TechnologyOne Engineering Test Reflections

Introduction
This document outlines the development of a web page that includes a server-side routine for converting numerical input into words as part of a technical assessment. I will briefly discuss my reasoning and approach to the assessment.

Rapid Prototyping
I started by quickly creating a basic design for the page, focusing on making it easy for users to interact with. My first goal was to ensure I could capture user input and send it to my controller. This meant designing simple form elements that were easy to understand and use. Once I had a basic layout and the necessary input fields set up, I shifted my focus to choosing my approach to the solution.

I identified three possible solutions:

-Single dictionary approach
-Recursive design
-Iterative method

Ultimately, I chose the recursive design for its clarity and effectiveness in addressing the problem.

Why Recursive
The recursive approach breaks down the problem by matching how numbers are structured, making it easy to understand.
Each recursive call deals with specific parts (almost like chunking in units, tens, and hundreds), which simplifies the implementation and makes the code clearer. Although recursion has some overhead, it's still efficient for the range of numbers we are working with, providing a straightforward solution without complicated logic.

Also, the recursive design is easy to scale and adapt. It can be expanded to handle larger numbers or adjusted for new needs without changing the core logic.

Reflections
I chose recursion for converting numbers to words because I think it's the right choice for the sizes of numbers I expect to handle. The clarity and readability of the recursive approach are important to me, making the code easier to understand and maintain.
While iterative methods might perform better for large inputs, I prefer the simplicity of recursion for this project. I believe recursion will work well for the task at hand.