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 Mail Merge code documentation   
  
  
 The main purpose of this project is to take in excel files of varying extensions and formats and standardize them outputting two excel files one with correct addresses and one with wrong addresses both having all duplicates removed.. The excel files are unique each with its own standard of headers ie some have full-name columns some have first name last name or last name first name. Alongside that issue these excel files have some that just alumni, or just faculty, or just donors. However, some alumni are faculty who donate so to output all of these into one file the duplicates will have to be taken care of.   
 We first start using a combination of Gooey and glob to present the user with a GUI that allows them to select the excel files that need formatting and then choose a folder where they want the good files outputted. After receiving appropriate filenames from choosing the excel files pandas is used to make all the excel files into data frames. Then using fuzzy wuzzy those different dataframes that represent the different excel files are standardized by renaming columns and putting them into one big dataframe. After the standardizing has happened all duplicates are then dropped from the dataframe using pandas drop duplicates method.   
 At this point we have our standardized dataframe with no duplicates and it is ready to have the addresses checked. The client wanted all UB addresses to be excluded so a statement is made to exclude all zip codes with 14261 and 14260. After that we used usaddress to check the validity of addresses where correct addresses are put into a dataframe named correct addresses and wrong addresses are put into a dataframe named wrong addresses.  
 Finally the program has finished and these two dataframes are turned to excel files using pandas function and outputted into the file specified earlier by the user.   
  
**How to Install MailMerge**1. Open NSIS folder  
2. Run mail\_merge\_1.0 application   
3. Click next and select Pylauncer, Python, and mail merge.  
4. Pick an installation folder which can be anything BUT Program Files (x86) (I recommend you install it on desktop for easy access) and hit install   
5. Wait for program to install and hit finish  
6. Open folder mail merge that has just been installed  
7. Go into pkgs folder   
8. Scroll down and open the second mail merge.   
9. Select folder with all excel files you wish to have merged.   
10. Hit start and wait for files to be merged   
11. Done!!  
  
**Limitations of program**  
 The program has trouble with addresses that spell out their numbers ie 6 versus six which will cause it to be put in the wrong address excel file even if it is a valid address. Alongside that issue it also has problems with multiple addresses numbers for instance a school dean saying their school address and office number.