



Acing the Whiteboard Interview

With Ellen Beeman and Kate Reinhard





About

Ellen Beeman has been a designer/producer/hiring manager in the game industry for over 20 years, working on 50+ games for companies including Microsoft, WB, Disney, and others. She teaches game software design and production at DigiPen Institute of Technology in Redmond, Washington.

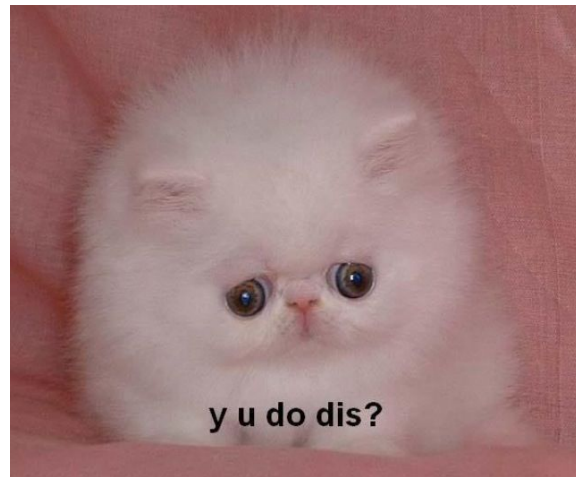
Kate Reinhard is an engineer at Turn 10 in the Seattle area, and the founder of Seattle Women in Games and Technology.





Why do companies even DO whiteboard programming interviews?

- Limited space
- Limited time
- No IntelliSense! No debugger! No actual compiling!
- This is a **terrible** way to interview someone!







Surprise! It's not about your code

- (OK, it's kinda about your code)
- But what they're really looking for is... A REASON NOT TO HIRE YOU.
- *You're not going to give them that in your whiteboard interview*



DONT EVER PLAY YOURSELF





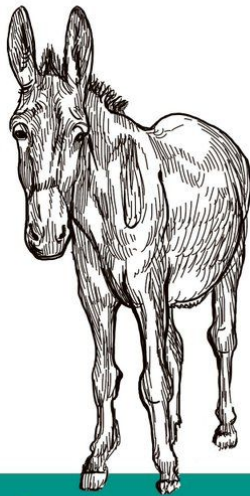
The Nightmare Programmer Hire

- One bad programmer can sink an entire software project
- There are specific characteristics of a Nightmare Programmer Hire...





Where's the fun in just knowing what the code is supposed to do?



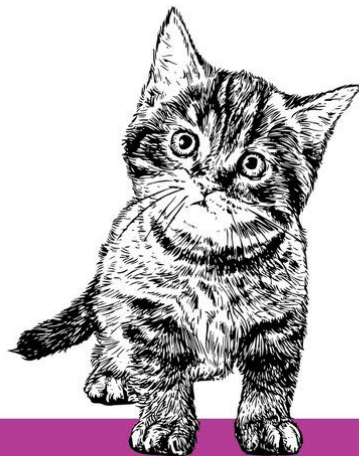
Essential

Excuses for Not Writing Documentation

O RLY?

@ThePracticalDev

How to actually learn any new programming concept



Essential

Changing Stuff and Seeing What Happens

O RLY?

@ThePracticalDev

Cutting corners to meet arbitrary management deadlines



Essential

Copying and Pasting from Stack Overflow

O'REILLY®

The Practical Developer
@ThePracticalDev





The Nightmare Programmer Hire

- Doesn't find out requirements of the feature, just starts coding
- Doesn't actually talk to anyone on the team
- Doesn't talk to anyone WHILE CODING THE FEATURE
- Doesn't test their code

Companies don't want to hire THIS PERSON





Be the programmer they WANT

- You find out requirements of the feature before you start coding
- You demonstrate that you would talk to someone on the team
 - Hint: Talk to the interviewer in the room
- You talk **while coding** the feature
- And OMG, you test your code!



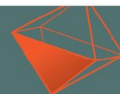


Ask - Talk - Test!

The **golden** rule:

- ASK lots of questions!
- TALK while coding
- TEST your code!

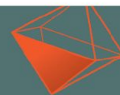
If you don't remember anything else, remember: **ASK TALK TEST**





ATT

Ask - Talk - Test





The Sacred Space of the Whiteboard

- Choose sides:
 - 1/4 for pseudocode and testing
 - 3/4s of whiteboard for your code
- Start your code in the **extreme upper left** of that section
- Leave space to TEST your code!





* code starts here

code go
here

notes
&
pseudo-
code





1. Ask

- Ask LOTS OF QUESTIONS before you start coding
- Write down the requirements on the whiteboard
 - 1st question: What language should I use?

(Your resume should only have languages you can actually code in for an interview. Mark other languages as “familiar”)

- WRITE YOUR TEST CASES

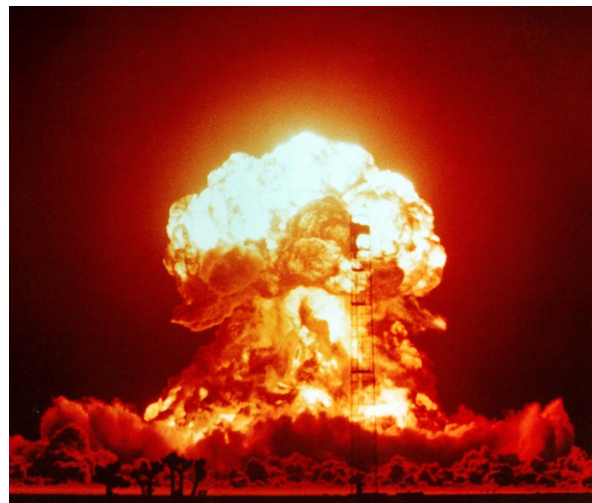




2. Talk Continuously

- Seriously, don't stop talking. Ever.
- Pseudocode first, THEN real code

your chances if you stop talking ->

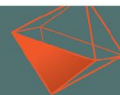




USE COMMENTS

Not that you need to be reminded... right?

//, /*, and */ will get you far in whiteboard interviews





ALWAYS Pseudocode First

Why?

- Because interviews are stressful
- Writing logic first lets you worry about syntax later

But if you make a mistake...





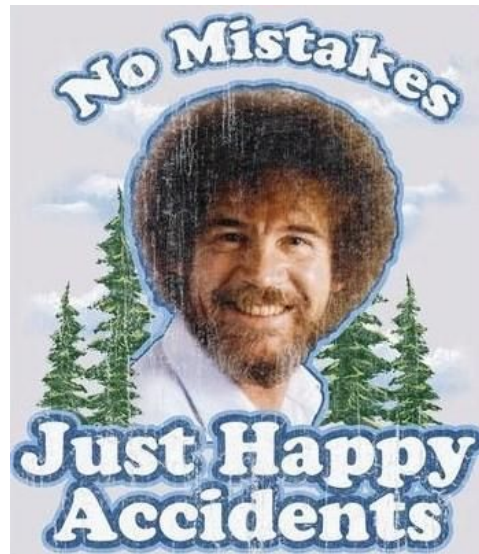
Mistakes: Just Happy Accidents

Just *calmly* fix it

- Cross things out, DON'T erase them!

Your opportunity to show the interviewer that you can handle mistakes!

REMEMBER TO BREATHE





3. TEST!

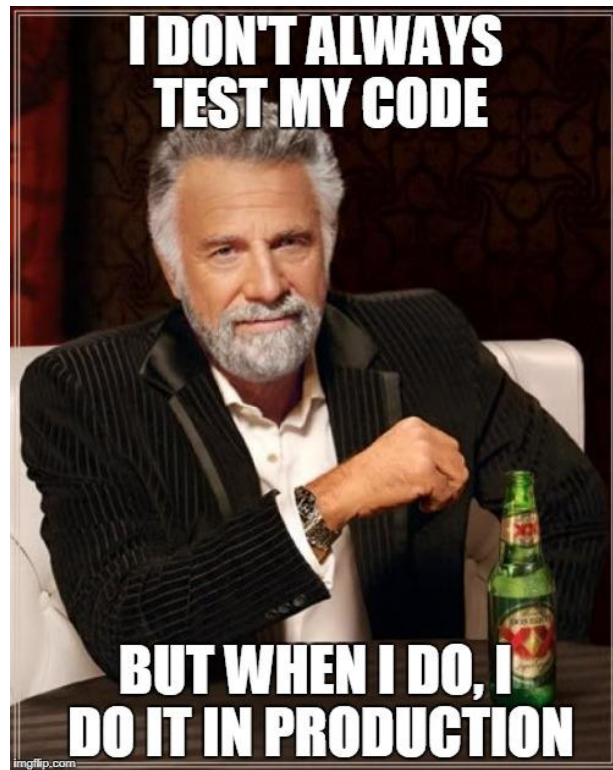
- Using your PREVIOUSLY WRITTEN test cases...
- Do a walkthrough of your code, pointing at it line by line
- Keep a “variable table” and update it as you go





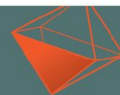
3. TEEEEEEEST!

- Would you want to work with someone who doesn't test their code?
- If you skip this step, they're completely justified in not hiring you.





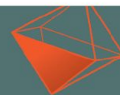
What are the golden rules?





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Ask - Talk - Test





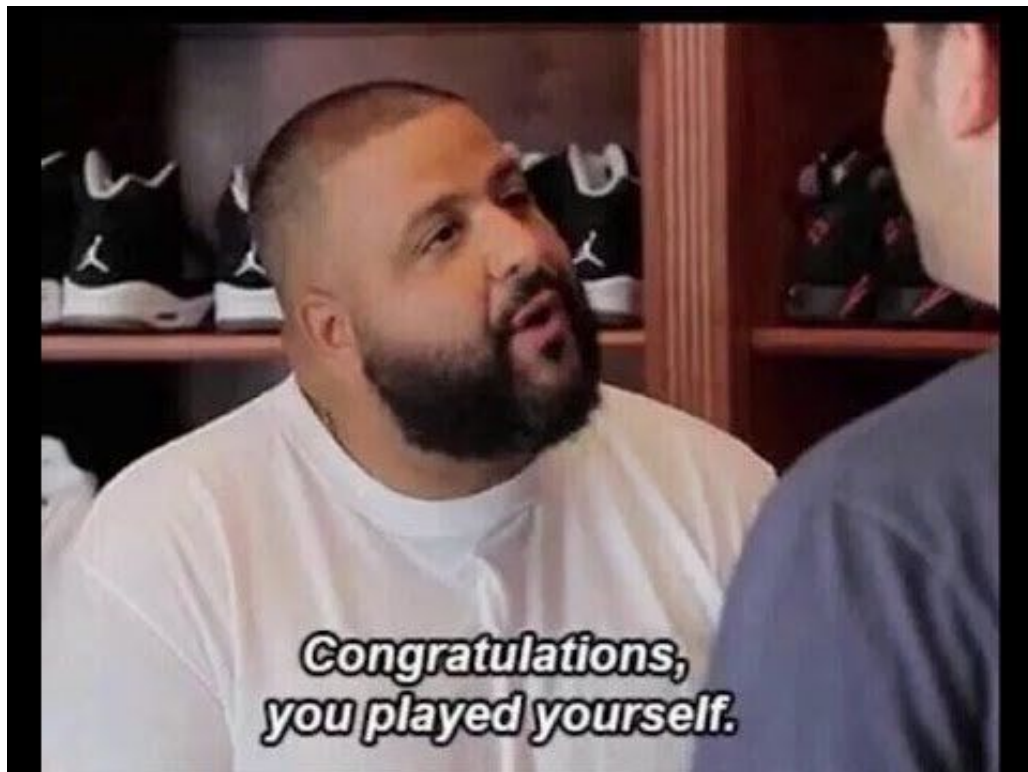
The Whiteboard eats 50 points of your IQ

```
int a = 5;  
int b = 10;  
a = b;
```

What is the value of a?









Actually, it's not

```
int a = 5;
```

```
int b = 10;
```

```
a = b;
```

The value of `a` is now `b`, which means `a`'s value is now 10

But when you're standing at the whiteboard,
it looks like a trap



DONT EVER PLAY YOURSELF





FizzBuzz

- We all know and love FizzBuzz
- Yes, it is a very simple problem
- But it demonstrates ALL the traits that an employer is looking for, which you can show by doing the three simple steps...





Ask - Talk - Test





Live Whiteboard Interview Demo





ONE MORE TIME: What are the golden rules?





Ask - Talk - Test!





Whiteboarding An Industrial Design

- Not just for designers!
- Certain companies ask this of all of their programming candidates
- To demonstrate that you have a CUSTOMER FOCUS
- How do you do that?





Ask - Talk - Test!





Whiteboarding An Industrial Design

- Testing is just walking through the **user experience** instead





Stapler for the Blind: UX Walkthrough

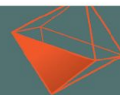
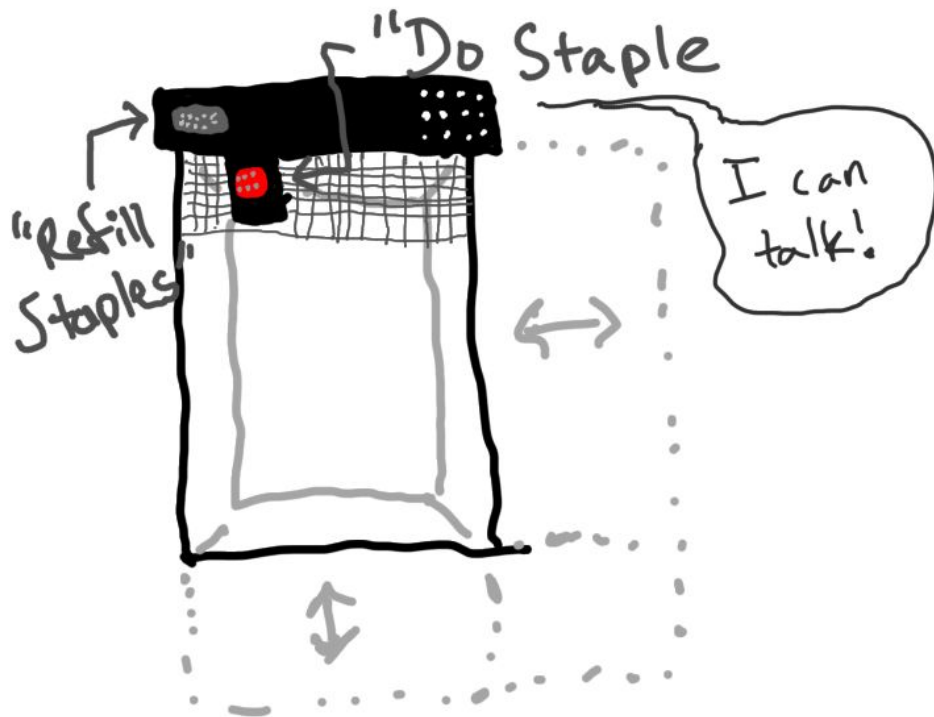
Design Criteria:

- Must be a custom design
- Safety!
- Money is no concern
- Great UX is *essential*





Industrial
Design
Testing
Example:





Thanks for watching!

Email Ellen at Ellen.Beeman@DigiPen.edu

Email Kate at Kate@KateReinhard.com

Interested in Seattle Women In Games and Technology? Join the group at facebook.com/groups/swigt

Questions?

And remember: ASK - TALK - TEST!

