

Introduction to Programming

Class 14, 18 October 2016

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Goals

Goal 1: You will understand the basic format of an html web page.

Goal 2: You will know how to implement a simple for-loop.

Vocabulary

HTML
Structured Text
Tags
Iteration
For Loop

Code

```
<html>  
<head>  
<body>  
<title>  
<h1>  
<p>  
<ul>  
<li>  
for () {}
```

New Partners

- Michael & Matthew
- Jake & Vikram
- Chloe & Lauren
- Lorenzo & Kendall
- Lindsay & Dom
- Thomas B & Reese
- Max & Alaa
- Naz & Izzy & Jack
- Nic & Thomas C

- **Share name and grade**

- **Whom would you call for bail money?**

What is HTML?

Hyper Text Markup Language
A way to STRUCTURE text.

STRUCTURE with <TAGS>

```
<title></title>  
  <p></p>  
<script></script>  
  <img>
```

basicStructure.html

```
<!doctype html>
<html>

<head>
  <title>My Title</title>
</head>

<body>
  <h1>This is a header</h1>

  <p>This is a paragraph</p>

  <script>
    // My javascript code goes here
  </script>
</body>

</html>
```

basicStructure.html

```
<!doctype html>
<html>

<head>
  <title>My Title</title>
</head>

<body>
  <h1>This is a header</h1>

  <p>This is a paragraph</p>

  <script>
    // My javascript code goes here
  </script>
</body>

</html>
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basicStructure.html

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  <h1>This is a header</h1>  
  
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</body>
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</html>
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basicStructure.html

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<head>  
  <title>My Title</title>  
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  <h1>This is a header</h1>  
  
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<script>  
  // My javascript code goes here  
</script>
```

```
</body>
```

```
</html>
```

This is a header

This is a paragraph

Make your HTML Page

- Sync Github Repo
- Open unstructuredText.txt
- Turn it into a structured HTML document
- You will need to use
<http://www.w3schools.com/tags/>

```
<doctype>
<html>
<body>
<head>
<title>
<p>
<h1>
<h2>
<ul>
<li>
```

The American School in London

The American School in London is an international, private, independent K-12 school in St John's Wood, London, England for students aged between 4 and 18 years. It was established in 1951 by journalist Stephen Eckard.

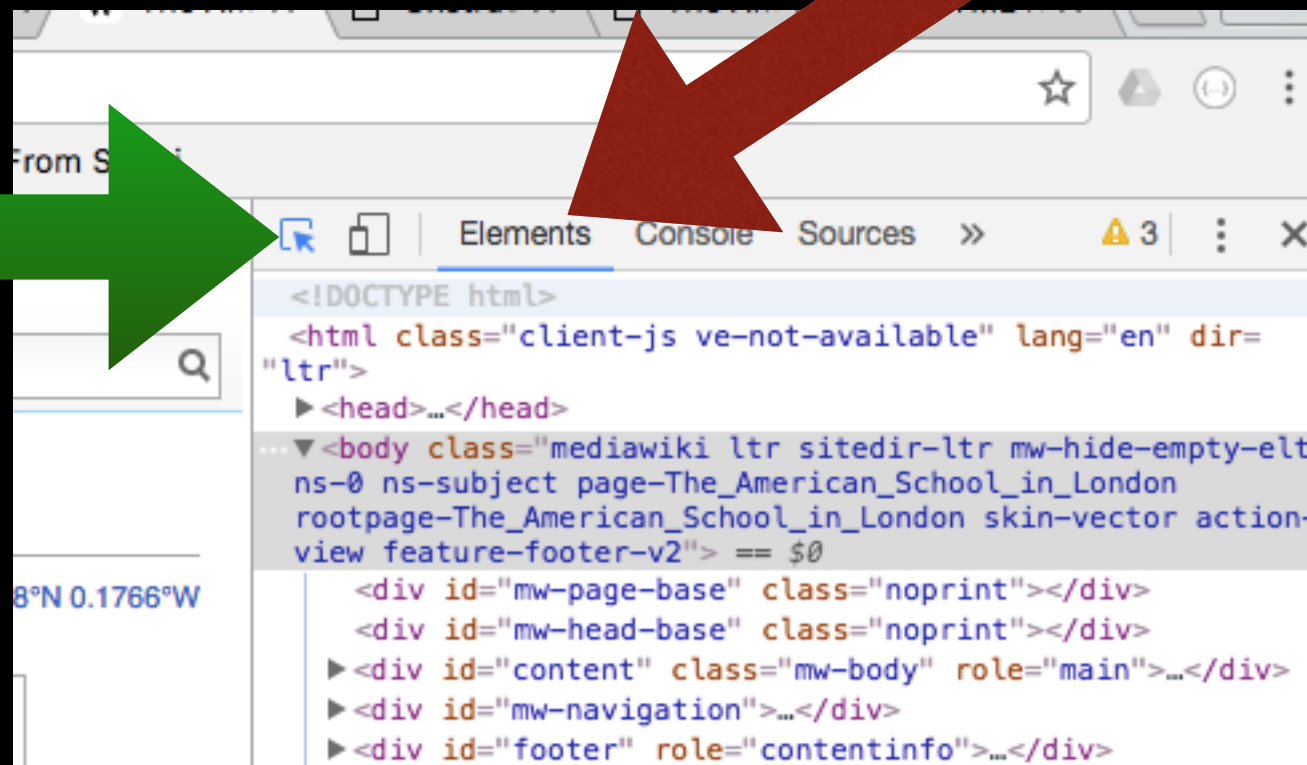
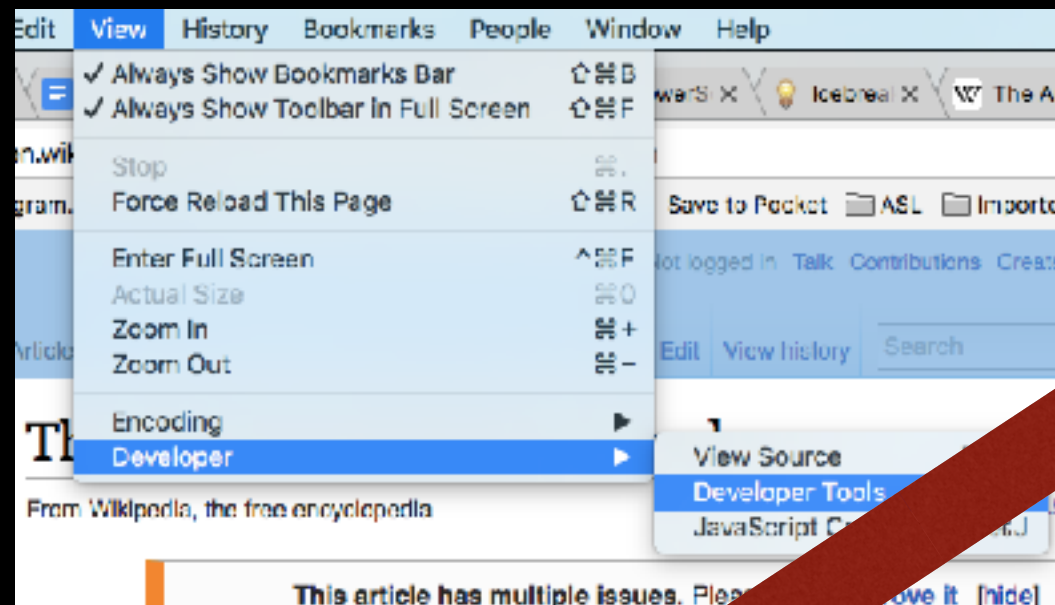
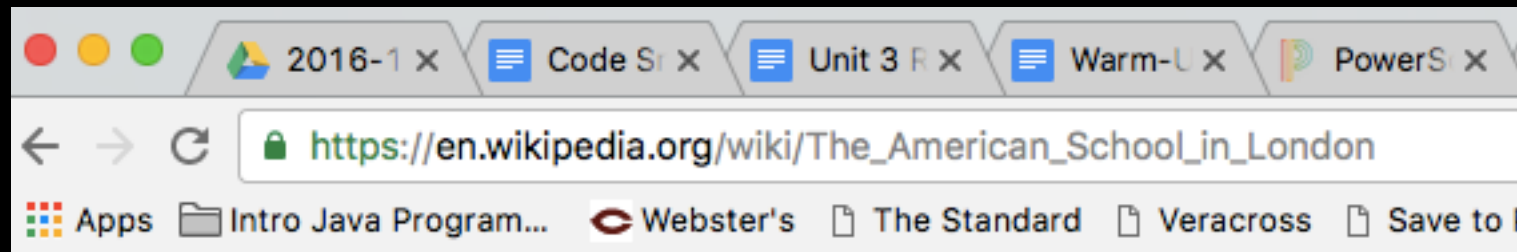
The American School in London welcomed U.S. President Barack Obama for a visit during the 2008-2009 school year. Presidents Harry Truman, Ronald Reagan, and Bill Clinton have also met with ASL students and parents during visits to London.

ASL has been reviewed by the online Good Schools Guide International. A 2013 Ofsted (Office for Standards in Education, a British Government department) inspection report found that ASL was outstanding in all fields.

Heads of School

- Stephen Eckard, founder, head of school 1951-1971
- Jack Harrison, head of school 1971-1986
- William E. Harris, head of school 1986-1991
- William Greenham, interim head of school 1991-1992
- Judith L. Glickman, head of school 1992-1998
- William C. Mules, head of school 1998-2007
- Coreen R. Hester, head of school 2007-2017

Make an even better HTML Page



Loops (aka Iteration)

Three key parts of a programming language (so far):

- 1) Storage (variables)**
- 2) Selection (conditionals)**
- 3) Iteration (loops)**

Ingredients of an algorithm



Task: **Welcome to School**

If isNew is "y", alert
"Welcome"

NOTE: Indented four spaces!

```
if ( isNew == "y" ) {  
    alert("Welcome to ASL!");  
}
```

NOTE: No semicolon

A code block.
Everything between { }

Structure of a For Loop

Repeat "Welcome" 5 times

Structure of a For Loop

Repeat "Welcome" 5 times

```
for ( var i=0; i<5; i++ ) {  
    alert("Welcome to ASL!");  
}
```

NOTE: Indented four spaces!

NOTE: semicolons

NOTE: No semicolon

A code block.
Everything between { }

Structure of a For Loop

Repeat "Welcome" 5 times

```
for (var i=0; i<5; i++) {  
    alert("Welcome to ASL!");  
}
```

Initialize
iterator

Termination
Condition

Increment

Structure of a For Loop

Repeat "Welcome" 5 times

```
for ( var i=0; i<5; i++ ) {  
    alert("Welcome to ASL!");  
}
```

```
var i = 0;  
alert("Welcome to ASL!");  
i = i + 1;  
alert("Welcome to ASL!");  
i = i + 1;  
alert("Welcome to ASL!");  
i = i + 1;  
alert("Welcome to ASL!");  
i = i + 1;  
alert("Welcome to ASL!");  
i = i + 1;
```

Structure of a For Loop

Repeat "Welcome" 5 times

```
for (var i=0; i<5; i++) {  
    alert("Welcome to ASL!");  
}
```

SAME

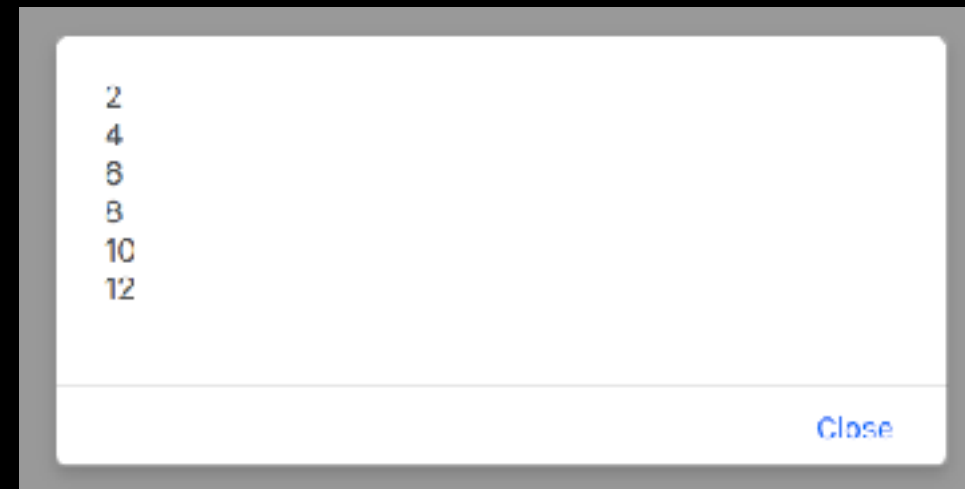


```
for (var i=0; i<5; i=i+1){  
    alert("Welcome to ASL!");  
}
```

```
var i = 0;  
alert("Welcome to ASL!");  
i = i + 1;  
alert("Welcome to ASL!");  
i = i + 1;  
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i = i + 1;  
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alert("Welcome to ASL!");  
i = i + 1;
```

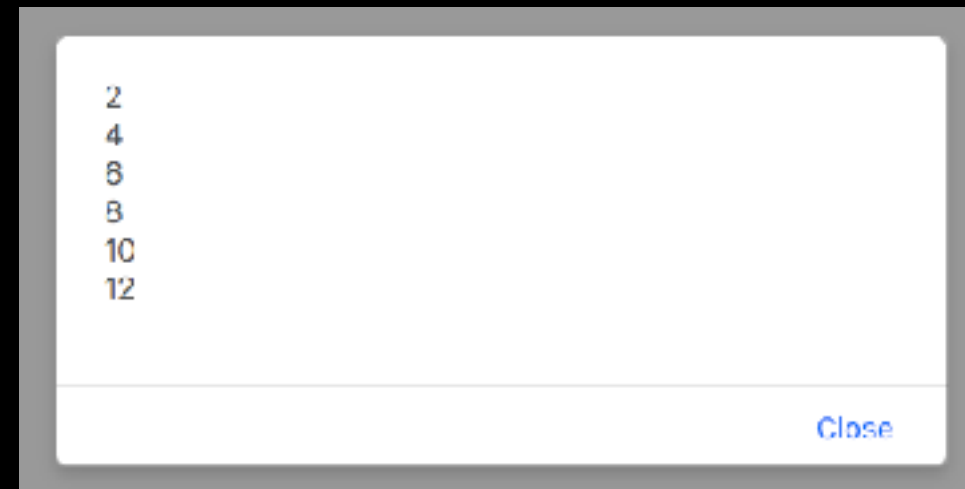
Practice!

- Write a program that displays:



Practice!

- Write a program that displays:



```
<script>
var message = "";

for (var i=2; i<14; i=i+2) {
    message = message + i + "\n";
}

alert(message) ;
</script>
```

Practice!

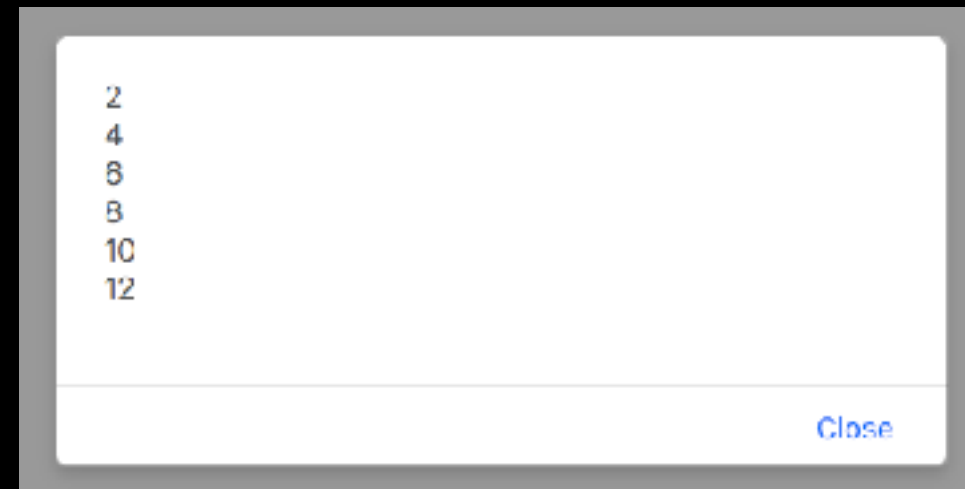
- Write a program that displays:

100
81
64
49
36
25
16
9
4
1

Close

Practice!

- Write a program that displays:



```
<script>
var message = "";

for (var i=10; i>0; i=i-1) {
    message = message + i*i + "\n";
}

alert(message) ;
</script>
```

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