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ECE 4564 - Assignment 1

This project is a client-server interaction question and answer system. We took advantage of reading the twitter api, using the wolfram alpha api, and utilizing the ibm watson API.

Our project functions by listening for a tweet using the tweepy package from twitter on the Raspberry Pi which is running the client. The captured tweet (which contains a question) is then sent as an encrypted pickled payload to the RPi which is running the server script. The server Pi then takes the questions received, and sends it to IBM Watson to convert the received text to audio. The audio file is then written locally and saved as the specified audio file type. When testing, we tested .ogg, .mp3, and .wav files. After, the server sends the question out to Wolfram Alpha via an API call to receive the answer. Once the question answer is received, the Pi sends the answer once again encrypted back to the client Pi. Finally, the client sends the answer to IBM Watson again to have the answer output as audio.

We have gone through and followed the specification found on canvas to make sure we reach each checkpoint. We output those checkpoints with the required arguments as well. We also have the option in the code to be able to output the audio in three different languages: English, Spanish, and German, which was a suggestion given by the project specification (one of the nice to have options).