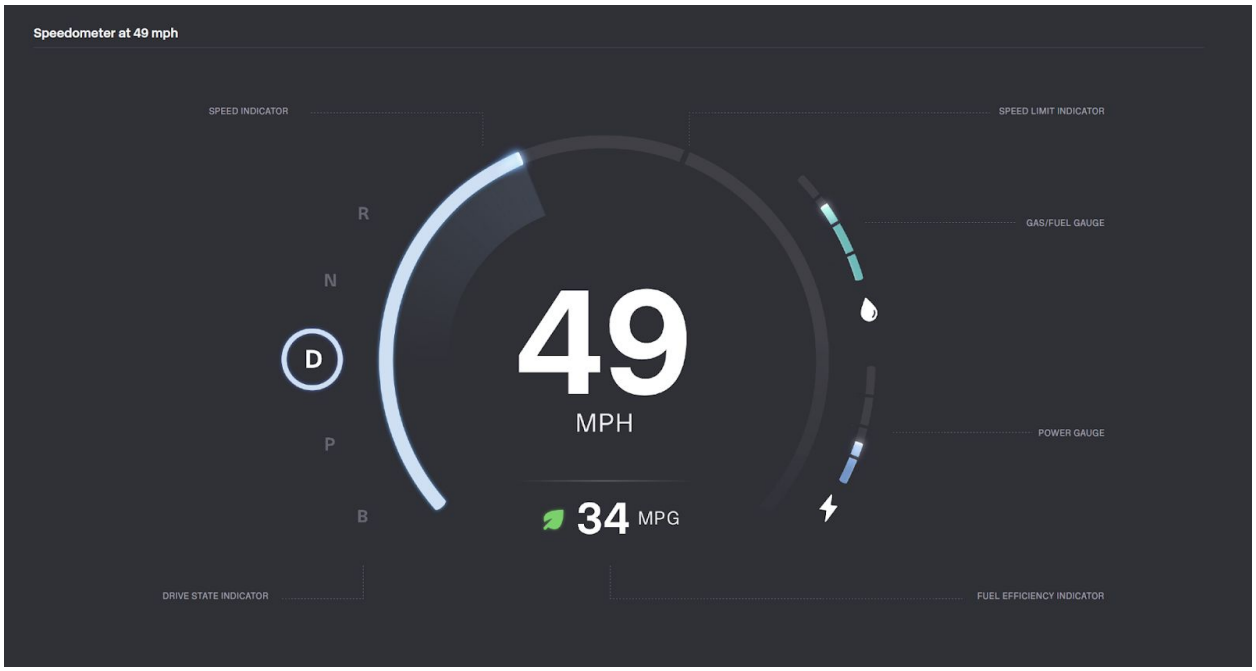
Problem Statement

Imagine you are given this speedometer concept image from your User Experience design team.



(A larger picture of the speedometer is attached in the email sent to you)

In this exercise you want to demonstrate that you can develop an early version of this speedometer component.

Your version must:

- Show how your speedometer can be used as a component of a bigger UI application.
- Update the speedometer numerical value to reflect the input to your visual component.
    - Use a 0-100 MPH value range.
- Update the shiny blue arc labeled “Speed Indicator” proportionally to the value of the speedometer.
    - Notice the shadow below the bar close to the tip and how the tip shines in a 3D fashion.
- Implement the bar labeled “Speed Limit Indicator”.
    - It should be at the 65 MPH value.
- Allow a user to press the SPACE button to increase the speed on the speedometer. When they hold SPACE down your implementation animates the speedometer to smoothly progress higher and when they release it to progress lower (i.e., emulating someone pressing their foot on and off the gas pedal in the car).

- If the speedometer value hits the Speed Limit Indicator and goes above 65 MPH then the Speed Indicator bar should change to *yellow* and the highlight at the end of the bar should emit light rays very subtly. These should be a *particle effect*.
    - Up to you how you cool you want to design the particle effect.

Your version may ignore:

- The “34 mpg” Fuel Efficiency indicator.
- The Drive State Indicator (R, N, D, P, B).
- The Gas/Fuel Gauge on the right.
- The Power Gauge on the right.

In your implementation:

- The Speed Indicator bar should be a 3D component so we expect you use a 3D framework (WebGL, three.js, etc.).
    - Your 3D component should be able to run inside a browser.
- The rest of the speedometer may be a 3D or 2D component.
- Try to render the speedometer as close to the visual spec as possible but we don’t expect a perfect match.
- Provide documentation around your code.
- Provide reasonable unit tests.

What to return back to us

1. A .zip with your solution and a README file explaining how we can build your source code and run it locally in a browser window.
2. In the README file explain your UI component design decisions.
3. Approximately how long the exercise took to complete.