Assignment #4

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For the assignment, we created a graphical user interface with Python 3. The graphical user interface allows for the user to write text in an entry box and produce text-to-speech sound. This was chosen as systems such as Alexa Skill do not seem to fit the Computer Science degree. Plus, it’s fun to code in Python. Regardless, we utilized to different modules to create our program. The first is Tkinter. Tkinter is the most popular graphical user interface framework for Python. It gives us the ability to easily set up a window to mess around with without having to write our own entire framework. Lastly, we used the module Pyttsx3. This is the only Python Text-to-Speech module that is able to create sound for Python 3. This allows us to create any “voice clips” we want so long as the user types in words the module can recognize (only words located in an english dictionary).

Creating the program proved to be more difficult than originally envisioned, as the module we chose for text-to-speech did not have proper documentation. This meant that we had to blindly figure out exactly what methods to call in order to generate any sound to be played. After a few hours of reading through the source code of the module, we were finally able to generate sound on the machine.

The program is great for any user that needs a simple text to speech interface. This may be for the elderly or even someone that is mute (inability to generate sound with vocal chords). The interaction flow is simple as there is only one button that can generate sound. The program was prototyped using user tests that could check to see whether it would be able to produce single words, entire sentences, and a mixture of jumbled together words.

**Screenshot of the Program:**