

IT 105 – Principles of Programming

Day 07

1. Helpful resources:
 - a. W3 Schools HTML Tutorial: <https://www.w3schools.com/html/>
 - b. HTML Powerpoint in Moodle.
2. Just a reminder, when you save your pages make sure they are text, but that they have the .html extension and not .txt . As you modify your pages to add functionality, be sure to save separate copies.
3. Note how the W: drive directory structure is related to URL:
 - a. If I save a file called `hello.html` on the top level of my GitHub Pages, the associated URL would be:
`https://username.github.io/hello.html`
 - b. But if save the same file in a sub-folder called **it105**, the associated URL would change to:
`https://username.github.io/it105/hello.html`
 - c. The **it105** sub-folder is represented in the URL.
4. Note W3 Schools link for HTML and HTML .ppt
5. ``, `<i>`, `
`, `<u>`, `<Hx>`, `<p>`
(<http://jcsites.juniata.edu/faculty/kruse/it105/inClass/htm01.html>)
6. `<body bgcolor=_ _ _ _ _>` in hexadecimal

<u>decimal (base 10)</u>	<u>binary (base 2)</u>	<u>hexadecimal (base 16)</u>
0	0000	0
1	0001	1
2	0010	2
3	0011	3
4	0100	4
5	0101	5
6	0110	6
7	0111	7
8	1000	8
9	1001	9
10	1010	A
11	1011	B
12	1100	C
13	1101	D
14	1110	E
15	1111	F

7. Regarding the above:

- a. Binary, base 2, means there are 2 base digits, 0 and 1.
 - i. To convert from binary to decimal, expand using powers of 2.
 - ii. For example: $1101_2 = 1*2^3 + 1*2^2 + 0*2^1 + 1*2^0 = 8+4+1 = 13_{10}$.
 - iii. For example: $0111_2 = 0*2^3 + 1*2^2 + 1*2^1 + 1*2^0 = 4+2+1 = 7_{10}$.
- b. Decimal, base 10, means there are 10 base digits, 0 thru 9.
- c. Hexadecimal, base 16, means there are 16 base "digits," 0 thru F.
- d. The largest two digit number in:
 - i. Binary is $11 \rightarrow 3$ in decimal (or using subscripts: $11_2 = 3_{10}$).
 - ii. Decimal is 99.
 - iii. Hexadecimal is FF \rightarrow 255 in decimal and 1111 1111 in binary.

8. Anchor tag, <a> to an external webpage:

```
<a  
href="http://jcsites.juniata.edu/faculty/kruse/it10  
5/it105syl.htm">homepage?</a>
```

9. Anchor tag, <a> linking to a position on the same page:

```
<!-- here is the href at the top of the page -->  
Click <a href="#bottom">here</a> to go to the  
bottom of the page.
```

```
<!-- the NAME element would then be farther down  
the page -->  
<A NAME = "bottom"> Here we are at the bottom.</a>
```

For example, with the URL

<http://jcsites.juniata.edu/faculty/kruse/it105/inClass/htm01.html>,

note how it (the internal reference, #bottom, is appended) changes when the href button is clicked:

<http://jcsites.juniata.edu/faculty/kruse/it105/inClass/htm01.html#bottom>