

Coding Question 1

An application that you are implementing requires multiple date formats to be transformed into one common date format. Implement the function `ChangeDateFormat` which accepts a list of strings, representing dates, and returns a new list with each date in the format `YYYYMMDD`. All incoming dates will be valid dates, but only those in one of the following formats: `YYYY/MM/DD`, `DD/MM/YYYY` and `MM-DD-YYYY` should be included in the returned list. For example, `change_date_format(["2010/03/30", "15/12/2016", "11-15-2012", "20130720"])` should return the list `["20100330", "20161215", "20121115"]`.

This question required to transform different date type into one specific type. Since the input is a list of string, I imported `re` module to split the string. To avoid empty string, I split it with `","` and a space instead of just `","`. Considered it will be a file document in reality to transform, I decided to use `file.read()` to get the information. I selected `"/"` and `"-"` character as symbols combined with `if` statement to decide which format of date to return. It only asked to return the dates in the goal format, so I just delete those have same format as goal format.

Coding Question 2

Give a data structure representing a social network, having a method named `canBeConnected` and implement it on class `Friend`. The method should check if a connection to the given member exists. That should be either a direct friendship or a chain of members between them who are mutual friends. For example, if `A` and `B` are friends and `B` and `C` are friends, then `A.canBeConnected(C)` should return `true`, since `C` is a friend of `B` and `B` is a friend of `A`.

This question asked to select a data structure representing a social network. After considering about tree, linked list I decided to use Graph represent it. I take people as vertices, connections as edges and use path to find out two people can be connected or not. I used recursion to find path.

Conclusion:

These two questions are interesting programs. I should have emailed for more details such as how to deal with the date that have the same format as the goal format. I know it may not be the best way to delete data cause every data is valuable. For the past week, I had two programming projects and will have two midterms in this week. I know I can do better but this is the best I can do so far.

I treat every opportunity seriously, especially this one. I hope there could be a feedback about programs not matter what the result is.

Thank you so much for your time, appreciate it.

Sincerely,

Jinchao (Chad) Chai