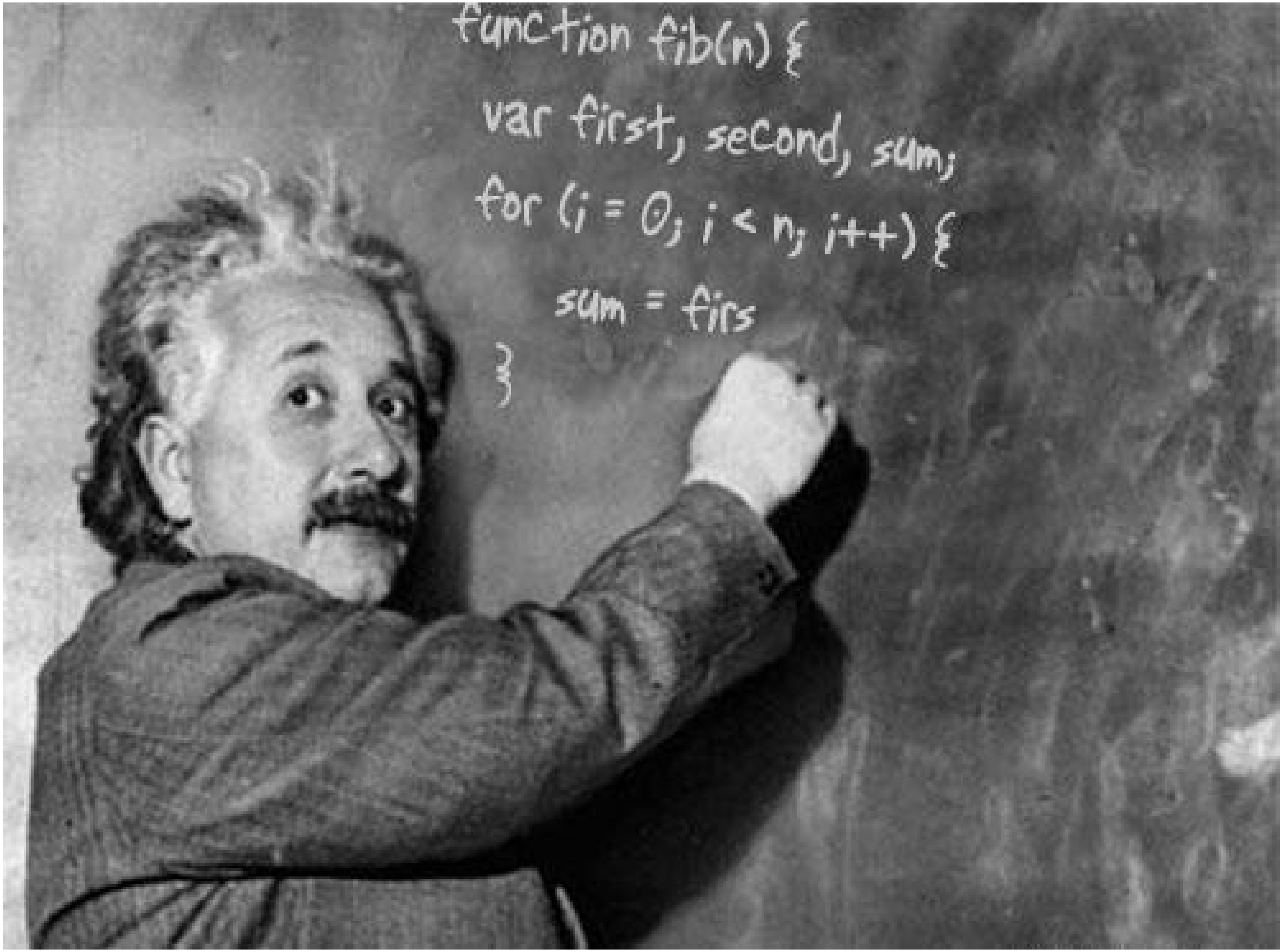
Whiteboarding



```
function fib(n) {
 var first, second, sum;
 for (i = 0; i < n; i++) {
    sum = firs
 }
```

The Goal

- Show your critical thinking skills
- *Its not about finding 'the right answer'!*
- Talk through your thinking process.

The Problem

- Write a function that checks for balanced parentheses.

```
balancedParens('hello world');       → true
balancedParens('[x](y){z}'),           → true
balancedParens('[({yay})]'),             → true
balancedParens('[(nope]{wrong)}')     → false
```

Probe. Listen.

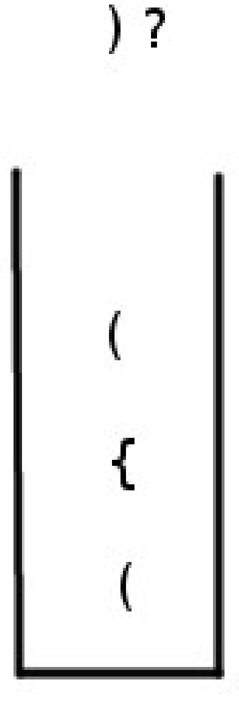
- What will the input be? Contents? Size?
- Do I have to worry about curly braces? Angle brackets?

  ([{ <

Pictures

- DO NOT CODE RIGHT AWAY
- Draw pictures to illustrate your approach

“({ (corn) })”



Space

- Begin writing at top-left-most part of board
- Leave blank line between

Pseudo-code

```
function balancedParens(str) {
  var bracs = filter non-bracs from str
  var stack = [ ]
  for (brac in bracs) {
     If (brac is opening)
       Put brac in stack
     Else
       Check the stack
  }
  return stack.empty?
}
```

Goldilocks Variable Names

- Too short: `var n;`
- Too long: `var indexForWeekToBeRendered;`
- Accaptableeee:

```
var weekIndex;
```

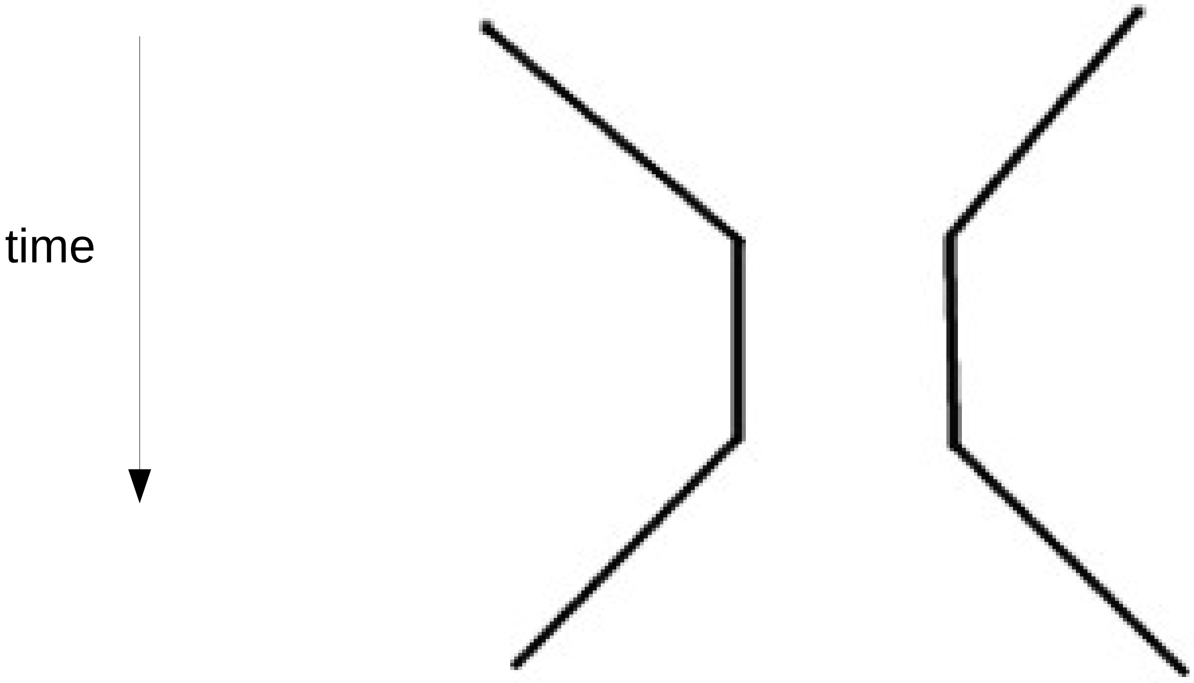
Helper Methods

```
function balancedParens(str) {
    var bracs = getBracs(str);    //returns array of bracs
    var stack = [ ];
    for (var i in bracs) {
        var brac = bracs[i];
        if (brac.match(/ ( [ { /) {
            stack.push(brac);
        } else {
            if (!stack.length) return false;
            if (!bracMatch(stack.pop(), brac)) return false;
        }
    }
    return !stack.length;
}

function bracMatch(open, close) {
    return Math.abs( close.charCodeAt(0) -
                     open.charCodeAt(0)    ) <= 2;
}
```

Double Funnel Model

- Start broad, get detailed when you start writing
- After you have first answer, get broad again



Optimize *later*

- Focus on getting an initial solution
- Evaluate it, suggest optimizations
- Analyze space/time complexity

  Linear O(n)?

Optimize

```
function balancedParens(str) {
    var bracs = getBracs(str);    //returns array of bracs
    var stack = [ ];
    for (var i in bracs) {
        var brac = bracs[i];
        if (brac.match(/ ( [ { /) {
            stack.push(brac);
        } else {
            if (!stack.length) return false;
            if (!bracMatch(stack.pop(), brac)) return false;
        }
    }
    return !stack.length;
}
```

Misc. Tips

- Don't freak out if you don't know. Just break down the problem into small steps, draw pics, pseudo-code, and think through it.
- Always take interviewer's suggestions.
- Verbalize clearly. *State intentions before coding!*
- Should be language agnostic. You hsould be able to communicate your ideas to a C++ developer.