Zen and the art of Interviewing

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Interviews are about coding, right ...
... Interviews are about communication!
General Tips

Goal of an interview is to **Translate a problem into code**

Focus on being **clear** not clever

Clear code has a unified style and **well named functions and variables**

Ask clarifying questions.

The best interviews are full of mistakes

Pick a single language to do all your interviews in
Types of Interviews

- Timed Challenge
- Remote Interview
- Onsite Interview
Timed Challenge

Usually tests a very specific area of computer science. Closest to the typical “tricky” coding challenge.

Problem is well defined for you

Come up with your own test cases

Best Prep technique:
Remote Interview

Very challenging environment

Shared text editor and a phone call

Don't be afraid to ask questions

The goal is to demonstrate your coding process, not necessarily the end result

Talk though your solution as you develop it

Start with simple unoptimized case and develop from there

Best prep technique: interviewing.io
Onsite Interview

Two main focuses ...

1. How well can you design a system

2. How well can you solve a small problem.
System Design Question

Architect a solution to a more complex problem

Organize data structures, classes, objects and functions

Example: Design a system to detect ships in a game of battleship
Focused Problem Question

Smaller focused problems - typically one function

Iterate multiple designs

Cover all edge cases - showing how you handle them within your code

Focus on code structure, have an intention behind each line and explain why you're writing it this way

Example: write a function that detects if a string is a palindrome
Battleship - Given a matrix representing a game of battleship, find the ships!

```java
class Board {
    int[][] board_squares; // 1 if ship 0 if empty - given info
    Ship[] found_ships;    // initially empty
}

class Ship {
    int[][] coords;       // list of (x,y) pairs
```
Battleship - Given a matrix representing a game of battleship, find the ships!

```java
Board b

for y in b.board_squares {
    for x in b.board_squares {
        Ship current_ship = null;
        if (b.is_hit(x, y)) {
            if (current_ship == null) {
                current_ship = new Ship();
            } else if (current_ship != null) {
                b.record_ship(current_ship);
            }
        }
        current_ship.add_hit(x, y);
    }
}
//no hit but previous iteration was a hit
else if (current_ship != null) {
    b.record_ship(current_ship);
    current_ship = null;
}
```
Write a function that detects if a string is not a palindrome.
Resources

http://hackerrank.com/

https://interviewing.io/

https://www.reddit.com/r/dailyprogrammer/

https://news.ycombinator.com/

http://code.facebook.com/

https://developers.google.com/