```
1   import pandas as pd
```

```
1   def foo(a):
2     a.drop_duplicates(inplace=True)
3     b=a.iloc[:,[-1,0]].copy()
4     b.columns=["Employee","Boss"]
5     return b
```

```
1   def foo2(table):
2     g=pd.DataFrame(columns=["Employee","Boss"])
3     table.insert(0,"Empty Column","")
4     table.dropna(inplace=True)
5     for a in range(0,table.shape[1]-1):
6       df2=table.iloc[:,[a,a+1]].copy()
7       f=foo(df2)
8       g=pd.concat([g,f])
9     table.drop(columns="Empty Column",inplace=True)
10    return g
```

```
1   df=pd.read_excel("data2.xlsx")
2   df.head()
```

	L1	L2	L3	L4	L5	L6	Count	Salary	Role	Department L3	flag
0	CEO	CFO	Iggs Bob	Higgs Laura	Lopez Juan	Lliva Loren	1	60000	Finance	Accounting	Y
1	CEO	CFO	Iggs Bob	Higgs Laura	Lopez Juan	Dur Singh	1	60000	Tech	Accounting	N
2	CEO	CFO	Iggs Bob	Higgs Laura	Lopez Juan	Katar John	1	60000	Tech	Accounting	N

```
1 df1=df.iloc[:,[0,1,2,3,4,5]].copy()
2 desired=foo2(df1)
3 desired.index=[f for f in range(0,len(desired))]
4 desired
```

	Employee	Boss
0	CEO	
1	CFO	CEO
2	Iggs Bob	CFO
3	Linn William	CFO
4	Naseem Wagstaf	CFO
5	Higgs Laura	Iggs Bob
6	Fudo Dan	Iggs Bob
7	Tot Jim	Linn William
8	Major Kristopher	Naseem Wagstaf
9	Lopez Juan	Higgs Laura
10	Zhang Liu	Fudo Dan
11	Tartt Andreas	Tot Jim
12	Luz Jorge	Tot Jim
13	Reuben Nolan	Major Kristopher
14	Lliva Loren	Lopez Juan
15	Dur Singh	Lopez Juan
16	Katar John	Lopez Juan
17	Hanan Jose	Zhang Liu
18	Brown Levan	Tartt Andreas
19	Candi Daphne	Tartt Andreas
20	Forest Beam	Tartt Andreas
21	Ortman John	Tartt Andreas
22	Kennedy John	Luz Jorge
23	Okpara Luna	Luz Jorge

```
1 a=pd.DataFrame(desired.Boss.value_counts())
2 a.insert(0,"Employee",a.index)
3 a["Direct Report"]=a.Boss.values
4 a.drop(columns=["Boss"],inplace=True)
```

```
1 a.index=[f for f in range(0,len(a))]
```

28	Liyana Barber	Reuben Nolan

```
1 a
```

	Employee	Direct Report
0	Reuben Nolan	4
1	Tartt Andreas	4
2	CFO	3
3	Lopez Juan	3
4	Luz Jorge	3
5	Tot Jim	2
6	Iggs Bob	2
7	CEO	1
8	Major Kristopher	1
9	Higgs Laura	1
10	Naseem Wagstaf	1
11	Zhang Liu	1
12	Linn William	1
13	Fudo Dan	1
14		1

```
1 desired1=pd.merge(desired,a,on="Employee",how="left").fillna(0)
```

```
1 desired1["Direct Report"]=desired1["Direct Report"].astype("int")
```

```
1 desired1
```

	Employee	Boss	Direct Report
0	CEO		1
1	CFO	CEO	3
2	Iggs Bob	CFO	2
3	Linn William	CFO	1
4	Naseem Wagstaf	CFO	1
5	Higgs Laura	Iggs Bob	1
6	Fudo Dan	Iggs Bob	1
7	Tot Jim	Linn William	2
8	Major Kristopher	Naseem Wagstaf	1
9	Lopez Juan	Higgs Laura	3
10	Zhang Liu	Fudo Dan	1
11	Tartt Andreas	Tot Jim	4
12	Luz Jorge	Tot Jim	3
13	Reuben Nolan	Major Kristopher	4
14	Lliva Loren	Lopez Juan	0
15	Dur Singh	Lopez Juan	0
16	Katar John	Lopez Juan	0
17	Hanan Jose	Zhang Liu	0
18	Brown Levan	Tartt Andreas	0
1			
	Forest Beam	Tartt Andreas	3
21	Ortman John	Tartt Andreas	0
22	Kennedy John	Luz Jorge	0
23	Okpara Luna	Luz Jorge	0
24	Castillo Juan	Luz Jorge	0
25	Keavy Ratcliffe	Reuben Nolan	0
26	Kristopher Major	Reuben Nolan	0
27	Naseem Wagstaff	Reuben Nolan	0
28	Liyana Barber	Reuben Nolan	0

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