# READ-ME

**Requirements**: Python3, openpyxl
**How to run :**
Enter command -> python3 Jagdeep_intern_question2.python3
Now enter file data file name -> hierarchy_case_20May2020.xlsx

**Explanation :**
I have created an Employee class that will be consisting of information about an employee and a list of subordinates under him and dictionary (which will contain all employees below him).

Firstly I open the data file using load_workbook() from openpyxl, then load the sheet from object loaded from previous functionality.

Now I iterate through the whole sheet and make a dictionary of consisting all employees ( without any relation ) named “dict_objects” containing all information on each employee as an object and I also keep checking in this for loop for the employee without any “manager_employee_id” (assumption made there must be one such person who will be on top ) who will be CEO.

Now iterate through the dictionary of all employees made in the last step, for each employee we find its manager_employee and then add the employee to subordinate list of manager_employee.

In this way, each employee will have its subordinate list updated.
After all, I call the “make_dictionary()” function for creating a nested dictionary starting with the CEO that I found on top.

“make_dictionary()” function is a recursive function, when it is called it creates a nesting dictionary named “reportees” inside “dict_subordiate”, now I check the subordinate list of the employee for which this function is called and adds subordinate employees to “dict_subordiate” recursively.

“dict_subordinate” is a nesting dictionary of employees and it contains dictionaries of reportees and reportees of reportees . . . . so on staring all with the CEO.

In this way calling this function for CEO and following recursively all the employees will be nested into the dictionary “dict_subordinate” according to the hierarchy level.