**PROJECT SUMMARY**

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1. **Introduction**

The project aims to utilize the computation power of the personal computers and creates a platform where users can use the extra compute power to run their programs. This software enables user to either lend their computing power or run their program scripts.

1. **Advantages**

This application diverts the unused computation power to the users who need the extra horsepower. For example: a user has already maxed out his/her resources and while he/she runs their code on their computer, they can also run their scripts on this application in parallel . While on some other side a user now has no use of the computer for a while, so he/she becomes an IDLEr and lends their computer’s resources on this platform.

1. **Implementations In Code**

The server and clients exchange data in a handshake manner, that is, for every request made their is a response. The application uses TCP protocol. The server maintains the privacy of users by being the middle agent in their transactions. The server also manages the online users, lenders available. The file transfer between clients is through server and it just passes on the file chunks received from a client to another lender/client. The connection is kept alive until every request to server has a status response of whether the request failed or got accepted. The client has a gui interface implemented using the python-tkinter module.

1. **Project Compatibility and Development Details**

Developed on: Windows 10, Anaconda, Python

Compatible with: Windows 10, Most of the linux distros.

Dependencies: Python3.5 or python3.6, with tkinter module

1. **Bibilography**
2. Python Documentation: <https://docs.python.org/3.6/>
3. Windows Commands: <https://docs.microsoft.com/en-us/windows-server/administration/windows-commands/windows-commands>
4. tkinter docs: <https://docs.python.org/3/library/tk.html>
5. **Conclusion**

I designed an application using TCP and socket programming to help the those who need more compute power.