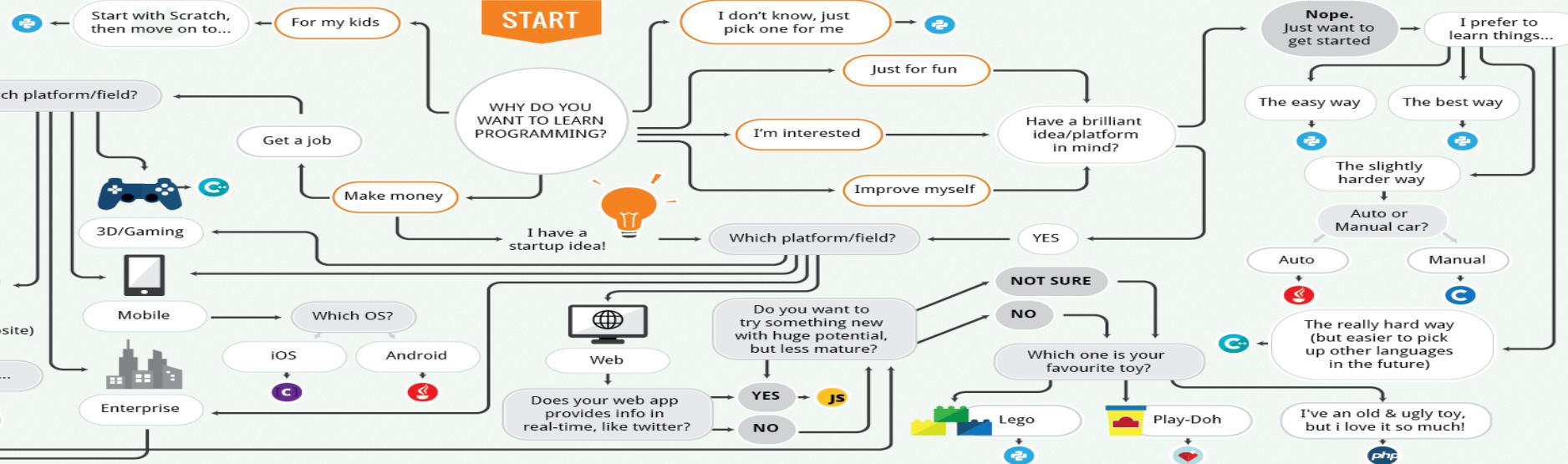
WHAT IS PROGRAMMING?

Writing very specific instructions to a very dumb, yet obedient machine.



LANGUAGES

PYTHON	JAVA	C	PHP	C++
JS JAVASCRIPT	C#	RUBY	OBJECTIVE-C	



THE LORD OF THE RINGS ANALOGY TO PROGRAMMING LANGUAGES



Python

The Ent

DIFFICULTY ★★★★★

Help little Hobbits (beginners) to understand programming concepts

Help Wizards (computer scientists) to conduct research

Widely regarded as the best programming language for beginners

Easiest to learn

Widely used in scientific, technical & academic field, i.e. Artificial Intelligence

You can build website using Django, a popular Python web framework



Java

Gandalf

DIFFICULTY ★★★★★

Wants peace & works with everyone (portable)

Very popular on all platforms, OS, and devices due to its portability

One of the most in demand & highest paying programming languages

Slogan: write once, work everywhere



C

One Ring

DIFFICULTY ★★★★★

The power of C is known to them all

Everyone wants to get its Power

Lingue franca of programming language

One of the oldest and most widely used language in the world

Popular language for system and hardware programming

A subset of C++ except the little details



C++

Saruman

DIFFICULTY ★★★★★

Everyone thinks that he is the good guy

But once you get to know him, you will realize he wants the power, not good deeds

Complex version of C with a lot more features

Widely used for developing games, industrial and performance-critical applications

Learning C++ is like learning how to manufacture, assemble, and drive a car

Recommended only if you have a mentor to guide you



JavaScript

Hobbit

DIFFICULTY ★★★★★

Frequently underestimated (powerful)

Well-known for the slow, gentle life of the Shire (web browsers)

Java and Javascript are similar like Car and Carpet are similar - Greg Hewgill

Most popular clients-side web scripting language

A must learn for front-end web developer (HTML and CSS as well)

One of the hottest programming language now, due to its increasing popularity as server-side language (node.js)



C#

Elf

DIFFICULTY ★★★★★

Beautiful creature (language), used to stay in their land, Rivendell (Microsoft Platform)

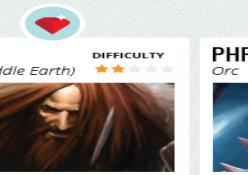
Can be rapidly converted to open up to their neighbours (open source)

A popular choice for enterprise to create websites and Windows application using .NET framework

Can be used to build website with ASP.NET, a web framework from Microsoft

Similar to Java in basic syntax and some features

Best for fun and personal projects, startups, and rapid development



Ruby

Man (Middle Earth)

DIFFICULTY ★★★★★

Very emotional creature

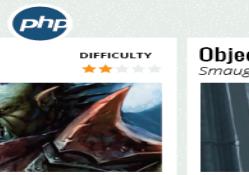
They (some Ruby developers) feel they are superior & need to rule the Middle Earth

Mostly known for its popular web framework, Ruby on Rails

Focuses on getting things done

Designed for fun and productive coding

Best for fun and personal projects, startups, and rapid development



PHP

Orc

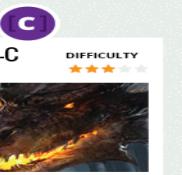
DIFFICULTY ★★★★★

Ugly guy (language) and doesn't respect the rules (inconsistent and unpredictable)

Yet still dominates the Middle-earth (most popular web scripting language)

Suitable for building small and simple sites within a short time frame

Supported by almost every web hosting services with lower price



Objective-C

Smaug

DIFFICULTY ★★★★★

Lonely and loves gold

Primary language used by Apple for Mac OS X & iOS

Choose this if you want to focus on developing iOS or OS X apps only

Consider to learn Swift (newly introduced by Apple in 2014) as your next language

POPULARITY

★★★★★

AVG. SALARY

\$107,000

USED TO BUILD

YouTube, Instagram, Spotify

AVG. SALARY

\$102,000

POPULARITY

★★★★★

USED TO BUILD

Gmail, Minecraft, Microsoft Apps, Enterprise applications

AVG. SALARY

\$102,000

POPULARITY

★★★★★

USED TO BUILD

Operating systems, hardware, and browsers

AVG. SALARY

\$104,000

POPULARITY

★★★★★

USED TO BUILD

Paypal, front-end of majority websites

AVG. SALARY

\$99,000

POPULARITY

★★★★★

USED TO BUILD

Enterprise and Windows applications

AVG. SALARY

\$94,000

POPULARITY

★★★★★

USED TO BUILD

Hulu, Groupon, Slideshare

AVG. SALARY

\$107,000

POPULARITY

★★★★★

USED TO BUILD

Wordpress, Wikipedia, Flickr

AVG. SALARY

\$89,000

POPULARITY

★★★★★

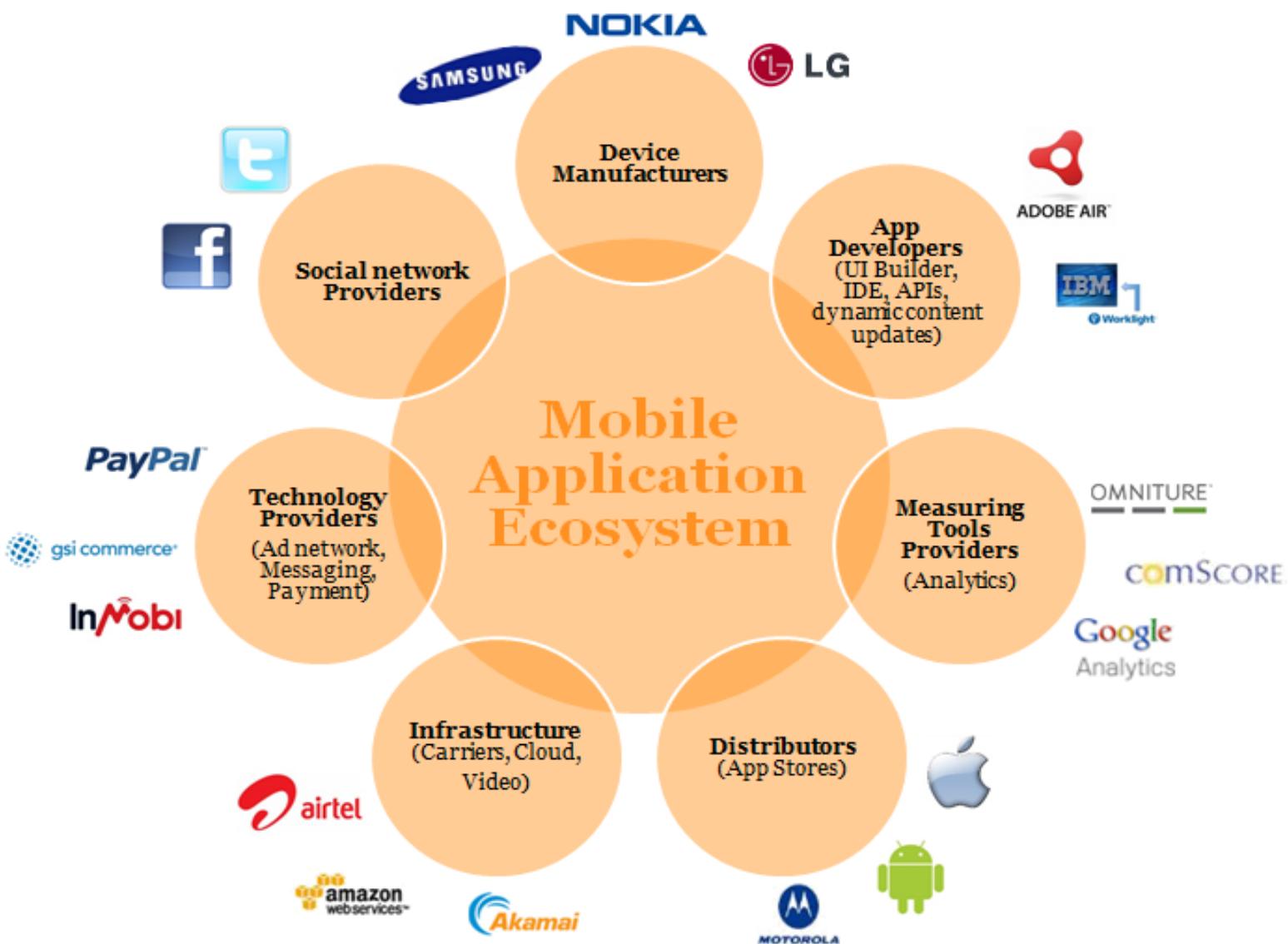
USED TO BUILD

Most iOS Apps and part of Mac OS X

AVG. SALARY

\$107,000

Mobile Ecosystem



Why is this important?

Mobile App Developers



Apple in 2014 paid
\$25 billion to
Developers for sales
within their
App Store.

Developer License is
\$99 per year

2D Development

2.5D Game Design



Student Platformer Game



2D Space shooter Game



Getting to know your keys

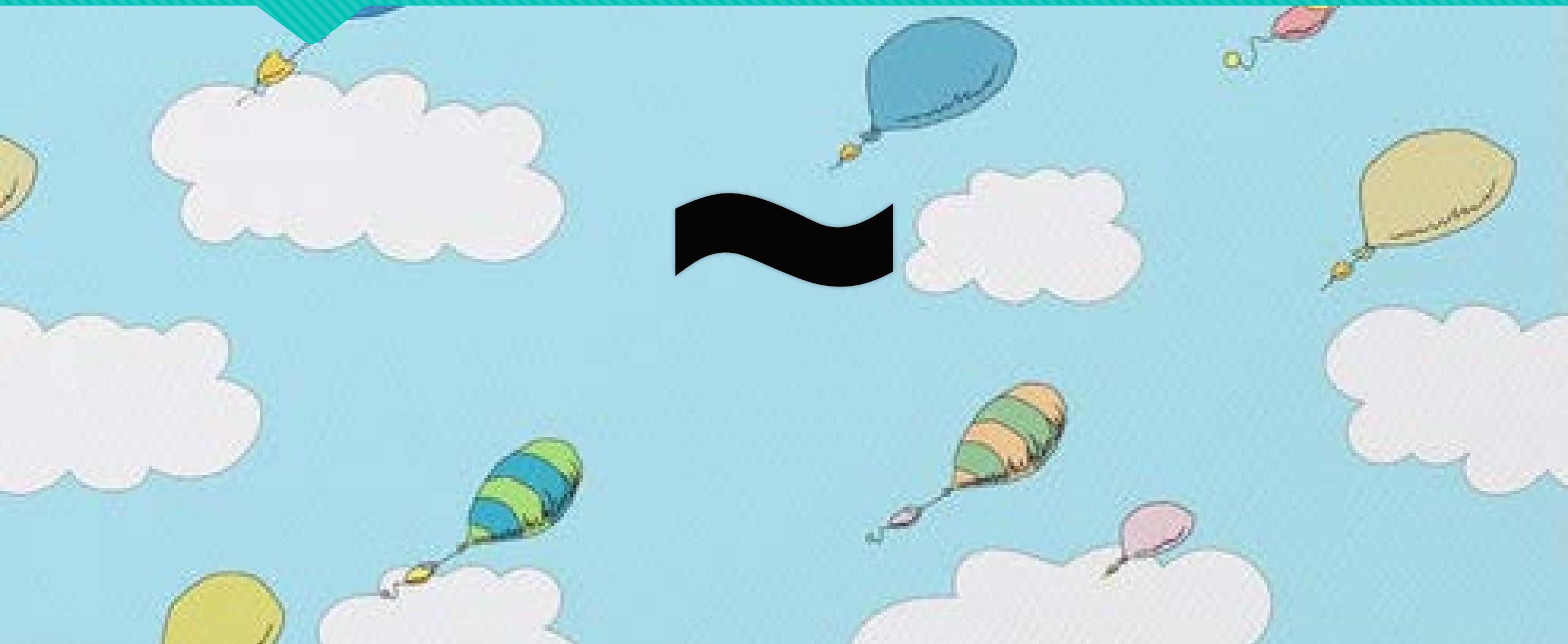
Keyboard shortcuts



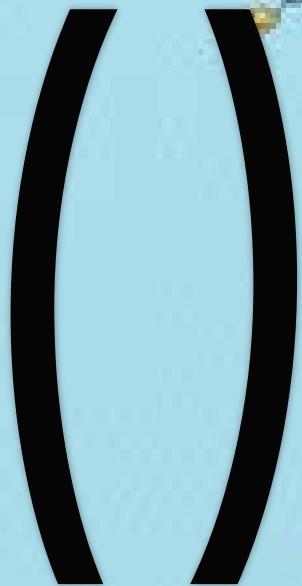
Exclamation Point

!

Tilde



Brackets



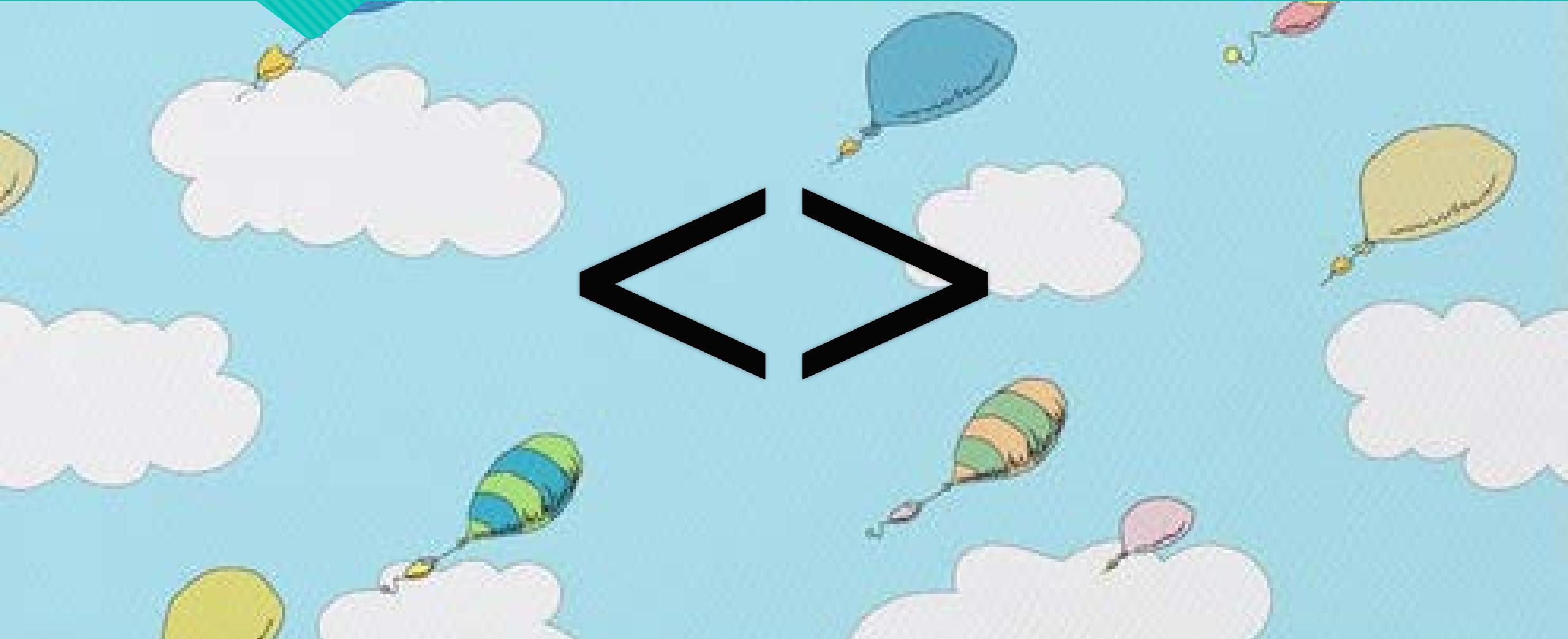
Square Brackets

[]

Curly Brackets

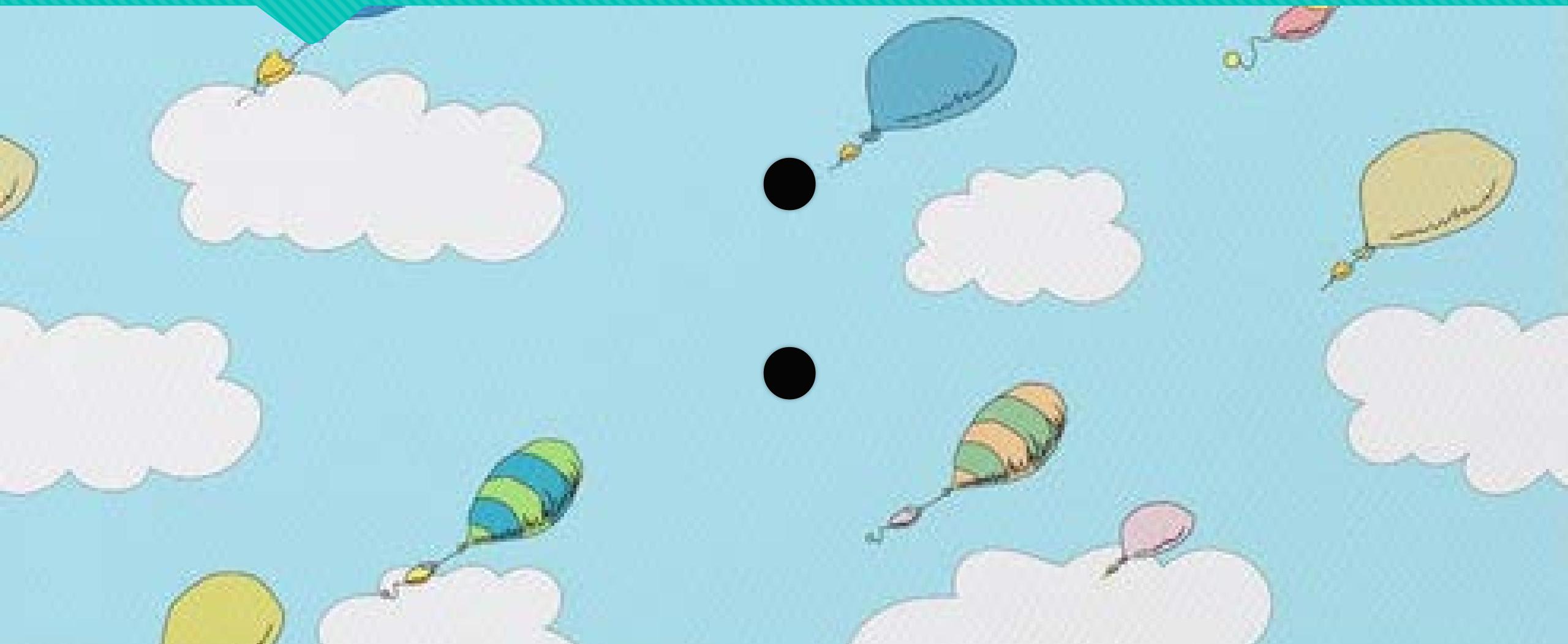
{ }

Angle Brackets



<>

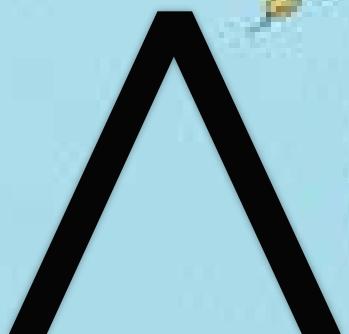
Colon



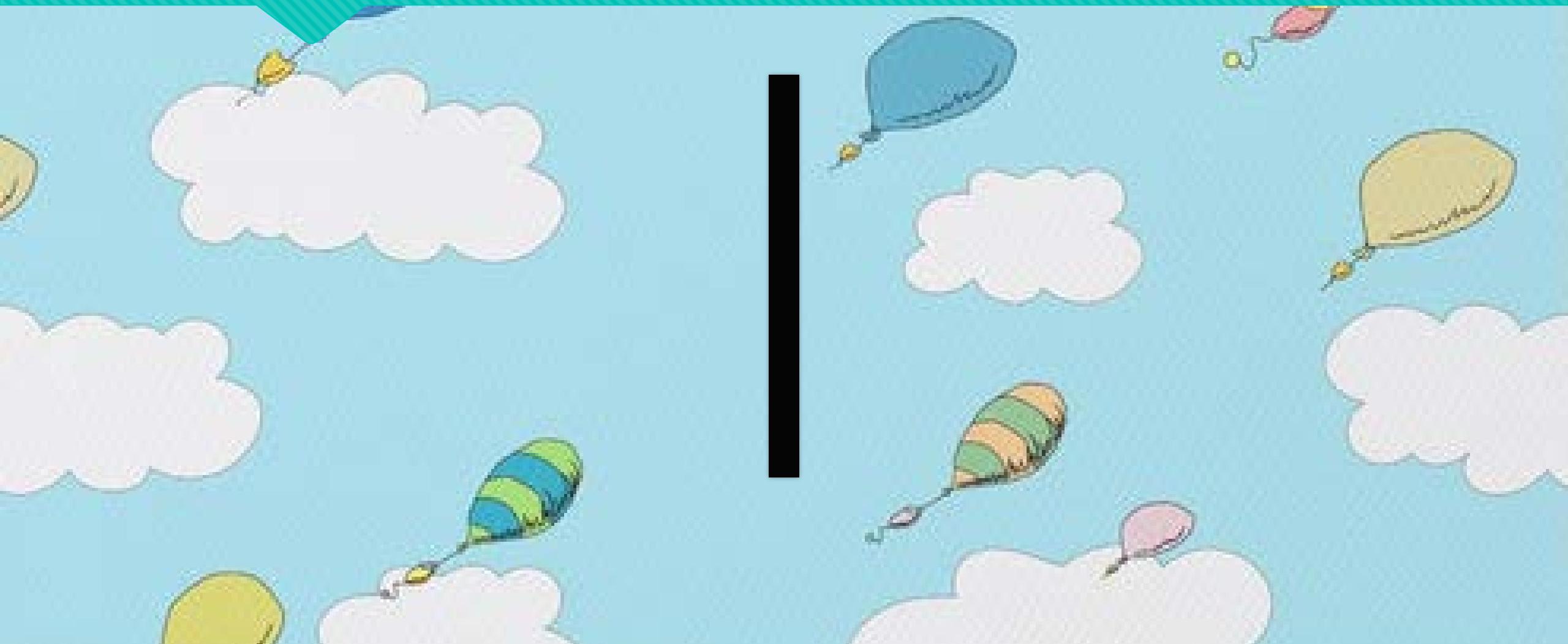
Semicolon



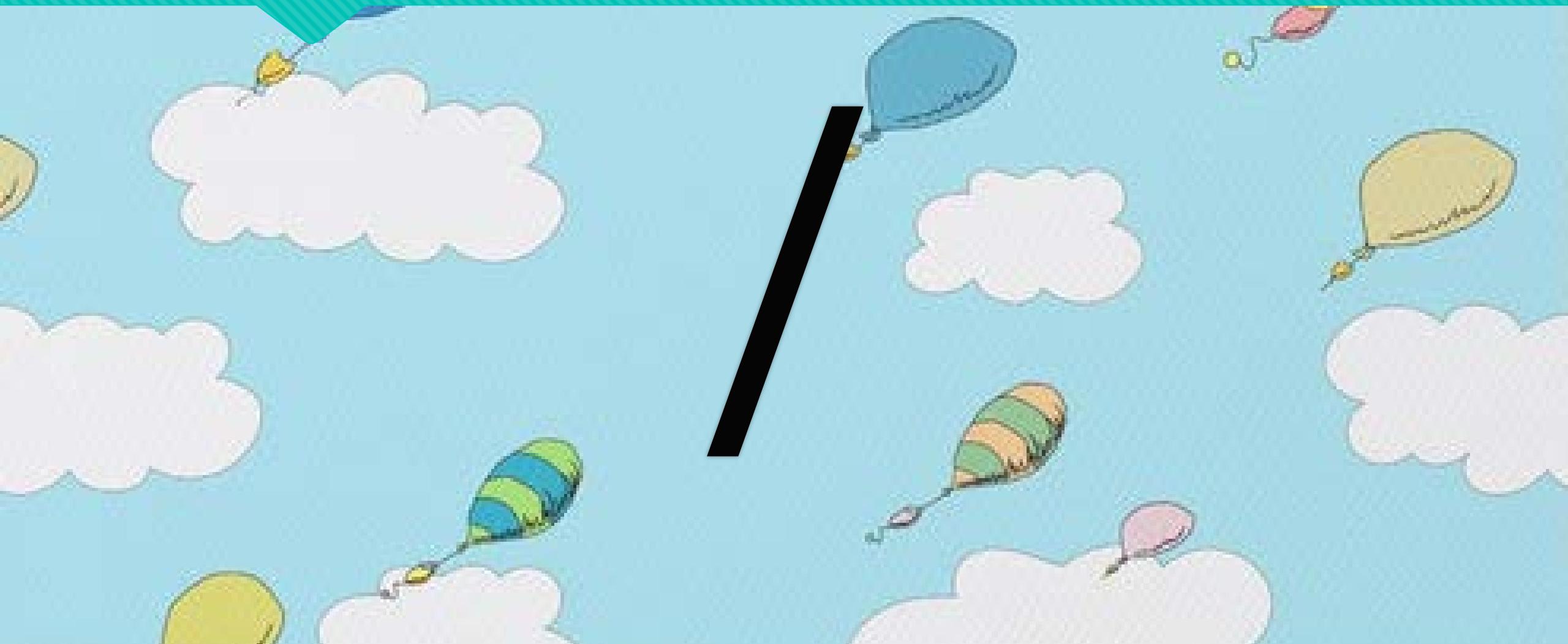
Caret



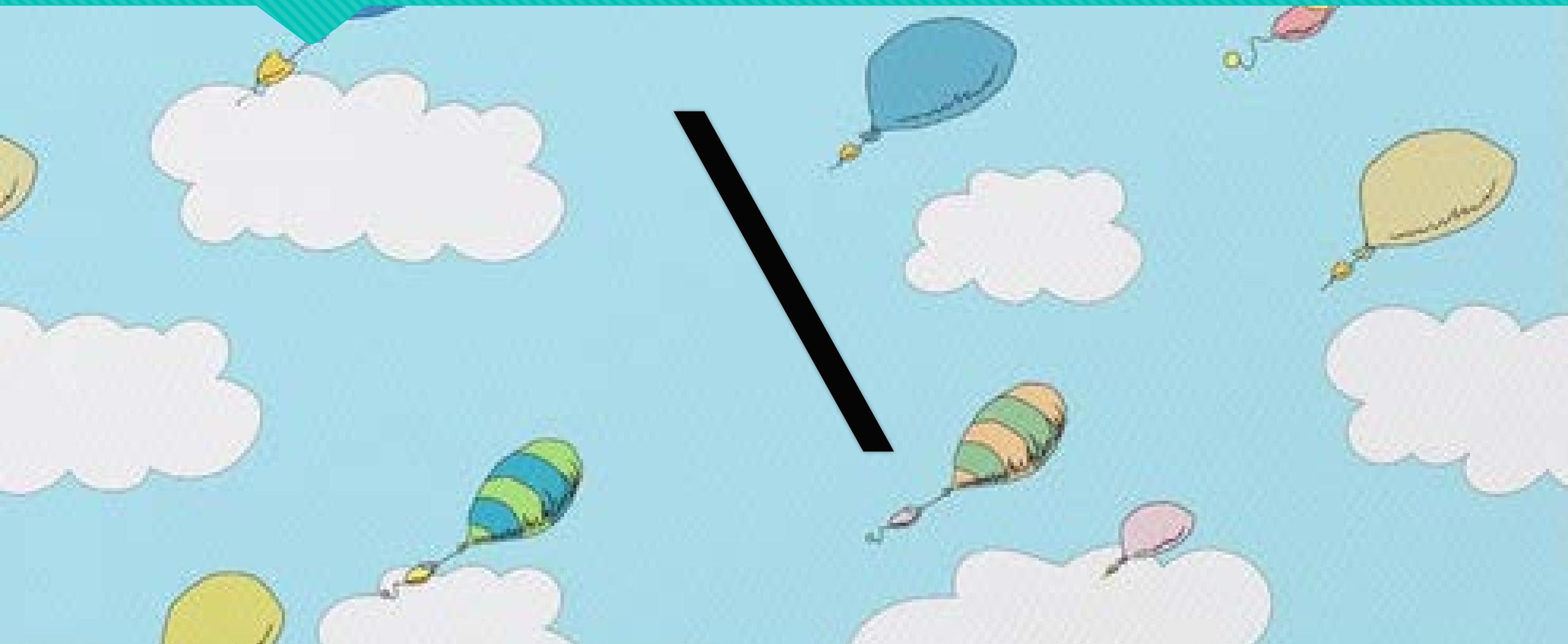
Vertical Bar



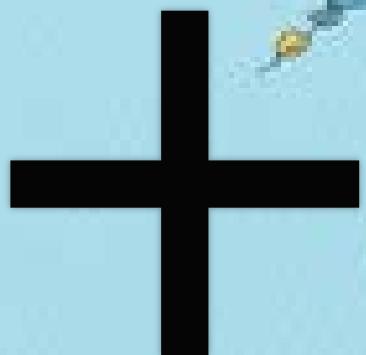
Forward Slash



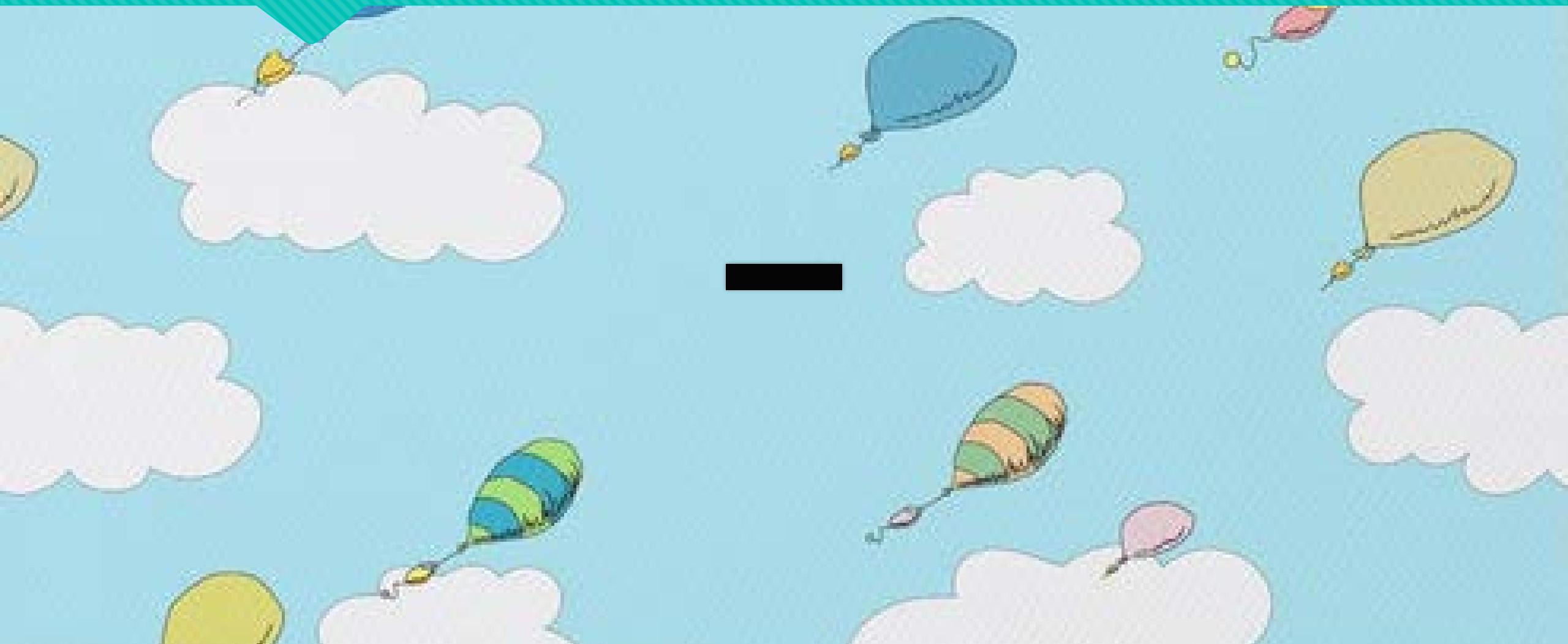
Backwards Slash



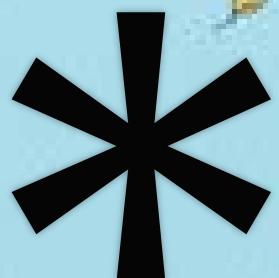
Addition



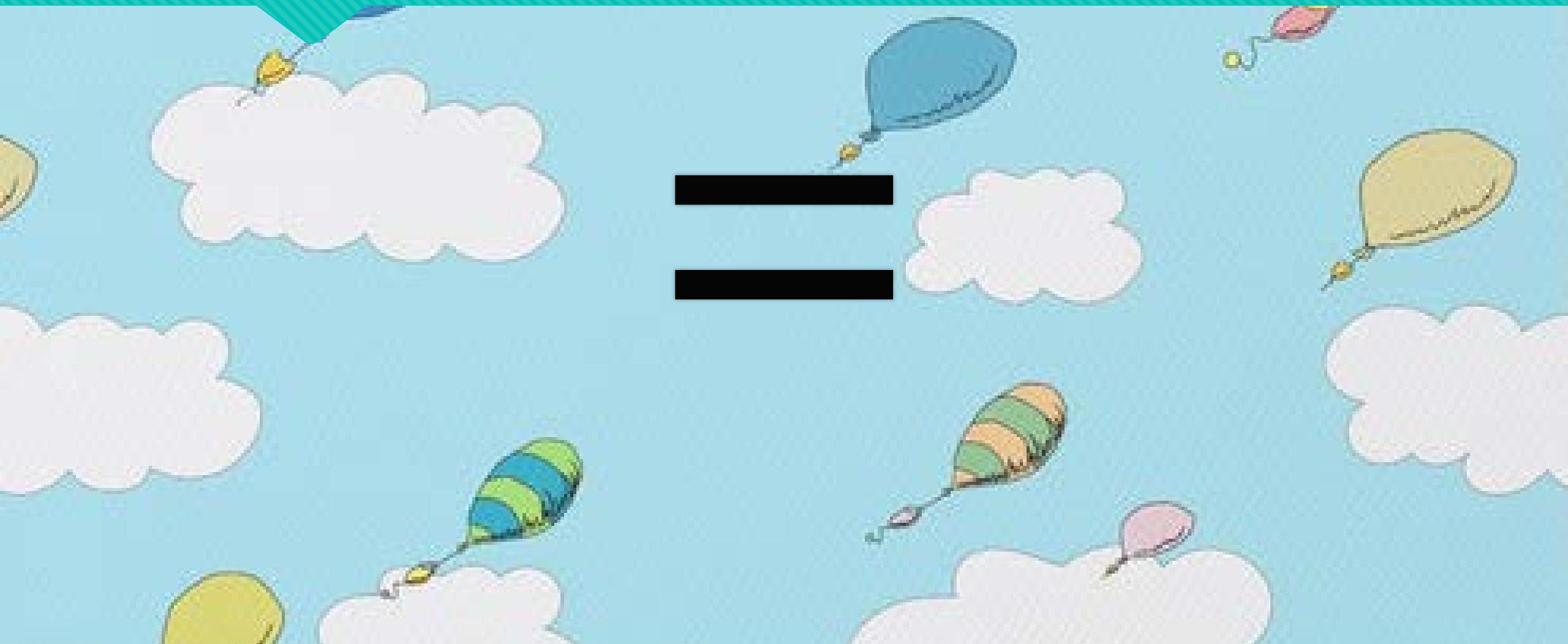
Minus



Multiplication



Equal Sign



Number Sign

#

At Sign

@



SHORTCUTS

Most Important

Control Copy & Control Cut

Ctrl+C or Ctrl+Insert
and Ctrl+X



Pasting

Ctrl+V or Shift+Insert

CTRL C + CTRL V

HOMEWORK DONE

Undo & Redo

Ctrl+Z and Ctrl+Y



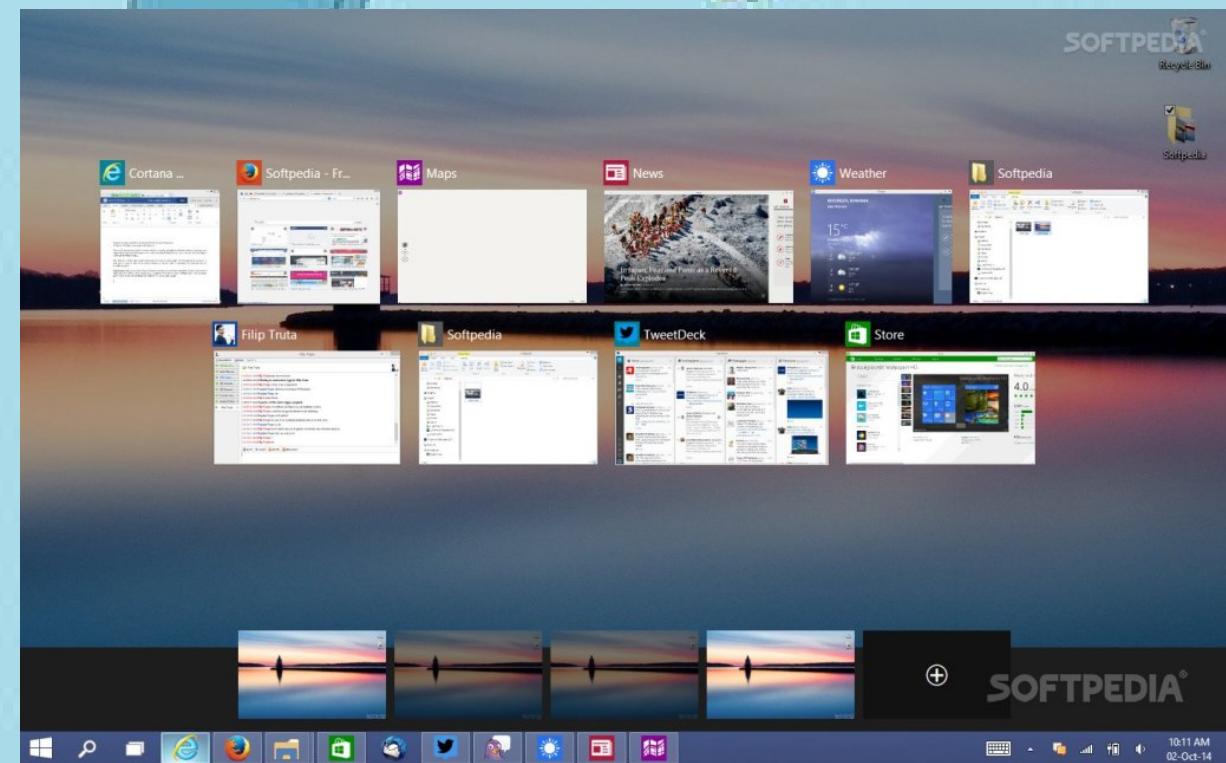
FIND

Ctrl+F



Switch Screens

Alt+Tab or Ctrl+Tab





SAVE



Ctrl+S

Coding Tools

Tools of the trade

IDE

- Brackets
- Atom

Browser

- Chrome
- Firefox

Developer Tools

- Chrome
- Firefox

Photo Editor

- Photoshop
- Paint

Introduction to HTML

Objectives

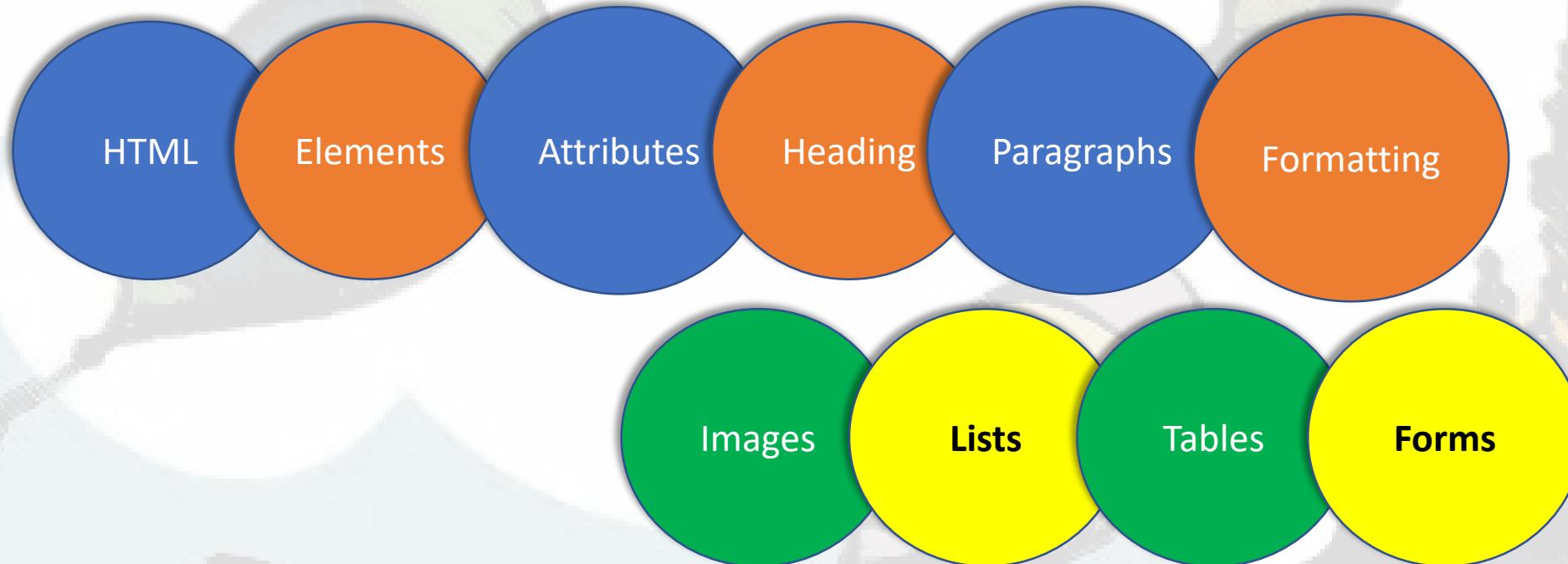
- Write simple HTML documents
- Understand the difference between closing and self closing tags
- Write tags with attributes
- Use MDN as a reference
- Given an image, write the corresponding HTML

History of HTML

- Created in 1989/1990 by Tim Berners Lee
- Allowed publishing and exchanging of scientific and
- Technical documents
- Allowed electronic linking of documents via hyperlinks



HTML by the parts



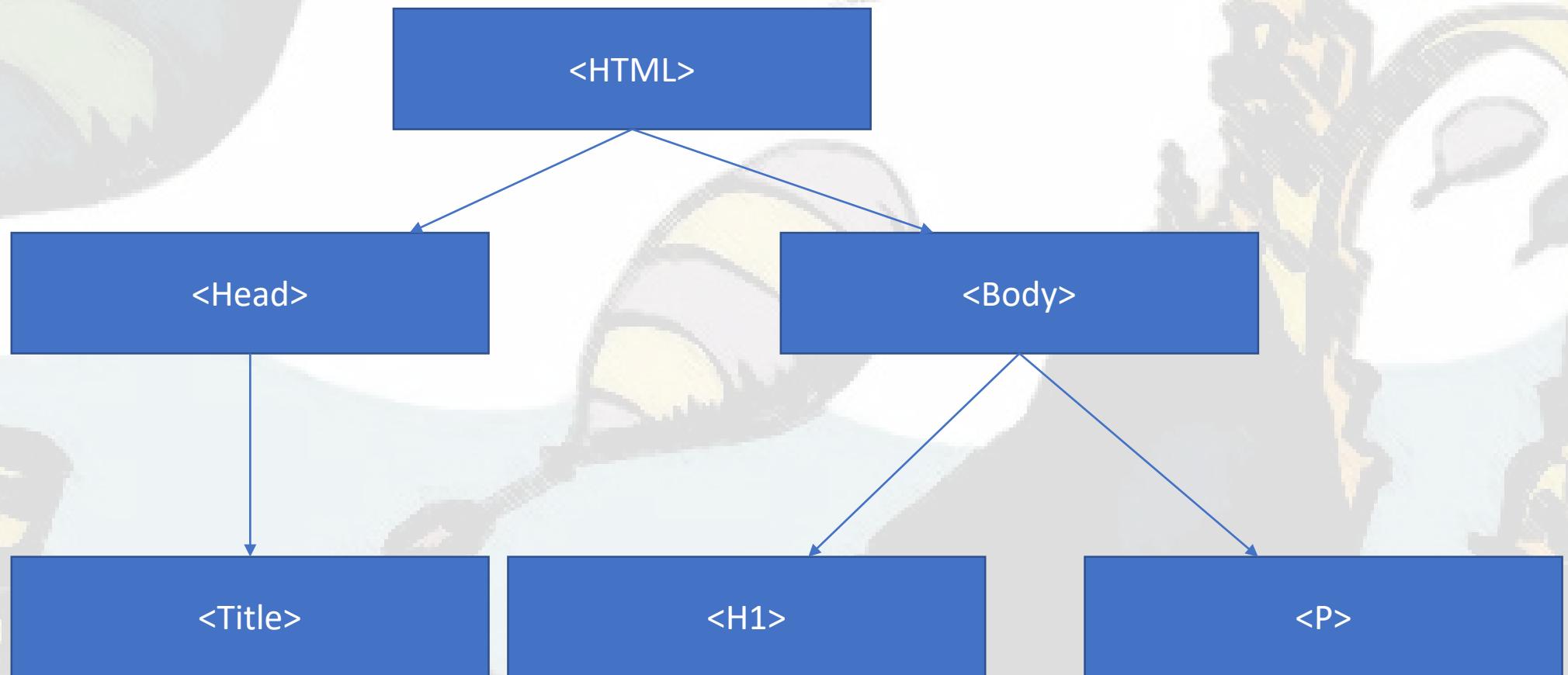
MDN HTML Reference

Every HTML Document - Boilerplate

```
<!DOCTYPE html>
<html>
<head>
<!-- Our metadata goes here --&gt;
&lt;title&gt;&lt;/title&gt;
&lt;/head&gt;
&lt;body&gt;

<!-- Our content goes here --&gt;
&lt;/body&gt;
&lt;/html&gt;</pre>
```

Every HTML Document - Boilerplate



Every HTML Document - Boilerplate



```
<HTML>
```

```
  <Head>
```

```
    <Title>
```

```
  <Body>
```

```
    <H1>
```

```
    <P>
```

General Rule

<tagName> Some Content </tagName>

```
<h1>Coding is for winners</h1>
<p>I love to code!</p>
```

Tags & Elements

<tagName> Some Content </tagName>

```
<h1>Coding is for winners</h1>
<p>I love to code!</p>
```

Comments

<!-- This is a comment. It doesn't do anything! -->

Common Tags

`<h1>I'm a header </h1>`

`<h2>I'm a slightly smaller header </h2>`

`<h6>I'm the smallest header </h6>`

`<p>I'm a paragraph</p>`

`<button>I'm a button!</button>`

Common Tags – Cont.

Ordered List

```
<ol>
```

```
  <li>List Item 1</li>
```

```
  <li>List Item 2</li>
```

```
</ol>
```

Unordered List

```
<ul>
```

```
  <li>List Item 1</li>
```

```
  <li>List Item 2</li>
```

```
</ul>
```

Closing Tags

```
<h1>I need a closing tag </h1>  
<p>Me too!</p>
```

Self Closing Tags

```
<!-- No closing tag or inner text needed -->  
  
<link href="style.css">  
<!-- Don't worry about what these tags do yet -->
```

Attributes

Adding Additional Information To Tags

```
<tag name="value"></tag>
```

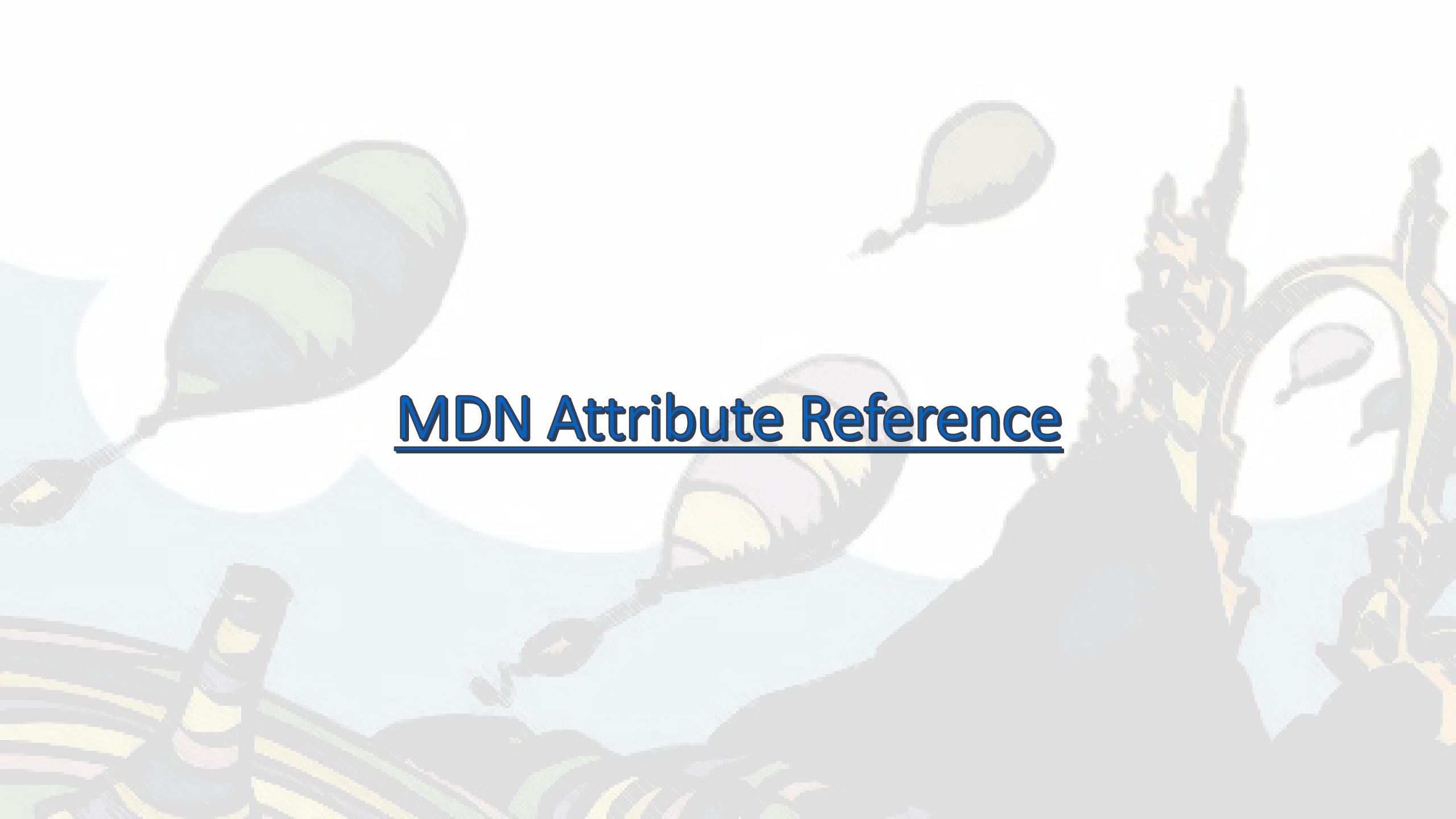
```

```

```
<p class="selected">woof woof</p>
```

```
<a href="www.google.com">Click me to go to Google</a>
```

```
<link rel="stylesheet" type="text/css" href="style.css">
```



MDN Attribute Reference

Images

```

```



Links

```
<a href="url">Link Text</a>
```

```
<a href="www.google.com">Click me to go to Google</a>
```

```
<a href="www.reddit.com">Click me to go to Reddit</a>
```