

**Monday, June 23**

Describe three ways you might like to use computers in the future but do not currently know how.

**Tuesday, June 24**

Fill in the table below with the Microsoft Word keystroke commands to perform the indicated actions:

<u>Action</u>	<u>Keystroke Command</u>
Toggle boldface font	
Begin a hanging indent	
Begin double-spacing	
Toggle italicized font	
Begin text centering	
Indent a paragraph	
Begin right-justification	
Begin single-spacing	
Begin left-justification	
Copy highlighted text	
Toggle underlined text	
Paste copied text	
End hanging indent	

**Wednesday, June 25**

A *square* is a number that is that square of a whole number. For example, 1, 4, and 9 are all squares because  $1 = 1^2$ ,  $4 = 2^2$ , and  $9 = 3^2$ . Describe in detail how you could use Microsoft Excel to find the sum of the first hundred squares, that is,

$$1^2 + 2^2 + 3^2 + \cdots + 99^2 + 100^2.$$

**Thursday, June 26**

Suppose you have a Microsoft Excel spreadsheet whose A column contains the annual income of a company's employees. The employees must pay a 10% tax on the first \$20,000 of income and 15% tax on anything above \$20,000. For example, if an employee has an income of \$15,000, he would only owe

$$\$15,000 \times 10\% = \$1,500,$$

whereas if another employee earned \$50,000, she would owe

$$\$20,000 \times 10\% + (\$50,000 - \$20,000) \times 15\% = \$6,500.$$

Describe how you could use Microsoft Excel to calculate each employee's tax burden.

**Monday, June 30**

Use the next two pages to design a PowerPoint presentation with at least eight slides. Be sure to describe layout features.



**Tuesday, July 1**

Describe a problem you encountered when writing your PowerPoint presentation today and what you did to solve it.

**Wednesday, July 2**

Describe some functionality that you would like to use in a PowerPoint presentation but that does not currently exist (to the best of your knowledge).

**Monday, July 7: Introduction to HTML**

Use the space provided to design a personal webpage. Include links and images, and pay attention to layout.

TITLE:

**Tuesday, July 8: HTML Images and Links**

(1) Give HTML code to write produce the following:

**BOLD***Italic*Underline **Now:** *A combination*

For the remaining questions, assume PICTURE.jpg is an image located in the same directory as the webpage you are writing.

(2) Give HTML code to include PICTURE.jpg on your webpage:

(3) Give HTML code to include PICTURE.jpg 100 pixels wide on your webpage:

(4) Give HTML code for a hyperlink to [www.google.com](http://www.google.com). The link text should be "Google".

(5) Give HTML code for PICTURE.jpg to be included on your webpage in such a way that when someone clicks on it, they are directed to [www.facebook.com](http://www.facebook.com).

**Wednesday, July 9: Tables and Lists**

(1) Give HTML code to create an unordered list of the courses you are taking this summer in Upward Bound.

(2) Give HTML code to create an ordered list entitled “Course Units” whose entries are the three units in this class, namely, Microsoft Office, HTML, and Java Programming.

(3) Give HTML code to create a table containing your Tuesday morning class schedule in Upward Bound. It should include all times in one column and course names in another.

**Thursday, July 10: HTML Questions**

Use the space provided to draw a detailed diagram of the webpage you designed for last Thursday. The diagram should specify any tables, lists, and links used.

TITLE:

**Monday, July 14: HTML Colors**

(1) Write the following decimal (base 10) numbers in hexadecimal (base 16):

(a) 200

(b) 93

(c) 7

(2) Write the following hexadecimal numbers in decimal:

(a) 7C

(b) 25

(c) FF

(3) Give the HTML color code of a color bluer than #558CA3.

(4) Give the HTML color code of a color less red than #37F921.

(5) Give the HTML color code of a color with half as much green as #4FCDE2 but the same amount of red and blue.

(6) Write HTML code to assign the background color of a webpage to your answer from Question 3 and its text color to your answer from Question 4.

**Tuesday, July 15: HTML Practice 1**

Write about a problem you encountered when writing your webpage today and what you did to fix the problem.

**Wednesday, July 16: HTML Practice 2**

What would you like to do to improve your webpage (including things you may not know how to do yet)?

**Monday, July 21: Introduction to Java and Object-Oriented Programming**

- (1) Write Java code to write your name to the screen.
  
- (2) Write Java code to write the value of the variable  $x$  to the screen.
  
- (3) Write Java code to write “New Line” to the screen and then continue to a new line of output.
  
- (4) Suppose you are writing a class called “Student”. List five attributes and five methods you might want to include in this class.
  
- (5) Give three possible subclasses and three possible superclasses for your “Student” class.

**Tuesday, July 22: Java Datatypes**

(1) Write Java to declare the following variables:

- (a) An integer called  $i$
- (b) A character called  $c$
- (c) A double called  $d$
- (d) A string called  $s$
- (e) A boolean called  $b$

(2) Write Java to assign the following values to the following variables:

- (a) The value 17 to  $i$
- (b) The value  $c$  to  $c$
- (c) The value 3.14159 to  $f$
- (d) The value *Java* to  $s$
- (e) The value *true* to  $b$

(3) Write a single line of Java code to:

- (a) Declare an integer  $i$  equal to  $-2$
- (b) Declare a character  $c$  equal to  $A$
- (c) Declare a double  $d$  equal to 2.71828
- (d) Declare a string  $s$  equal to *false*
- (e) Declare a boolean  $b$  equal to *false*

(4) Write the value of the double  $z$  after each of the following blocks of code are run:

(a) `int x = 2;    int y = 3;    z = x + y;`

(b) `int x = 7;    int y = 3;    z = x % y;`

(c) `int x = 4;    int y = -6;    z = x * y;`

(d) `int x=5;    int y=3;    z = x / y;`

(e) `int x=5;    int y=3;    z = (double)x / y;`

**Wednesday, July 23: Booleans and Loops**

(1) Write the value of the boolean variable  $b$  after the following blocks of code are run:

(a) `boolean b = true && false;`

(b) `boolean b = false || true;`

(c) `boolean b = (1 < 2);`

(d) `boolean b; int x = 1; b = (x == 1);`

(e) `boolean b; b = !(2 <= 3);`

(f) `boolean b; b = (b && !b);`

(2) Given three integer variables  $x$ ,  $y$ , and  $z$ , write a Java expression that is *true* if and only if  $x$  and  $y$  are equal or both  $y$  equals 1 and  $z$  is even.

(3) Given an integer variable  $x$  holding a positive value, write two separate blocks of Java code to find the sum of all the integers between 1 and  $x$  (inclusive). The first should use a *for* loop and the second should use a *while* loop.

(4) Write Java code to compute  $x \% y$  given two integer positive integer values  $x$  and  $y$ . The only arithmetic operations you may use are addition and subtraction.



**Monday, July 28**

Describe three tasks that you feel a Java program could help you accomplish better.

**Tuesday, July 29: Java Practice 1**

Describe a problem you encountered when programming today and what you did to solve it.