

LEC 09

CSE 121

Conditionals

BEFORE WE START

Talk to your neighbors:

What's something new you did recently? Or something new you'd like to try?

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TAs: Anisha Savannah William
Cayden Tamsyn

Questions during Class?

Raise hand or send here

sli.do **#cse121**



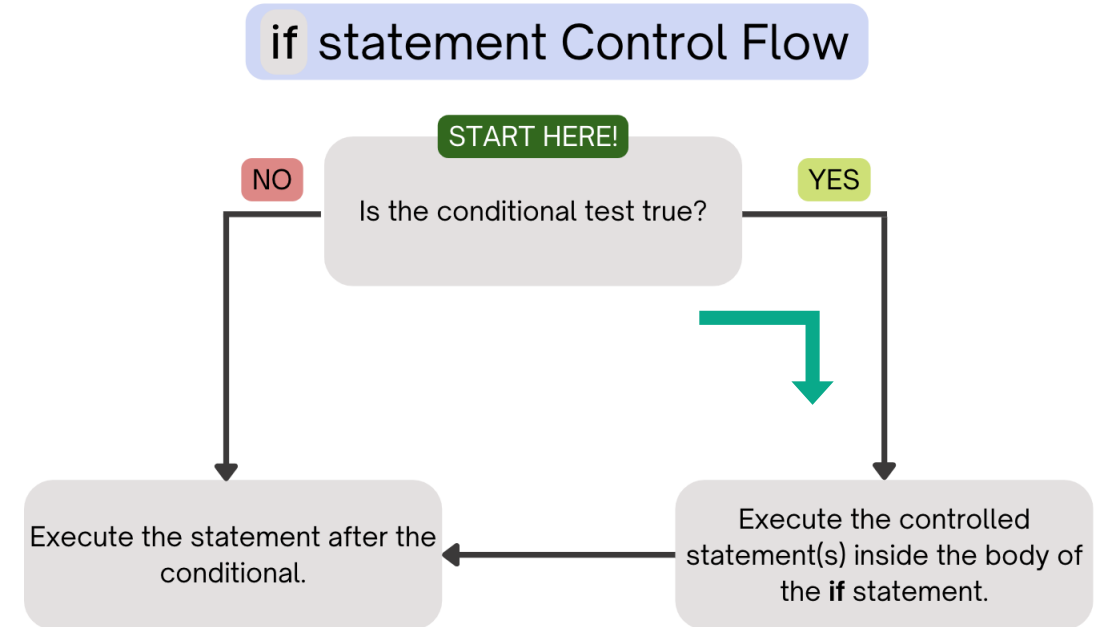
Announcements, Reminders

- **C2** released, due Thursday, July 30th
- **R2** out yesterday, due **Thursday, July 30th**
 - the last time C0 is eligible for resubmission!
 - ["Re-resubmissions" post](#)
- Quiz reminders:
 - Quiz 0 grades – we're working on it!
 - Quiz 1 is on **Thursday, July 30th**

PCM Review: if Statements

```
if ( test ) {  
    body (statements to be executed)  
}
```

Executes a block of statements
if and only if the test is **true**

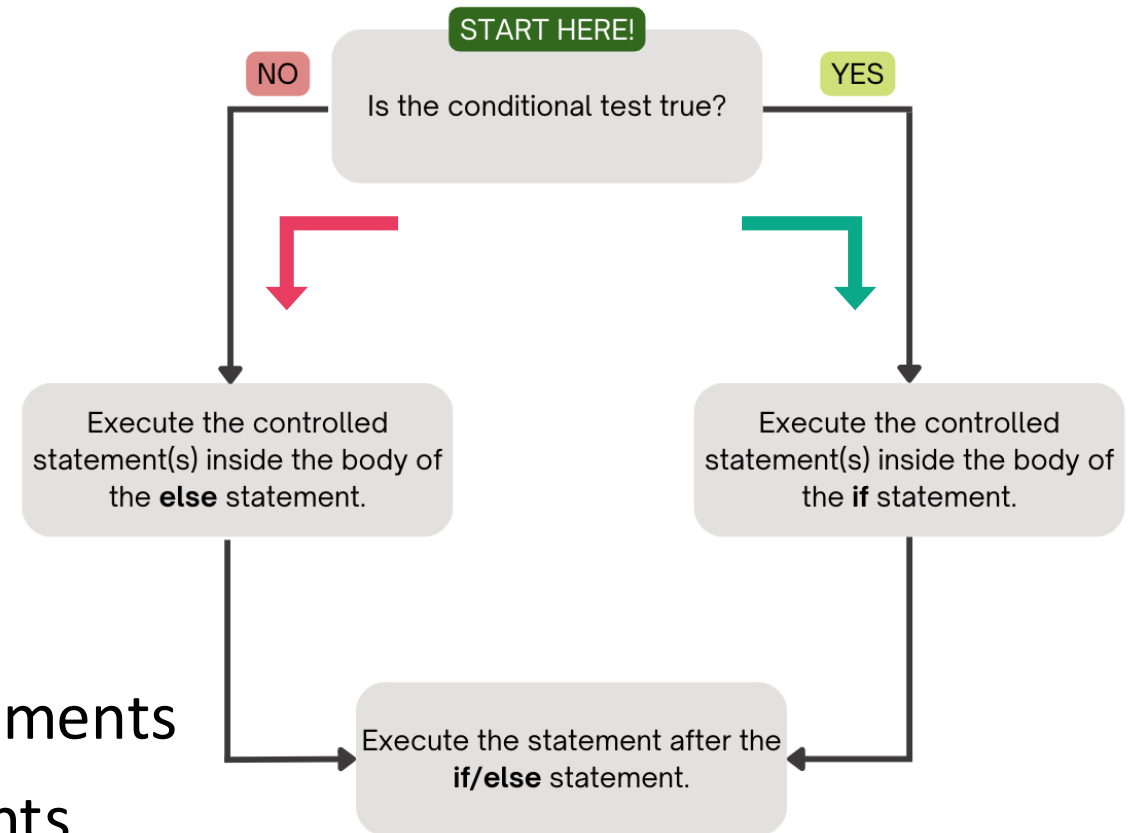


PCM Review: if-else

```
if ( test ) {  
    statement(s)  
}  
else {  
    statement(s)  
}
```

1. If the test is **true**: execute block of statements
2. If **false**, execute other block of statements

if/else statement Control Flow

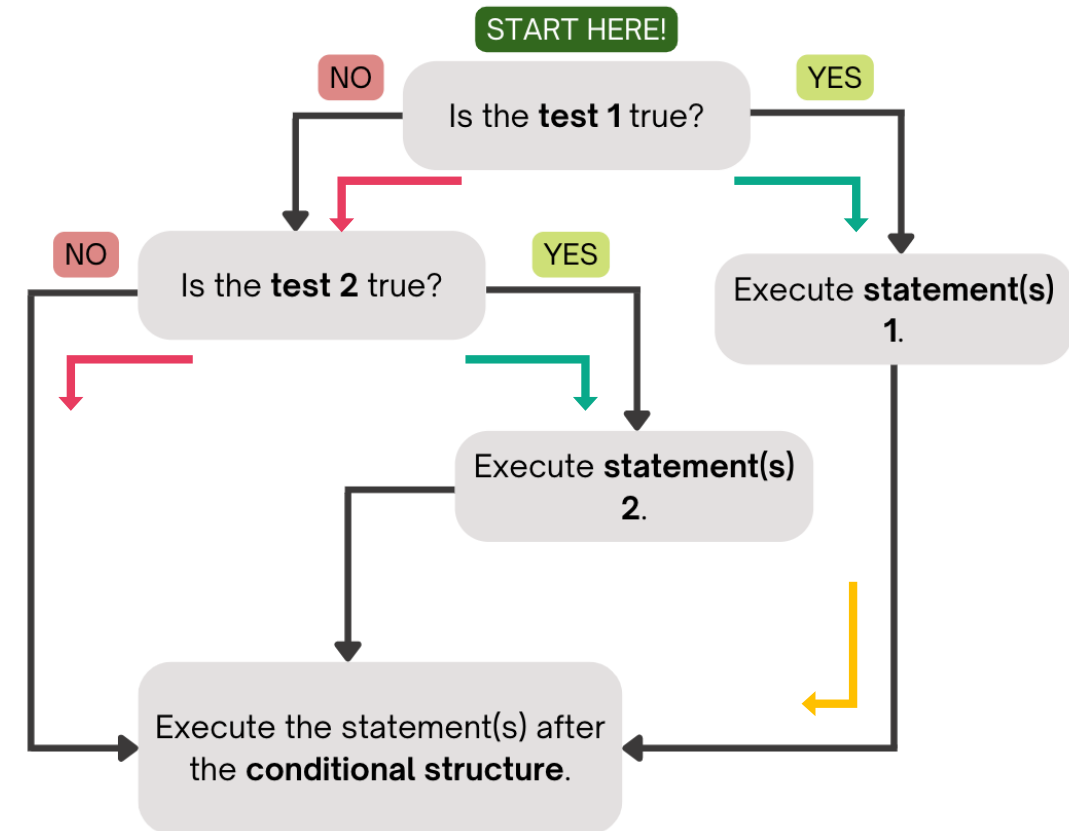


PCM Review: if-else if

```
if ( test ) {  
    statement(s)  
}  
else if ( test ) {  
    statement(s)  
}
```

1. If the first test is **true**, execute that block
2. If not, proceed to the next test, and repeat
3. If none were true, don't execute any blocks

if/else if statement Control Flow



Note After entering an if /else if block, **skip** all remaining blocks.

Reminder: Boolean Operators!

- ! (NOT)
- && (AND)
- || (OR)
- relational: <, >, <=, >=, ==, !=

Very common with conditionals

```
if (day.equals("Wed") || day.equals("Fri")) {  
    return "121 lecture!";  
} else if (day.equals("Tue") || day.equals("Thu")) {  
    return "121 quiz section!";  
} else {  
    return "no 121!";  
}
```



Practice: Think



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#cse121

```
public static void main(String[] args) {  
    for (int i = 1; i <= 3; i++) {  
        System.out.print(mystery(i));  
    }  
}  
public static String mystery(int n) {  
    String response = "even ";  
    if (n % 2 == 1) {  
        response = "odd ";  
    } else if (n == 1) {  
        response = "one ";  
    }  
    return response;  
}
```

**What does this
program output?**

A. odd even odd

B. one even odd

C. one even even

D. even even even



Practice: Pair

sli.do

#cse121

```
public static void main(String[] args) {  
    for (int i = 1; i <= 3; i++) {  
        System.out.print(mystery(i));  
    }  
}  
public static String mystery(int n) {  
    String response = "even ";  
    if (n % 2 == 1) {  
        response = "odd ";  
    } else if (n == 1) {  
        response = "one ";  
    }  
    return response;  
}
```

**What does this
program output?**

A. odd even odd

B. one even odd

C. one even even

D. even even even

“Useless” Conditionals

```
public static void main(String[] args) {  
    for (int i = 1; i <= 3; i++) {  
        System.out.print(mystery(i));  
    }  
}  
  
public static String mystery(int n) {  
    String response = "even ";  
    if (n % 2 == 1) {  
        response = "odd ";  
    } else if (n == 1) {  
        response = "one ";  
    }  
    return response;  
}
```

← This else if statement never runs!



Practice: Think

[sli.do](#)[#cse121](#)

```
public static int mystery(int num1, int num2) {  
    int count = 0;  
    if (num1 == 7) {  
        count++;  
        if (num2 < 4) {  
            count++;  
        }  
    }  
    if (num1 + num2 == 10) {  
        count++;  
    } else if (num1 - 2 + num2 == 8) {  
        count++;  
    } else {  
        count++;  
    }  
    return count;  
}
```

If num1 is 7 and num2 is 3, what does this method return?

A. 2

B. 3

C. 4

D. 5



Practice: Think

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```
public static int mystery(int num1, int num2) {  
    int count = 0;  
    if (num1 == 7) {  
        count++;  
        if (num2 < 4) {  
            count++;  
        }  
    }  
    if (num1 + num2 == 10) {  
        count++;  
    } else if (num1 - 2 + num2 == 8) {  
        count++;  
    } else {  
        count++;  
    }  
    return count;  
}
```

If num1 is 7 and num2 is 3, what does this method return?

A. 2

B. 3

C. 4

D. 5