Bonus Assignment

Submission Requirements:

- Total Points: 1
- Once finished your assignment push your source code to your repo (GitHub) and explain the work through the ReadMe file properly. Make sure you add your student info in the ReadMe file.
- Submit your GitHub link and video on BrightSpace.
- Comment your code appropriately **IMPORTANT.**
- Make a simple video about 2 to 3 minutes which includes demonstration of your home assignment and explanation of code snippets.
- No late submission accepted.

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Question 1: *Question Answering with Transformers*

Use Hugging Face's transformers library to build a simple question answering system using pre-trained models.
Setup Instructions:
Before starting, make sure your Python environment has the transformers and torch libraries installed.

Short Answer

- **How does a Conditional GAN differ from a vanilla GAN?**

  → Include at least one real-world application where conditioning is important.

Ans.A Conditional GAN (cGAN) differs from a vanilla GAN by using label or context information as input, allowing controlled image generation. While vanilla GANs generate random outputs, cGANs generate outputs tied to specific conditions. For example, cGANs can generate clothes or faces based on given attributes like type, color, or age.

- **What does the discriminator learn in an image-to-image GAN?**

  → Why is pairing important in this context?

Ans. In an image-to-image GAN, the discriminator learns to distinguish between real and generated image pairs—specifically whether the output image is a realistic transformation of the input. Pairing is important because it ensures the generator learns meaningful mappings (e.g., sketch → photo), not just generating realistic images unrelated to the input.