User Manual

1. Introduction

* This program provides customers to load items into trucks in an effective way

2. Environment

* Using any Python environment to run this program
* For example: Jupyter Notebook(.ipynb), Spider(.py)

3. Download packages (in the computer terminal)

* Please type ‘pip install openpyxl’ to download the openpyxl package
* Please type ‘pip install pandas’ to download pandas package

4. Create a database

* Open a new Excel file to input your item information
* In the first row, enter each data’s name by the following order: ‘Item serial number’ in column 1,’ Item weight’ in column 2,’ Number of items’ in column 3, ‘Truck Capacity’ in column 6.
* Enter all ingredients of each data into this excel

5. Execute program

* Run each code and follow the instructions
* Enter the Excel file’s path and sheetname, which you store all your data in step 4, then hit enter to run the program. Don’t input quotation marks.
* If the program runs successfully, you can find at most three .csv files named ‘inputLog’, ‘RemainItemNum’,‘RemainTruckCapacity’ under the same path as your item information file. Otherwise, there is a .txt file named ‘error’ shows you error information:’Cannot open the file’
* ‘InputLog.csv’ file provides an efficient way to move items to trucks.The three columns are ‘Item’, ‘Truck’ and ‘MoveNum’, which means move which item to which truck, and move how many of the items. Assume at least one thing can be loaded, so this file will always exist if the program runs successfully.
* ‘RemainItemNum.csv’ file shows the remaining item numbers after assigning all items to the truck. The two columns are 'RemainItem' and 'RemainNumber'. The file will only exist when there are unloaded items. If all of the items are loaded, this file won’t be created.
* ‘RemainTruckCapacity.csv’ file shows the remaining capacity after assigning all items to the truck. The two columns are 'RemainTruck' and 'RemainCapacity'. The file will only exist when there is remaining capacity. If all capacity is used, this file won’t be created.
* ‘error.txt’ file shows the reason why users encounter errors. If it cannot open the file, it will show ‘Cannot open the file’. If there are errors of data, it will show the error message, for example, if you input a negative weight -100 in ‘Item Weight’ it will show ‘Please input non-negative cargo weight’, if you put a string ‘eight hundred’ in ‘Truck Capacity’ it will show 'Please input numeric cargo weight’. You can read the error.txt and correct your data.