Fetch/Execute Cycle
- Instruction Fetch
- Instruction Decode
- Data Fetch
- Instruction Execute
- Result Return

PC = 1001

```
1000 || ADD 4000, 2000, 2080
1001 || CMP 1050, 2000
....
2000 || 7
....
2080 || 13
....
4000 || 6
```

RAM (random access memory)

```
100 || h
101 || e
102 || l
103 || l
104 || o
105 || \
```

Each memory location is 1 byte = 8 bits (00000000) = $2^8 = 256$

---

**High level language**: sum = num1 + num2
**Assembly (low level)**: add 20, 21, 24
**Binary**: 000 0010 1001 1000 1010 0110 1001 0001

---

**File systems**
- files are layered out in directories
- directories can also contain directories

Computer -> Local Disk -> Desktop -> photo.jpg
-> Documents -> essay.doc
Coding in HTML

Reference: w3schools.com
Text editor: Windows: Notepad, Notepad++
       Mac: TextEdit, Sublime Text
       Linux: VIM, GEdit
Viewing: Firefox, Chrome, Internet Explorer

---

HTML Basics

Tag structure: <tag attr="value"> … </tag>

Good: <u>My Essay Title</u>
Bad: <u>My Essay Title</u>  <- Don’t forget to close the tag!

- Note that not all tags need to be closed! The <img> tag is an example.

<html> the root tag that contains everything else
<head> Where the heading/title/style/etc. goes
<body> Where the html body goes (the things you actually see on a site)

<b> bold
<u> underline
<i> italic
<hr> horizontal line
<br> new line

Heading Tags: <h1> <h2> <h3> <h4> <h5> <h6> ( 
<h1> Some Text Here </h1> (biggest)
<h6> Other Text </h6> (smallest)

Image Tag (displays an image in the html body)
<img src="http://www.kidsgeo.com/images/landscape.jpg"/>

Anchor Tag (displays a link in the html body)
<a href="http://www.kidsgeo.com/images/landscape.jpg">A Mountain Photo</a>