Nettoyage du dataset et creation du script du .dot

I - Nettoyage données

Dans un premiers temps, nous allons fusionné les données sous formes excel MFB_employees et MFB_exchanges afin d'avoir un seul tableau avec les échanges entre les différents collaborateurs de MyFeelBack

```python
In [1]: import pandas as pd
        import numpy as np
        MFB_employees = pd.read_excel("C:/Users/chris/Desktop/Epitech/Organizat
        ional Theory/MFB_employees.xlsx")
        MFB_exchanges = pd.read_excel("C:/Users/chris/Desktop/Epitech/Organizat
        ional Theory/MFB_exchanges.xlsx")
```

```python
In [2]: MFB_employees.head()
```

Out[2]:

	ID	Nom	Position
0	1	Stéphane Contrepois	CEO
1	2	Aurore Beugniez	COO
2	3	Julien Hourrègue	CTO
3	4	Justine Gicquel	Sales Leader
4	5	Lisa Codina	Sales

```python
In [3]: MFB_exchanges.head()
```

Out[3]:

	Sender	Receiver
0	1	2
1	1	3
2	1	24
3	2	1
4	2	3

In [4]:
```python
full=MFB_exchanges.merge(MFB_employees, how="left", left_on="Sender", right_on="ID")
full.head()
```

Out[4]:

	Sender	Receiver	ID	Nom	Position
0	1	2	1	Stéphane Contrepois	CEO
1	1	3	1	Stéphane Contrepois	CEO
2	1	24	1	Stéphane Contrepois	CEO
3	2	1	2	Aurore Beugniez	COO
4	2	3	2	Aurore Beugniez	COO

In [5]:
```python
full=full.merge(MFB_employees, how="left", left_on="Receiver", right_on="ID")
full.head()
```

Out[5]:

	Sender	Receiver	ID_x	Nom_x	Position_x	ID_y	Nom_y	Position_y
0	1	2	1	Stéphane Contrepois	CEO	2	Aurore Beugniez	COO
1	1	3	1	Stéphane Contrepois	CEO	3	Julien Hourrègue	CTO
2	1	24	1	Stéphane Contrepois	CEO	24	Eléonore Hermand	CEO assistant

	Sender	Receiver	ID_x	Nom_x	Position_x	ID_y	Nom_y	Position_y
3	2	1	2	Aurore Beugniez	COO	1	Stéphane Contrepois	CEO
4	2	3	2	Aurore Beugniez	COO	3	Julien Hourrègue	CTO

```
In [6]: MFB_full = full[["Nom_x","Position_x","Nom_y","Position_y"]]
        MFB_full.columns =["nom_envoyeur","position_envoyeur","nom_receveur","p
        osition_receveur"]
        MFB_full.head()
```

Out[6]:

	nom_envoyeur	position_envoyeur	nom_receveur	position_receveur
0	Stéphane Contrepois	CEO	Aurore Beugniez	COO
1	Stéphane Contrepois	CEO	Julien Hourrègue	CTO
2	Stéphane Contrepois	CEO	Eléonore Hermand	CEO assistant
3	Aurore Beugniez	COO	Stéphane Contrepois	CEO
4	Aurore Beugniez	COO	Julien Hourrègue	CTO

II - Script

La deuxième partie consistera à output un fichier .dot afin de créer et d'afficher le graphe grâce à un outil en ligne

```
In [11]: dot = {}
         for index,row in MFB_full.iterrows():
             sender = row["nom_envoyeur"]
             receiver = '"' + str(row["nom_receveur"]) + '"'
             if sender not in dot.keys():
                 dot[sender] = [receiver]
             elif sender in dot.keys() and receiver not in dot[sender]:
                 dot[sender].append(receiver)
```

In [12]:
```python
result = ""
for k,v in dot.items():
    key = '"'+k+'"'
    value = " ".join(v)
    result =  result + key+ " -> { "+value+ " };"


final = "digraph { graph [ overlap =scale , splines =true , rankdir =LR
 ];" +result+ "}"
print(final)
```

digraph { graph [overlap =scale , splines =true , rankdir =LR];"Stéph
ane Contrepois" -> { "Aurore Beugniez" "Julien Hourrègue" "Eléonore Her
mand" };"Aurore Beugniez" -> { "Stéphane Contrepois" "Julien Hourrègue"
"Justine Gicquel" "Marine Aubagna" "Eric Vibert" "Christophe Tiet" };"J
ulien Hourrègue" -> { "Stéphane Contrepois" "Aurore Beugniez" "David Ar
pin" "Christophe Tiet" };"Justine Gicquel" -> { "Aurore Beugniez" "Juli
en Hourrègue" "Marine Aubagna" "Eric Vibert" "David Arpin" "Lisa Codin
a" "Pol Barrière" "Jordan Nectoux" "Ola Baher" "Benjamin Dentaux" };"Li
sa Codina" -> { "Justine Gicquel" "Pol Barrière" "Jordan Nectoux" "Ola
Baher" "Benjamin Dentaux" };"Pol Barrière" -> { "Justine Gicquel" "Lisa
Codina" "Jordan Nectoux" "Ola Baher" "Benjamin Dentaux" };"Jordan Necto
ux" -> { "Justine Gicquel" "Lisa Codina" "Pol Barrière" "Ola Baher" "Be
njamin Dentaux" };"Ola Baher" -> { "Justine Gicquel" "Lisa Codina" "Pol
Barrière" "Jordan Nectoux" "Benjamin Dentaux" };"Benjamin Dentaux" -> {
"Justine Gicquel" "Lisa Codina" "Pol Barrière" "Jordan Nectoux" "Ola Ba
her" };"Marine Aubagna" -> { "Aurore Beugniez" "Justine Gicquel" "Eric
Vibert" "Anastasia Shapovalova" };"Anastasia Shapovalova" -> { "Marine
Aubagna" };"Eric Vibert" -> { "Aurore Beugniez" "Julien Hourrègue" "Jus
tine Gicquel" "Marine Aubagna" "David Arpin" "Alexandra Boudier" "Edoua
rd Renault" "Emmanuelle Maux" "Marielle Kornberg" "Line Mpe" "Christoph
e Tiet" };"Alexandra Boudier" -> { "Eric Vibert" "Edouard Renault" "Emm
anuelle Maux" "Marielle Kornberg" "Line Mpe" "David Arpin" };"Edouard R
enault" -> { "Eric Vibert" "Alexandra Boudier" "Emmanuelle Maux" "Marie
lle Kornberg" "Line Mpe" "David Arpin" };"Emmanuelle Maux" -> { "Eric V
ibert" "Alexandra Boudier" "Edouard Renault" "Marielle Kornberg" "Line
Mpe" "David Arpin" };"Marielle Kornberg" -> { "Eric Vibert" "Alexandra
Boudier" "Edouard Renault" "Emmanuelle Maux" "Line Mpe" "David Arpin"
};"Line Mpe" -> { "Eric Vibert" "Alexandra Boudier" "Edouard Renault"
"Emmanuelle Maux" "Marielle Kornberg" "David Arpin" };"David Arpin" ->

```
{ "Stéphane Contrepois" "Aurore Beugniez" "Julien Hourrègue" "Justine G
icquel" "Eric Vibert" "Olivier Prudente" "Laurent Huzard" "Mathieu Gon
d" "Valentin Noël" "Christophe Tiet" };"Olivier Prudente" -> { "Julien
Hourrègue" "David Arpin" "Laurent Huzard" "Mathieu Gond" "Valentin Noë
l" };"Laurent Huzard" -> { "Julien Hourrègue" "David Arpin" "Mathieu Go
nd" "Valentin Noël" };"Mathieu Gond" -> { "Julien Hourrègue" "David Arp
in" "Olivier Prudente" "Laurent Huzard" "Valentin Noël" };"Valentin Noë
l" -> { "Julien Hourrègue" "David Arpin" "Olivier Prudente" "Laurent Hu
zard" "Mathieu Gond" };"Christophe Tiet" -> { "Aurore Beugniez" "Julien
Hourrègue" "Eric Vibert" "David Arpin" };"Eléonore Hermand" -> { "Stéph
ane Contrepois" "Justine Gicquel" "Lisa Codina" "Pol Barrière" "Jordan
Nectoux" "Ola Baher" "Benjamin Dentaux" "Marine Aubagna" "Anastasia Sha
povalova" "Eric Vibert" "Alexandra Boudier" "Edouard Renault" "Emmanuel
le Maux" "Marielle Kornberg" "Line Mpe" "David Arpin" "Olivier Prudent
e" "Laurent Huzard" "Mathieu Gond" "Valentin Noël" "Christophe Tiet"
};}
```

In [ ]:
```python
f= open("C:/Users/chris/Desktop/Epitech/Organizational Theory/script.do
t","w+")
f.write(final)
f.close()
```