Day 17

Santa's Email Meltdown

The Story

"BLITZEN! GET IN HERE!" Santa's furious voice echoed through the workshop.

Blitzen stepped inside cautiously. It had been only a few hours since Santa forgave him for the "great grep fiasco"—when Blitzen had decided to re-write grep from scratch.

The Story

"I thought we were good now!" Blitzen said.

"Well, WE'RE NOT!" Santa shouted, spinning his monitor around. "LOOK AT THIS!"

The Story

Blitzen squinted at Santa's inbox, now overflowing with spam emails:

- "Naughty List Revenge Services!"
- "SantaCoin: The next big blockchain sleigh innovation!"
- "Elves for hire: Cheaper than your workshop!"

The Story

"What happened?" Blitzen asked.

"I LEAKED MY EMAIL ON TWITCH!" Santa bellowed. "I was streaming my lecture on why Rust traits are better than cookies when I accidentally typed my real address live on stream!"

The Story

The chat, of course, had gone wild:

Chat: "LMAO! Bro just doxxed himself live." "The spam bots are already in his inbox."

"And it's all because of YOU!" Santa continued.

"ME? How is this my fault?" Blitzen asked, bewildered.

The Story

"If you hadn't wasted the morning re-writing grep, you'd have caught this issue before it happened!" Santa snapped, slamming his candy cane onto the desk. "Now you're going to fix it. Write me an API that anonymizes email addresses—Christmas style. Replace the local part with festive emojis, and make sure it doesn't crash on invalid emails. Do it NOW!"

The Story

Blitzen sighed and opened Vim. "Okay, okay... I'm on it."

Your Mission

Blitzen as always is in trouble—again.

Here's what you gotta do to help him out:

- Replace the local part of an email with Christmas emojis, for example `santa@north.pole` should be anonymized to 🎅🎄🎁🎄🎅`@north.pole` .

- If the email is invalid, turn every character into emojis, for example `santa` should be anonymized to 🎅🎄🎁🎄🎅 .

Your Mission

Here's how Santa likes to use this API:

```
fn main() {
    let email = "santa@north.pole";
    let anonymized = email.anonymize_email();
}
```

Figure out a way to make this work, otherwise Blitzen will not get his cookies this Christmas!

Hints

If you're stuck or need a starting point, here are some hints to help you along the way!

- You can extend the String type by implementing a trait for it.

Hints

- Define a trait named Anonymize with a method named anonymize_email that returns a String.

```rust
pub trait Anonymize {
    fn anonymize_email(&self) → String;
}
```

Hints

- Implement the trait for the String type.

```rust
impl Anonymize for String {
    fn anonymize_email(&self) → String {
        // Implement the method
    }
}
```