

## **Akkio Take-home Problem**

This problem is intended to not take more than a few hours. Definitely reach out if you have any questions or need clarification.

When you're done, share things with a zipfile, private github repo, or similar

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## Building a better identicon



Users often work collaboratively in digital environments where a profile picture is not available. Some platforms have attempted to solve this problem with the creation of randomly generated, unique icons for each user (github, slack, ethereum wallets) sometimes called *Identicons*. Given an arbitrary string, create an image that can serve as a unique identifier

for a user of a B2B productivity app like slack, notion, etc.

Requirements

• Define a set of objectives to accomplish with your *identicon*. There's no right or wrong answer here. Here are some hypothetical objectives:

- Legibility at some scale or set of scales what sizes should the icon be shown at?
- Uniqueness vs similarity should similar strings look similar "John"
  vs "Jon" or should they be different?
- Appearance how do we avoid generating images that look bad?
- Given an arbitrary string, generate an image (as a jpg, gif, png, or in a web page using canvas, webgl, or whatever other display strategy you prefer)
- Images should be reasonably unique, for instance the strings "John", "Jane", and "931D387731bBbC988B31220" should generate three distinct images
- Any languages may be used, any libraries may be used, recommend javascript or python
- Don't use an existing library! Treat this exercise as if you looked at existing solutions and thought you could do better, and decided to write your own