



## **Objective**

The goal of this exercise from Knack's perspective is to gain an understanding of how you approach a problem and communicate about potential solutions. You can use as much time as desired but the intention is that this should not take more than a couple hours. No code should be written since this is all pre-implementation design.

## **Problem Statement**

You've been assigned a project to build a web application that will allow users to sign up and join a beta list for a new product that is launching. Users will be expected to provide their name and email address when signing up.

An administrator will select batches of users and accept them into the beta. Users will be sent a welcome email when they are accepted into the beta.

This product is expected to be very popular and you should plan for 100 million users to sign up over the next few months.

## **Desired Outputs**

- Written overview of how you would plan on building this
- Rough system architecture diagram
- Rough API spec
- Rough data store structure
- Web application component structure

Feel free to write a document, write on paper and scan in your plan or submit in any other form.

## **Suggested topics to cover in your plan:**

- What frameworks or libraries would you use to build the frontend?
- What frameworks or libraries would you use to build the backend?
- What type of API would the backend provide?
- How would you store the data?
- How would you send emails?
- How would you deploy and operate it?