Bonus Question

1. How you'd support students struggling with concepts or deadlines?

When students struggle with concepts or deadlines, I will focus on creating a supportive and structured environment. I encourage open communication so they feel comfortable expressing where they're stuck. For conceptual challenges, I offer multiple explanations—visual, verbal, and hands-on—and tailor my approach based on their learning style. I'd try to understand the specific challenges they're facing—whether it's conceptual confusion, time management, or external pressures. I would break down the topic into smaller, manageable parts and use relatable examples to build their confidence gradually. I will ensure clear communication, and flexibility among my students to go a long way in helping students feel supported and capable.

2. How you would break down a complex topic like "Gradient Descent" for beginners?

To explain Gradient Descent to beginners, I'd start by framing it as a way to help a model "learn" by improving its guesses step by step. I'd use a simple analogy—imagine trying to find the lowest point in a valley while blindfolded. Each step you take downhill is guided by feeling the slope beneath your feet. Similarly, in Gradient Descent, we calculate the slope (gradient) of the error and adjust the model's parameters in the direction that reduces it. I'd illustrate this with a basic graph showing a curved cost function and how the steps move closer to the minimum. I'd also highlight the importance of the learning rate—how big or small those steps are.