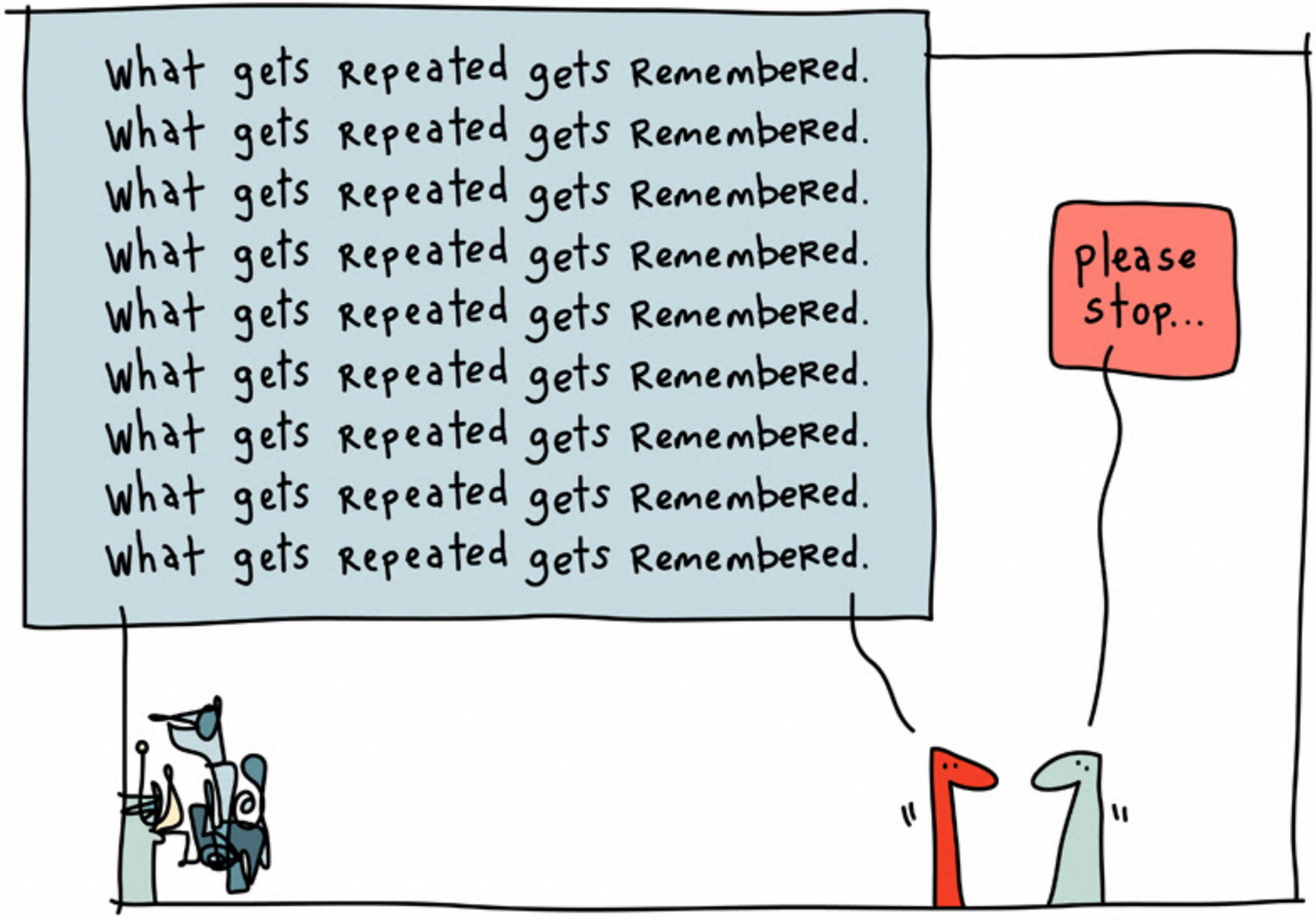
Review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please stop...

"Repetition is the mother of implementation."
Dan John

Biz Comm's Greatest Hits

Review Process:

1. Break into groups by counting off by 7.
2. Each group summarizes one week.
3. Present for 3-5 minutes.

Weeks

1. Welcome
2. Introductions
3. LinkedIn
4. Email
5. Interviewing
6. General Presenting
7. Observed best practices for giving a Lightning Talk


TIME FOR A BREAK

Practicum

1. LinkedIn
2. Interviewing

LinkedIn Advice Redux

1. Name: **Foo (Baz) Bar** 👈 Use Spaces!
2. Remove everything that could be negative.
3. Remove references to specific industries. You'll sour the pot for other practicum companies.

Practicum Interviewing

1. General Advice
2. Post-interview (Yes - I flipped order)
3. Pre-interview
4. Technical Interviewing 101

Practicum Interviewing: General Advice

1. Disposition is important
2. Start slow, finish strong
3. Nail common questions

Disposition is important

Disposition is important

- Be comfortable and calm
- Be excited, enthusiastic, and vibrant
- Smile 😀

Disposition is important

Start slow, finish strong

- Before your first words, take a nice deep breath and then start talking.
- End definitively.

Pre-interview Checklist

Technical Interviewing Levels

1. General technology questions
2. Specific challenges

Interview Summary Template

General technology questions

1. Can you talk about your knowledge in a logical style and using standard jargon?

2. Can you discuss ideas at different levels of abstraction?

Examples of general questions

1. What languages do you know? What level?
2. What is your favorite language and why?
3. Is more data always better?

Technical Interviewing 101

1. ½ static knowledge & ½ thought process
2. Always externalize
3. Never quit. Check-in with interviewer

Poisoned Wine 🍷 🐭 ☠️

Terrence has 1,000 bottles of wine. One of the bottles has been poisoned. He has 10 mice, his cat has caught, to test for poison. You have only 1 try and all mice/wine must be tested at the same time.* Assume the lethal dosage is not dependent on the size of the animal or the amount of wine.

How can you separate the 1 poisoned bottle from the 999 unpoisoned bottles? Thus, guaranteeing a safe and fun BBQ for Terence.

Poisoned Wine   

Use the strategy of solving sub-problems:

- If you had 1 bottle, how many mice would you need?
- If you had 2 bottles, how many mice would you need?
- If you had 3 bottles, how many mice would you need?
- If you had 4 bottles, how many mice would you need?

Poisoned Wine   

- 1 bottle = 1 mouse
- 2 bottles = 1 mouse
- 3 bottles = 2 mice
- 4 bottles = 2 mice

Poisoned Wine   

	Mouse 1	Mouse 2
Wine 1	— / 0	— / 0
Wine 2	— / 0	+ / 1
Wine 3	+ / 1	— / 0
Wine 4	+ / 1	+/ 1

Mouse 1 gets wine 3 & 4. Mouse 2 gets wine 2 & 4.

Poisoned Wine   

- If no mouse dies, wine 1 is poisoned.
- If only mouse 2 dies, wine 2 is poisoned.
- If only mouse 1 dies, wine 3 is poisoned.
- If both mice die, wine 4 is poisoned.

Poisoned Wine   

Encode the wine in Binary:

| mouse | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

|--------|---|---|---|---|---|---|---|---|---|---|

| wine 1 | - | - | - | - | - | - | - | - | - | - | - | No mouse gets 1 wine. If no mouse dies, wine 1 is poisoned.

| wine 2 | - | - | - | - | - | - | - | - | - | - | + | Only mouse 10 gets wine 2. If mouse 10 dies, wine 2 is poisoned.

| wine 3 | - | - | - | - | - | - | - | - | - | + | - | If mouse 9 dies, wine 3 is poisoned.

| wine 4 | - | - | - | - | - | - | - | - | - | + | + | If mouse 9 & 10 dies, wine 4 is poisoned.

...

| wine 1,000 | + | + | + | + | + | - | + | - | - | - | If mice 1-5 and 8 dies, wine 1,000 is poisoned.

Poisoned Wine   

Bonus: How many bottle of wines could you test with 10 mice?

1,024

Brian's Method for Technical Interviewing

- **A**sk
- **S**uppose
- **P**lan
- **C**ode
- **T**est
- **O**ptimize

FizzBuzz

Start counting numbers. For multiples of 3, replace the number with "Fizz". For the multiples of 5, replace the number with "Buzz". For multiples of both 3 and 5, replace them with "FizzBuzz".

Brian's Method for Technical Interviewing

- **A**sk
- **S**uppose
- **P**lan
- **C**ode
- **T**est
- **O**ptimize

FizzBuzz

```
def fizz_buzz(n):

    message = ''


    if n % 3 == 0:  message += 'Fizz'

    if n % 5 == 0:  message += 'Buzz'

    if not message: message = n


    return message
```

```
end = 15

for n in range(1, end+1):

    print(fizz_buzz(n))
```

Swap Values

Swap values:

a = 42

b = -1

Without: a temporary variable, multiple assignment, or changing type to a container

Brian's Method for Technical Interviewing

- **A**sk
- **S**uppose
- **P**lan
- **C**ode
- **T**est
- **O**ptimize

Swap Values

a = a + b

b = a - b

a = a - b

Swap Values

a = a ^ b

b = a ^ b

a = a ^ b

XOR swap algorithm

Worked example

Summary

- Actively review materials from all courses to improve long-term retention
- Use the Interviewing materials from class for Practicum Interviews
- Apply **A.S.P.C.T.O.** in every technical interview
- Everyone is here to support you