**Project Description, Summary**

*Summary* – I began my project exploring which API I wanted to request data from, I chose the Calendarific API, since there was a lot of parameters and data that I could work with. The API also had a website with detailed documentation and ways to track the usage along with tracking how many request I was making. Initially, I faced a few issues in regard to setting up the Python environment and virtual environment, as well as difficulties with package installations on Ubuntu and PowerShell. Despite this I worked through this with the help of my professor and resources I found online such as GitHub examples, articles and YouTube tutorials. Once these issues were fixed I was able to start downloading packages I needed such as pip, flask, and the calendarific library which I ended up not needing to use. I experimented with ThunderClient to test API requests so I can understand what data is provided by the parameters used and how it is being displayed. Then, I utilized requests in a python file before I was able to figure out how to use flask and get it to retrieve the data. Once I was able to get the names of the holidays to be displayed, it became easier to change the parameters and display different data such as the description of the holidays, I also changed the year to 2023 rather than 2005. To best display the data once I was able to request it, I used Jinja templating for frontend and applied CSS for the styling of the data.

*Reflection* – For the project I was able to use the Calendarific API to request data about all the national holidays in the U.S, I was able to display the name of these holidays, a description about them, and when these holidays happen. I used flask, request, and jinja to successfully request the data, display it, and run it on the server. Prior to this project I had used python a few times, but I had never used requests, Flask, Json, or worked with any type of terminal and I had never heard of an API before. This project helped increase my understanding of python and requesting data through a source such as an API, along with using packages and libraries. Additionally, utilizing the terminal I learned how to open up a virtual environment, downloaded packages, and manages files. I also figured out how to understand the source code and I used the chart on the Calendarific website to know what issues I was facing when a certain code would come up like 401 or 404. Once I understand how to properly request data, it was easy learning how to display it using jinja and then adding stylization with CSS which I was already familiar with.

*Continued Learning* – Originally, I planned to use an html form to POST the data to the API which would request data that I could then display within the same html file. Although I was unable to achieve this I plan to continue working with this same environment to figure out how to use forms and also work more with all the different parameters that the Calendarific API provides. Eventually, I want to learn React.js and it would be interesting to see how working with an API is done through that framework which is also something I plan to do.

*Project Viewing Instructions* – I using flask to run this project, I have a requirements.txt included in the project folder.

*Special Details* – there are no special details.