CS 302 - Week 3

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Week 3

● P1 Milestone 2 due Thursday 11:30am
● Exam and McBurney accommodation requests due by Friday
● CS Learning Center (NEW!)
● Office Hours change
  ○ Wed 1pm to 3pm, Thu 9:30am to 11:30am
  ○ and by appt.
What is wrong with this?

```java
int value == 6;
boolean 3or6value;
if ( value == 3 || 6)
    System.out.println("value is 3 or 6");
value3or6 = true;
if ( 0 < value < 10);
    System.out.println("0 < value < 10");
System.out.println("value=" + value);
```
Will these have the same result?

char choice = '?'; //don't know choice
if ( choice == 'A') {
    System.out.println("doing A");
} else if ( choice == 'B') {
    System.out.println("doing B");
} else {
    System.out.println("not A or B");
}

char choice = '?'; //don't know choice
if ( choice == 'A') {
    System.out.println("doing A");
} else if ( choice == 'B') {
    System.out.println("doing B");
} else {
    System.out.println("not A or B");
}
What happens with code

Bombetoka Bay
Madagascar

Dangling Else - What is print out?

if ( value >= 1 )
  if ( value <= 10)
    System.out.println( "1 to 10" ) ;
else
  System.out.println( "> 10 OR < 1?????" );
What is print out?
boolean sunny = false;
System.out.println(sunny  ? “sunny” : “cloudy”);
char choice = 'a';
switch (choice) { //switch var can be int or char
case 'a': System.out.println("a");
case 'b': System.out.println("b");  
    break;
default: System.out.println("otherwise");  
    break;
}
String strA = "This is a string"; //String literal
int lengthA = strA.length();
int lengthB = "This is a string".length();
Puzzle

String str1 = "Hello";
String str2 = new String( str1);

boolean equal = str1.equals(str2);
char

String strA = "This is a string"; //String literal
char firstInitial = 'J';    //char literal
char aChar = strA.charAt( 3);
char - Which will work?

```java
int intValue = 0;
char aChar = 'B';

intValue = aChar;    // 1
aChar = intValue + 1; // 2
char aChar = \u0041;  // 3
```
Puzzle

```c
int i = 5, j = 2, k;
j += 3;
k = i++ + --j;
```

After this executes, what are the values in i, j and k?
Increment & Decrement

\[
i = i + 1; \\
i += 1; \\
i++; \\
++i;
\]

\[
i = i - 1; \\
i -= 2; \\
--i; \\
i--;
\]
Lazy River

Do While Loop

Scanner input = new Scanner(System.in);
int num;
int sum = 0;
do {
    num = input.nextInt();
    sum += num;
} while (num > 0);
boolean finished = false;
while ( !finished) {
    String line = input.nextLine();
    if ( line.equals("done")) {
        finished = true;
    } else {
        System.out.println("echo:" + line);
    }
}
What is the difference?

```java
int a = 1;
while (a < 5) {
    System.out.println("hello");
    a++;
}
```

```java
for (int a = 1; a < 5; a++) {
    System.out.println("hello");
}
```
do {  //indefinite - body executes at least once
    
} while ( !finished);

while ( !finished) {
    //indefinite - body may never execute
}

for ( int i=1; i < 5; i++) {
    //definite
}
What is the value of count?

```java
int count = 0;
for (int i = 1; i < 4; i++) {
    for (int j = 3; j < 6; j++) {
        count += 1;
    }
}
System.out.println("count=\" + count);
```