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The social problem that I will be identifying is the barrier between languages. The United States has an abundance of cultures, especially New Jersey. New Jersey is the fourth most diverse state in the U.S., which means there are many different cultures and languages. The idea for this program is the ability to type in a sentence and receive it in a different language of your choice, like a translator. All over New Jersey there so many different languages, and sometimes it is hard to be able to understand these languages.

My vision is the ability to translate from whatever language needed to another so that you can successfully learn between languages. Personally, I am fascinated with languages and the ability of being able to understand multiple. I understand that one can google and look up a translator or download an app, however, being able to create one myself would be a pretty good feat.

My safe goal for this project is that my code will be able to translate from one language to another. That the user can enter whatever input language they are starting with and be able to translate to whichever language they want to. Moreover, my stretch goal would be to web scrape using beautiful soup, to take an entire book, and then translate it to another language. I know there are many amazing books out there or transcripts that one may not be able to understand because it is in a language foreign to them. So, the safe goal of this project is only the beginning. Being able to translate from one language to another is the first part, and then the stretch goal is taking language translation to another level.

To summarize my progress, I started out with using Tkinter, one of the libraries we used this semester, for my project. Alongside Tkinter, I used Translate to utilize translator. The code for my project was simple, it was just trying to figure out the correct placement for everything. The next thing I did was create a variable that stores the input language and one that stores the translated one. After that I inputted the languages that would be options. These languages were: English, Hindi, French, German, Spanish, Italian, Korean, Japanese, Chinese, Russian, and Arabic. Once I created the Language Choices, I set languages for both the input and output languages. In my code, I set the input language to English and the Output to Italian. Although these are set, once the code is run, the input and output languages can be changed to any of the Language Choices. Once that was done, I created a function for Translate which is what helped translate between the languages. When that was done, I added to the box that the use of Tkinter created. Meaning, I created a grid that would be labeled and then I edited the widgets to fit where I wanted to. The GUI box has the title, “Language Translation”, then the input language says, “Pick a language”, and then the output language says, “Translated Language”. Next to them is “Enter Text” and then “Output Text”. Lastly, there is a button that says “Translate”, once that is clicked, the inputted text will translate to whatever language was picked and be shown in the Output Text box, and that is how the program works.

I was able to reach my safe goal and complete the translation of languages. Compared to my stretch goal however, then I would say I was able to complete about 50% because I was able to translate languages and web scrape but trying to get it to take that and translate an entire book was a little more challenging. I am happy that I hit my safe goal and even though I could not reach my stretch goal yet, I do hope to keep working at it till I complete that as well.

Honestly, one of the most things I found helpful was the examples that we did in class and seeing how to use Tkinter. For the things that I could not figure out, I looked up examples from the internet, like on stackoverflow and then basically did trial and error until it worked. I would not necessarily say that there was anything unhelpful along the way.

I feel that I learned a lot, not only on the project but through this course itself. But some of the things I learned during this project was more experience with GUI and creating a grid for the box created during translation. Another thing is moving different widgets around in the grid, using row and column numbers. I am excited to continue learning as I try to advance my code to reach the standards of the stretch goal that I have too.

EXAMPLE OF WHAT MY CODE CREATES:

Graphical user interface, text, application

Description automatically generated