

relatorio_data1

February 11, 2023

Relatório Data - Reunião 01/02/2023

```
[ ]: import os
import numpy as np
import matplotlib.pyplot as plt
```

```
[ ]: lista_caminho = os.listdir('C:\\Users\\Riallen\\Documents\\Work_Text\\Data')
print(lista_caminho)
```

```
['AALR3', 'ABEV3', 'AERI3', 'AESB3', 'AESO3', 'AFLT3', 'AGRO3', 'AGXY3',
'AHEB3', 'AHEB5', 'AHEB6', 'ALLD3', 'ALLL4', 'ALPA3', 'ALPA4', 'ALPK3',
'ALUP11', 'ALUP3', 'ALUP4', 'AMAR3', 'AMBP3', 'AMER3', 'ANIM3', 'APTI3',
'APTI4', 'ARML3', 'ARZZ3', 'ASAI3', 'ATMP3', 'ATOM3', 'AURA32', 'AURA33',
'AURE3', 'AVLL3', 'AZE3', 'AZE4', 'AZUL3', 'AZUL4', 'BAHI3', 'BALM3', 'BALM4',
'BAUH3', 'BAUH4', 'BBML3', 'BDLL3', 'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3',
'BLAU3', 'BLUT3', 'BLUT4', 'BMKS3', 'BMOB3', 'BNPA3B', 'BOBR3', 'BOBR4',
'BPHA3', 'BRAP3', 'BRAP4', 'BRAP99', 'BRDT3', 'BRFS3', 'BRIT3', 'BRKM3',
'BRKM5', 'BRKM6', 'BRQB3', 'BTOW3', 'BTTL3', 'CABI3B', 'CAC011B', 'CAC03B',
'CALI3', 'CALI4', 'CAMB3', 'CAMB4', 'CAML3', 'CASH3', 'CASN3', 'CASN4', 'CATA3',
'CATA4', 'CBAV3', 'CBEE3', 'CCPR3', 'CCR03', 'CCXC3', 'CEAB3', 'CEBR3', 'CEBR5',
'CEBR6', 'CED03', 'CED04', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',
'CELP3', 'CELP5', 'CELP6', 'CELP7', 'CEPE3', 'CEPE5', 'CEPE6', 'CESP3', 'CESP5',
'CESP6', 'CGAS3', 'CGAS5', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
'CMIN3', 'CMSA3', 'CMSA4', 'CNSY3', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'COMR3',
'CPFE3', 'CPLE11', 'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CPTP3B', 'CRDE3',
'CRFB3', 'CRPG3', 'CRPG5', 'CRPG6', 'CRTE3B', 'CRTE5B', 'CSAN3', 'CSED3',
'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6', 'CTCA3', 'CTKA3', 'CTKA4', 'CTNM3',
'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CURY3', 'CVCB3', 'CYRE3', 'DASA3', 'DESK3',
'DEXP3', 'DEXP4', 'DIRR3', 'DMMO3', 'DMVF3', 'DOHL3', 'DOHL4', 'DOTZ3', 'DTCY3',
'DTCY4', 'DTEX3', 'DXCO3', 'EALT3', 'EALT4', 'ECOR3', 'EEEL3', 'EEEL4', 'EGIE3',
'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'ELMD3', 'EMAE3', 'EMAE4', 'EMBR3',
'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENJU3', 'ENMA3B',
'ENMA5B', 'ENMA6B', 'ENMT3', 'ENMT4', 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B',
'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6', 'EQPA7', 'EQTL11', 'EQTL3', 'ESPA3',
'ESTC11', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4', 'EVEN3', 'EZTC3',
'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FIQE3', 'FLEX3', 'FLRY3', 'FRAS3',
'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'FRTA3', 'GEP3', 'GEP4',
'GFA3', 'GGBR3', 'GGBR4', 'GGPS3', 'GMAT3', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4',
'GPAR3', 'GPCP3', 'GPCP4', 'GRAO3', 'GRND3', 'GUAR3', 'HAGA3', 'HAGA4', 'HAPV3',
```

'HAPV99', 'HBOR3', 'HBSA3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3',
 'IDNT3', 'IFCM3', 'IGSN3', 'INBR31', 'INEP3', 'INEP4', 'INNT3', 'INTB3',
 'IVPR3B', 'IVPR4B', 'JALL3', 'JBUD11', 'JBUD12', 'JBUD3', 'JBUD4', 'JBSS3',
 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3', 'KEPL3', 'KEPL4',
 'KLAS3', 'KLBN11', 'KLBN3', 'KLBN4', 'KRSA3', 'LAND3', 'LAVV3', 'LEVE3',
 'LIGT3', 'LIPR3', 'LJQQ3', 'LLBI3', 'LLBI4', 'LLIS3', 'LMED3', 'LOGN3', 'LREN3',
 'LTELB3', 'LTELB5', 'LTLA3B', 'LUPA3', 'LUXM3', 'LUXM4', 'LVTC3', 'LWSA3',
 'MAPT3', 'MAPT4', 'MATD3', 'MBLY3', 'MDIA3', 'MDNE3', 'MEAL3', 'MEGA3', 'MELK3',
 'MEND3', 'MEND5', 'MEND6', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MLAS3', 'MMAQ3',
 'MMAQ4', 'MMXM3', 'MNDL3', 'MNPR3', 'MOVI3', 'MRFG3', 'MRSA3B', 'MRSA5B',
 'MRSA6B', 'MRVE3', 'MSPA3', 'MSPA4', 'MSRO3', 'MTRE3', 'MTSA3', 'MTSA4',
 'MWET3', 'MWET4', 'MYPK3', 'NEMO3', 'NEMO5', 'NEMO6', 'NEOE3', 'NEWT3B',
 'NGRD3', 'NINJ3', 'NORD3', 'NRTQ3', 'NRTQ4', 'NTCO3', 'NUTR3', 'ODER3', 'ODER4',
 'ODPV3', 'OFSA3', 'OIBR3', 'OIBR4', 'ONCO3', 'OPCT3', 'OPGM3B', 'OPSE3B',
 'OPTS3B', 'ORVR3', 'OSXB3', 'PARD3', 'PASS3', 'PASS5', 'PASS6', 'PATI3',
 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3', 'PDTC3', 'PETR3', 'PETR4', 'PETZ3',
 'PFRM3', 'PGMN3', 'PIUM3', 'PIUM4', 'PLAS3', 'PLPL3', 'PMAM3', 'PNVL3', 'POMO3',
 'POMO4', 'PORT3', 'POSI3', 'PPAR3', 'PPAR4', 'PRIO3', 'PRMN3B', 'PRNR3',
 'PRPT3B', 'PTBL3', 'PTCA11', 'PTCA3', 'PTNT3', 'PTNT4', 'QUAL3', 'QUSW3',
 'QVQP3B', 'RADL3', 'RAIL3', 'RAIZ3', 'RAIZ4', 'RANI3', 'RANI4', 'RAPT3',
 'RAPT4', 'RBNS11', 'RBNS3', 'RBNS4', 'RCSL3', 'RCSL4', 'RDNI3', 'RDOR3',
 'RECV3', 'REDE3', 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'ROMI3', 'RPMG3',
 'RRRP3', 'RSID3', 'RSUL3', 'RSUL4', 'SAPR11', 'SAPR3', 'SAPR4', 'SBFG3',
 'SBSP3', 'SEER3', 'SEQL3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3',
 'SLED4', 'SMFT13', 'SMFT3', 'SMT03', 'SNSY3', 'SNSY5', 'SNSY6', 'SOJA3',
 'SOMA3', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'STBP3', 'STKF3', 'SUZB3', 'SYNE3',
 'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',
 'TECN3', 'TEGA3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TENE3', 'TENE5',
 'TENE7', 'TFCO4', 'TGMA3', 'TIBR5', 'TIBR6', 'TIMS3', 'TKNO3', 'TKNO4', 'TOTS3',
 'TPIS3', 'TRAD3', 'TRIS3', 'TRPL3', 'TRPL4', 'TTEN3', 'TUPY3', 'TXRX11',
 'TXRX3', 'TXRX4', 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B',
 'USIM3', 'USIM5', 'USIM6', 'VALE3', 'VAMO3', 'VBBR3', 'VIIA11', 'VIIA3',
 'VIIA4', 'VITT3', 'VIVA3', 'VIVR3', 'VIVT3', 'VIVT4', 'VLID3', 'VSPT3', 'VSPT4',
 'VULC3', 'VVEO3', 'WEGE3', 'WEST3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4',
 'WSO11', 'WSO33', 'YBRA3B', 'YBRA4B', 'YDUQ3', 'ZAMP3']

```
[ ]: #Total de empresas consultadas
tamnho_empresas = len(lista_caminho)
print(tamnho_empresas)
```

543

```
[ ]: #Análise de relatórios
#contador_relatorios
t = 0
lista = []
for caminho in lista_caminho:
```

```

path_caminho_pdf = 'C:\\Users\\Riallen\\Documents\\Work_Text\\Data\\' +
↪caminho
relatorio_pdf = os.listdir(path_caminho_pdf)
for lista_pdf in relatorio_pdf:
    #print(lista_pdf)
    lista.append(lista_pdf)
    t = t + 1
#quantidade total de relatorios baixados
print(t)

```

4462

```

[ ]: #organização da lista
#Pegar apenas os anos das strings
anos = []
for name in lista:
    org = name.split('_')
    #print(org[1])
    org2 = org[-1].split('.')
    #print(org2)
    anos.append(int(org2[0]))
print(anos)
#o tamanho de anos deve ser igual a t
print(len(anos))

```

```

[2016, 2017, 2018, 2019, 2020, 2021, 2013, 2014, 2015, 2016, 2019, 2020, 2021,
2020, 2021, 2021, 2021, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019,
2020, 2021, 2022, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020,
2021, 2022, 2020, 2021, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020,
2021, 2022, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022,
2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2020, 2021,
2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2011,
2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2020, 2021,
2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2012, 2013,
2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2012, 2013, 2014, 2015,
2016, 2017, 2018, 2019, 2020, 2021, 2022, 2011, 2012, 2013, 2014, 2015, 2016,
2017, 2018, 2019, 2020, 2021, 2022, 2020, 2021, 2012, 2013, 2014, 2015, 2016,
2017, 2018, 2019, 2020, 2021, 2022, 2013, 2014, 2016, 2017, 2018, 2019, 2021,
2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2011,
2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2021, 2012,
2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2021, 2012, 2013,
2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2012, 2013, 2014, 2015,
2016, 2017, 2018, 2019, 2020, 2021, 2022, 2020, 2021, 2020, 2021, 2020, 2021,
2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2012, 2013,
2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2017, 2018, 2019, 2020,
2017, 2018, 2019, 2021, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019,
2020, 2021, 2022, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021,
2022, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2012,

```

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]


```
print(contador_anos)
print(sum(contador_anos))
```

Ano minimo: 2010

Ano máximo: 2022

2010

2011

2012

2013

2014

2015

2016

2017

2018

2019

2020

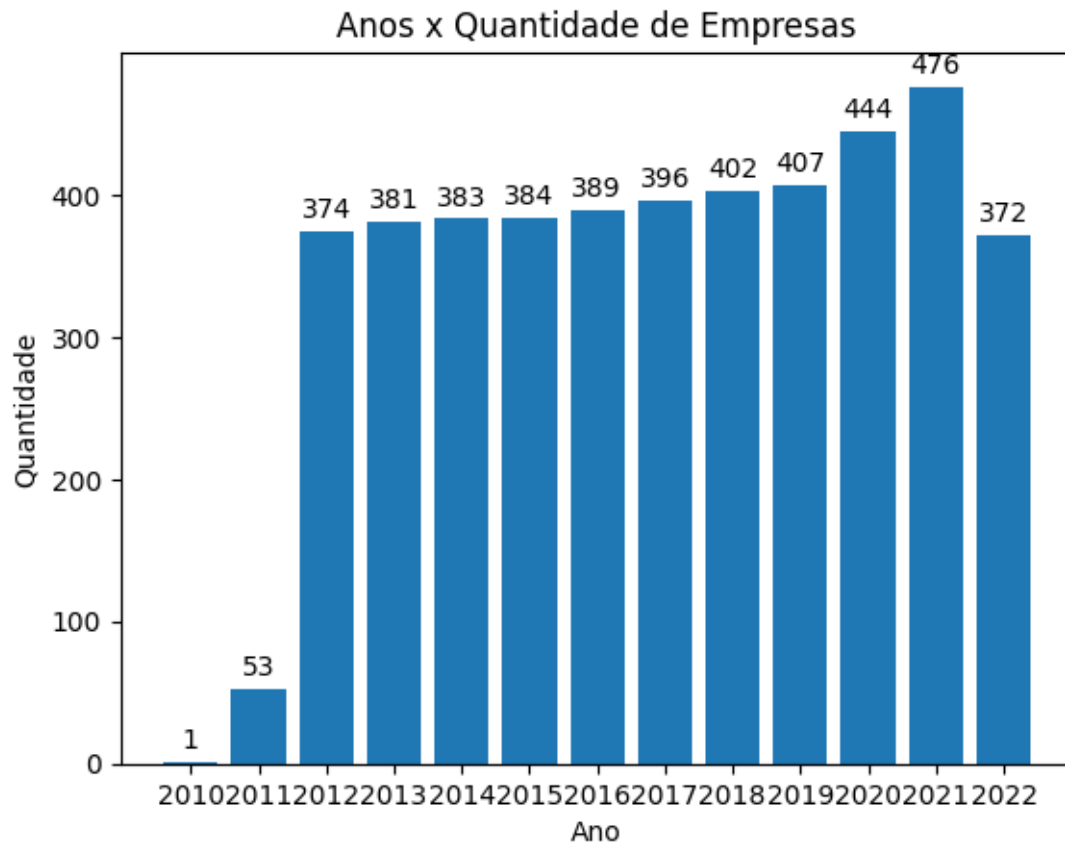
2021

2022

[1 53 374 381 383 384 389 396 402 407 444 476 372]

4462

```
[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ['2010', '2011', '2012', '2013', '2014', '2015', '2016', '2017', '2018',
     ↪, '2019', '2020', '2021', '2022']
rect1 = ax.bar(X, contador_anos)
ax.set_ylabel('Quantidade')
ax.set_title("Anos x Quantidade de Empresas")
ax.set_xlabel('Ano')
ax.bar_label(rect1, padding = 3)
plt.show()
```



```
[ ]: #Empresa 2010
#Pegar apenas os anos das strings
empresa_2010 = []
for name in lista:
    org = name.split('_')
    org2 = org[1].split('.')
    #print(org2[0])
    if org2[0] == '2010':
        empresa_2010.append(name)
print(empresa_2010)
#o tamanho de anos deve ser igual a t
print(len(empresa_2010))
```

['GPAR3_2010.pdf']

1

```
[ ]: #Realizar pesquisa na empresa GPAR3
GPAR3 = []
for empresa in lista_caminho:
    if empresa == "GPAR3":
```

```

path_caminho_pdf_2010 = 'C:
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa
relatorio_pdf_2010 = os.listdir(path_caminho_pdf_2010)
for lista_pdf_2010 in relatorio_pdf_2010:
    #print(lista_pdf)
    GPAR3.append(lista_pdf_2010)
#quantidade total de relatorios baixados
print(GPAR3)
print(len(GPAR3))

```

```

['GPAR3_2010.pdf', 'GPAR3_2011.pdf', 'GPAR3_2012.pdf', 'GPAR3_2013.pdf',
'GPAR3_2014.pdf', 'GPAR3_2015.pdf', 'GPAR3_2016.pdf', 'GPAR3_2017.pdf',
'GPAR3_2018.pdf', 'GPAR3_2019.pdf', 'GPAR3_2020.pdf', 'GPAR3_2021.pdf']
12

```

Ao observar a pasta da empresa GPAR3 descobrimos que consta os relatórios de 2010 - 2021

```

[ ]: #Empresa 2011
empresa_2011 = []
names_empresas_2011 = []
for name in lista:
    org = name.split('_')
    org2 = org[1].split('.')
    #print(org2[0])
    if org2[0] == '2011':
        names_empresas_2011.append(org[0])
        empresa_2011.append(name)
print(empresa_2011)
#o tamanho de anos deve ser igual a t
print(len(empresa_2011))

```

```

['AFLT3_2011.pdf', 'AGRO3_2011.pdf', 'ALPA3_2011.pdf', 'ALPA4_2011.pdf',
'AMAR3_2011.pdf', 'APTI3_2011.pdf', 'APTI4_2011.pdf', 'BAHI3_2011.pdf',
'BRAP3_2011.pdf', 'BRAP4_2011.pdf', 'BRAP99_2011.pdf', 'CATA3_2011.pdf',
'CGAS3_2011.pdf', 'CGAS5_2011.pdf', 'DASA3_2011.pdf', 'EMBR3_2011.pdf',
'FRTA3_2011.pdf', 'GGBR3_2011.pdf', 'GGBR4_2011.pdf', 'GOAU3_2011.pdf',
'GOAU4_2011.pdf', 'GOLL3_2011.pdf', 'GOLL4_2011.pdf', 'GPAR3_2011.pdf',
'GRND3_2011.pdf', 'GUAR3_2011.pdf', 'HAGA3_2011.pdf', 'HBSA3_2011.pdf',
'JBSS3_2011.pdf', 'KLBN11_2011.pdf', 'KLBN4_2011.pdf', 'LIPR3_2011.pdf',
'LTEL5B_2011.pdf', 'MAPT3_2011.pdf', 'MAPT4_2011.pdf', 'MSPA3_2011.pdf',
'MSPA4_2011.pdf', 'NEMO3_2011.pdf', 'NEMO6_2011.pdf', 'PETR3_2011.pdf',
'PETR4_2011.pdf', 'PGMN3_2011.pdf', 'POM04_2011.pdf', 'QUAL3_2011.pdf',
'ROMI3_2011.pdf', 'SAPR11_2011.pdf', 'SAPR3_2011.pdf', 'SAPR4_2011.pdf',
'STBP3_2011.pdf', 'STKF3_2011.pdf', 'TOTS3_2011.pdf', 'VALE3_2011.pdf',
'VIVT3_2011.pdf']

```

53

53

```
[ ]: print(names_empresas_2011)
```

```
['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',  
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',  
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',  
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',  
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',  
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',  
'TOTS3', 'VALE3', 'VIVT3']
```

```
[ ]: #realizar pesquisa nas empresas de 2011 sem a GPAR3
```

```
lista_de_empresas_2011 = []
```

```
for name_emp in names_empresas_2011:
```

```
    for empresa in lista_caminho:
```

```
        if empresa == name_emp:
```

```
            path_caminho_pdf_2011 = 'C:
```

```
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa
```

```
            relatorio_pdf_2011 = os.listdir(path_caminho_pdf_2011)
```

```
            att = []
```

```
            for lista_pdf_2011 in relatorio_pdf_2011:
```

```
                #print(lista_pdf)
```

```
                att.append(lista_pdf_2011)
```

```
            lista_de_empresas_2011.append(att)
```

```
#quantidade total de relatorios baixados
```

```
print(lista_de_empresas_2011)
```

```
print(len(lista_de_empresas_2011))
```

```
[['AFLT3_2011.pdf', 'AFLT3_2012.pdf', 'AFLT3_2013.pdf', 'AFLT3_2014.pdf',  
'AFLT3_2015.pdf', 'AFLT3_2016.pdf', 'AFLT3_2017.pdf', 'AFLT3_2018.pdf',  
'AFLT3_2019.pdf', 'AFLT3_2020.pdf', 'AFLT3_2021.pdf', 'AFLT3_2022.pdf'],  
['AGRO3_2011.pdf', 'AGRO3_2012.pdf', 'AGRO3_2013.pdf', 'AGRO3_2014.pdf',  
'AGRO3_2015.pdf', 'AGRO3_2016.pdf', 'AGRO3_2017.pdf', 'AGRO3_2018.pdf',  
'AGRO3_2019.pdf', 'AGRO3_2020.pdf', 'AGRO3_2021.pdf', 'AGRO3_2022.pdf'],  
['ALPA3_2011.pdf', 'ALPA3_2012.pdf', 'ALPA3_2013.pdf', 'ALPA3_2014.pdf',  
'ALPA3_2015.pdf', 'ALPA3_2016.pdf', 'ALPA3_2017.pdf', 'ALPA3_2018.pdf',  
'ALPA3_2019.pdf', 'ALPA3_2020.pdf', 'ALPA3_2021.pdf', 'ALPA3_2022.pdf'],  
['ALPA4_2011.pdf', 'ALPA4_2012.pdf', 'ALPA4_2013.pdf', 'ALPA4_2014.pdf',  
'ALPA4_2015.pdf', 'ALPA4_2016.pdf', 'ALPA4_2017.pdf', 'ALPA4_2018.pdf',  
'ALPA4_2019.pdf', 'ALPA4_2020.pdf', 'ALPA4_2021.pdf', 'ALPA4_2022.pdf'],  
['AMAR3_2011.pdf', 'AMAR3_2012.pdf', 'AMAR3_2013.pdf', 'AMAR3_2014.pdf',  
'AMAR3_2015.pdf', 'AMAR3_2016.pdf', 'AMAR3_2017.pdf', 'AMAR3_2018.pdf',  
'AMAR3_2019.pdf', 'AMAR3_2020.pdf', 'AMAR3_2021.pdf', 'AMAR3_2022.pdf'],  
['APTI3_2011.pdf', 'APTI3_2012.pdf', 'APTI3_2013.pdf', 'APTI3_2014.pdf',  
'APTI3_2015.pdf', 'APTI3_2016.pdf', 'APTI3_2017.pdf', 'APTI3_2018.pdf',  
'APTI3_2019.pdf', 'APTI3_2020.pdf', 'APTI3_2021.pdf', 'APTI3_2022.pdf'],  
['APTI4_2011.pdf', 'APTI4_2012.pdf', 'APTI4_2013.pdf', 'APTI4_2014.pdf',  
'APTI4_2015.pdf', 'APTI4_2016.pdf', 'APTI4_2017.pdf', 'APTI4_2018.pdf'],
```

'APTI4_2019.pdf', 'APTI4_2020.pdf', 'APTI4_2021.pdf', 'APTI4_2022.pdf'],
 ['BAHI3_2011.pdf', 'BAHI3_2012.pdf', 'BAHI3_2013.pdf', 'BAHI3_2014.pdf',
 'BAHI3_2015.pdf', 'BAHI3_2016.pdf', 'BAHI3_2017.pdf', 'BAHI3_2018.pdf',
 'BAHI3_2019.pdf', 'BAHI3_2020.pdf', 'BAHI3_2021.pdf', 'BAHI3_2022.pdf'],
 ['BRAP3_2011.pdf', 'BRAP3_2012.pdf', 'BRAP3_2013.pdf', 'BRAP3_2014.pdf',
 'BRAP3_2015.pdf', 'BRAP3_2016.pdf', 'BRAP3_2017.pdf', 'BRAP3_2018.pdf',
 'BRAP3_2019.pdf', 'BRAP3_2020.pdf', 'BRAP3_2021.pdf', 'BRAP3_2022.pdf'],
 ['BRAP4_2011.pdf', 'BRAP4_2012.pdf', 'BRAP4_2013.pdf', 'BRAP4_2014.pdf',
 'BRAP4_2015.pdf', 'BRAP4_2016.pdf', 'BRAP4_2017.pdf', 'BRAP4_2018.pdf',
 'BRAP4_2019.pdf', 'BRAP4_2020.pdf', 'BRAP4_2021.pdf', 'BRAP4_2022.pdf'],
 ['BRAP99_2011.pdf', 'BRAP99_2012.pdf', 'BRAP99_2013.pdf', 'BRAP99_2014.pdf',
 'BRAP99_2015.pdf', 'BRAP99_2016.pdf', 'BRAP99_2017.pdf', 'BRAP99_2018.pdf',
 'BRAP99_2019.pdf', 'BRAP99_2020.pdf', 'BRAP99_2021.pdf', 'BRAP99_2022.pdf'],
 ['CATA3_2011.pdf', 'CATA3_2012.pdf', 'CATA3_2013.pdf', 'CATA3_2014.pdf',
 'CATA3_2015.pdf', 'CATA3_2016.pdf', 'CATA3_2017.pdf', 'CATA3_2018.pdf',
 'CATA3_2019.pdf', 'CATA3_2020.pdf', 'CATA3_2021.pdf', 'CATA3_2022.pdf'],
 ['CGAS3_2011.pdf', 'CGAS3_2012.pdf', 'CGAS3_2013.pdf', 'CGAS3_2014.pdf',
 'CGAS3_2015.pdf', 'CGAS3_2016.pdf', 'CGAS3_2017.pdf', 'CGAS3_2018.pdf',
 'CGAS3_2019.pdf', 'CGAS3_2020.pdf', 'CGAS3_2021.pdf', 'CGAS3_2022.pdf'],
 ['CGAS5_2011.pdf', 'CGAS5_2012.pdf', 'CGAS5_2013.pdf', 'CGAS5_2014.pdf',
 'CGAS5_2015.pdf', 'CGAS5_2016.pdf', 'CGAS5_2017.pdf', 'CGAS5_2018.pdf',
 'CGAS5_2019.pdf', 'CGAS5_2020.pdf', 'CGAS5_2021.pdf', 'CGAS5_2022.pdf'],
 ['DASA3_2011.pdf', 'DASA3_2012.pdf', 'DASA3_2013.pdf', 'DASA3_2014.pdf',
 'DASA3_2015.pdf', 'DASA3_2016.pdf', 'DASA3_2017.pdf', 'DASA3_2018.pdf',
 'DASA3_2019.pdf', 'DASA3_2020.pdf', 'DASA3_2021.pdf', 'DASA3_2022.pdf'],
 ['EMBR3_2011.pdf', 'EMBR3_2012.pdf', 'EMBR3_2013.pdf', 'EMBR3_2014.pdf',
 'EMBR3_2015.pdf', 'EMBR3_2016.pdf', 'EMBR3_2017.pdf', 'EMBR3_2018.pdf',
 'EMBR3_2019.pdf', 'EMBR3_2020.pdf', 'EMBR3_2021.pdf', 'EMBR3_2022.pdf'],
 ['FRTA3_2011.pdf', 'FRTA3_2012.pdf', 'FRTA3_2013.pdf', 'FRTA3_2014.pdf',
 'FRTA3_2015.pdf', 'FRTA3_2016.pdf', 'FRTA3_2017.pdf', 'FRTA3_2018.pdf',
 'FRTA3_2019.pdf', 'FRTA3_2020.pdf', 'FRTA3_2021.pdf', 'FRTA3_2022.pdf'],
 ['GGBR3_2011.pdf', 'GGBR3_2012.pdf', 'GGBR3_2013.pdf', 'GGBR3_2014.pdf',
 'GGBR3_2015.pdf', 'GGBR3_2016.pdf', 'GGBR3_2017.pdf', 'GGBR3_2018.pdf',
 'GGBR3_2019.pdf', 'GGBR3_2020.pdf', 'GGBR3_2021.pdf', 'GGBR3_2022.pdf'],
 ['GGBR4_2011.pdf', 'GGBR4_2012.pdf', 'GGBR4_2013.pdf', 'GGBR4_2014.pdf',
 'GGBR4_2015.pdf', 'GGBR4_2016.pdf', 'GGBR4_2017.pdf', 'GGBR4_2018.pdf',
 'GGBR4_2019.pdf', 'GGBR4_2020.pdf', 'GGBR4_2021.pdf', 'GGBR4_2022.pdf'],
 ['GOAU3_2011.pdf', 'GOAU3_2012.pdf', 'GOAU3_2013.pdf', 'GOAU3_2014.pdf',
 'GOAU3_2015.pdf', 'GOAU3_2016.pdf', 'GOAU3_2017.pdf', 'GOAU3_2018.pdf',
 'GOAU3_2019.pdf', 'GOAU3_2020.pdf', 'GOAU3_2021.pdf', 'GOAU3_2022.pdf'],
 ['GOAU4_2011.pdf', 'GOAU4_2012.pdf', 'GOAU4_2013.pdf', 'GOAU4_2014.pdf',
 'GOAU4_2015.pdf', 'GOAU4_2016.pdf', 'GOAU4_2017.pdf', 'GOAU4_2018.pdf',
 'GOAU4_2019.pdf', 'GOAU4_2020.pdf', 'GOAU4_2021.pdf', 'GOAU4_2022.pdf'],
 ['GOLL3_2011.pdf', 'GOLL3_2012.pdf', 'GOLL3_2013.pdf', 'GOLL3_2014.pdf',
 'GOLL3_2015.pdf', 'GOLL3_2016.pdf', 'GOLL3_2017.pdf', 'GOLL3_2018.pdf',
 'GOLL3_2019.pdf', 'GOLL3_2020.pdf', 'GOLL3_2021.pdf', 'GOLL3_2022.pdf'],
 ['GOLL4_2011.pdf', 'GOLL4_2012.pdf', 'GOLL4_2013.pdf', 'GOLL4_2014.pdf',
 'GOLL4_2015.pdf', 'GOLL4_2016.pdf', 'GOLL4_2017.pdf', 'GOLL4_2018.pdf',

'GOLL4_2019.pdf', 'GOLL4_2020.pdf', 'GOLL4_2021.pdf', 'GOLL4_2022.pdf'],
 ['GPAR3_2010.pdf', 'GPAR3_2011.pdf', 'GPAR3_2012.pdf', 'GPAR3_2013.pdf',
 'GPAR3_2014.pdf', 'GPAR3_2015.pdf', 'GPAR3_2016.pdf', 'GPAR3_2017.pdf',
 'GPAR3_2018.pdf', 'GPAR3_2019.pdf', 'GPAR3_2020.pdf', 'GPAR3_2021.pdf'],
 ['GRND3_2011.pdf', 'GRND3_2012.pdf', 'GRND3_2013.pdf', 'GRND3_2014.pdf',
 'GRND3_2015.pdf', 'GRND3_2016.pdf', 'GRND3_2017.pdf', 'GRND3_2018.pdf',
 'GRND3_2019.pdf', 'GRND3_2020.pdf', 'GRND3_2021.pdf', 'GRND3_2022.pdf'],
 ['GUAR3_2011.pdf', 'GUAR3_2012.pdf', 'GUAR3_2013.pdf', 'GUAR3_2014.pdf',
 'GUAR3_2015.pdf', 'GUAR3_2016.pdf', 'GUAR3_2017.pdf', 'GUAR3_2018.pdf',
 'GUAR3_2019.pdf', 'GUAR3_2020.pdf', 'GUAR3_2021.pdf', 'GUAR3_2022.pdf'],
 ['HAGA3_2011.pdf', 'HAGA3_2012.pdf', 'HAGA3_2013.pdf', 'HAGA3_2014.pdf',
 'HAGA3_2015.pdf', 'HAGA3_2016.pdf', 'HAGA3_2017.pdf', 'HAGA3_2018.pdf',
 'HAGA3_2019.pdf', 'HAGA3_2020.pdf', 'HAGA3_2021.pdf', 'HAGA3_2022.pdf'],
 ['HBSA3_2011.pdf', 'HBSA3_2012.pdf', 'HBSA3_2013.pdf', 'HBSA3_2014.pdf',
 'HBSA3_2015.pdf', 'HBSA3_2016.pdf', 'HBSA3_2017.pdf', 'HBSA3_2018.pdf',
 'HBSA3_2019.pdf', 'HBSA3_2020.pdf', 'HBSA3_2021.pdf', 'HBSA3_2022.pdf'],
 ['JBSS3_2011.pdf', 'JBSS3_2012.pdf', 'JBSS3_2013.pdf', 'JBSS3_2014.pdf',
 'JBSS3_2015.pdf', 'JBSS3_2016.pdf', 'JBSS3_2017.pdf', 'JBSS3_2018.pdf',
 'JBSS3_2019.pdf', 'JBSS3_2020.pdf', 'JBSS3_2021.pdf', 'JBSS3_2022.pdf'],
 ['KLB11_2011.pdf', 'KLB11_2012.pdf', 'KLB11_2013.pdf', 'KLB11_2014.pdf',
 'KLB11_2015.pdf', 'KLB11_2016.pdf', 'KLB11_2017.pdf', 'KLB11_2018.pdf',
 'KLB11_2019.pdf', 'KLB11_2020.pdf', 'KLB11_2021.pdf', 'KLB11_2022.pdf'],
 ['KLB4_2011.pdf', 'KLB4_2012.pdf', 'KLB4_2013.pdf', 'KLB4_2014.pdf',
 'KLB4_2015.pdf', 'KLB4_2016.pdf', 'KLB4_2017.pdf', 'KLB4_2018.pdf',
 'KLB4_2019.pdf', 'KLB4_2020.pdf', 'KLB4_2021.pdf', 'KLB4_2022.pdf'],
 ['LIPR3_2011.pdf', 'LIPR3_2012.pdf', 'LIPR3_2013.pdf', 'LIPR3_2014.pdf',
 'LIPR3_2015.pdf', 'LIPR3_2016.pdf', 'LIPR3_2017.pdf', 'LIPR3_2018.pdf',
 'LIPR3_2019.pdf', 'LIPR3_2020.pdf', 'LIPR3_2021.pdf', 'LIPR3_2022.pdf'],
 ['LTEL5B_2011.pdf', 'LTEL5B_2012.pdf', 'LTEL5B_2013.pdf', 'LTEL5B_2014.pdf',
 'LTEL5B_2015.pdf', 'LTEL5B_2016.pdf', 'LTEL5B_2017.pdf', 'LTEL5B_2018.pdf',
 'LTEL5B_2019.pdf', 'LTEL5B_2020.pdf', 'LTEL5B_2021.pdf', 'LTEL5B_2022.pdf'],
 ['MAPT3_2011.pdf', 'MAPT3_2012.pdf', 'MAPT3_2013.pdf', 'MAPT3_2014.pdf',
 'MAPT3_2015.pdf', 'MAPT3_2016.pdf', 'MAPT3_2017.pdf', 'MAPT3_2018.pdf',
 'MAPT3_2019.pdf', 'MAPT3_2020.pdf', 'MAPT3_2021.pdf', 'MAPT3_2022.pdf'],
 ['MAPT4_2011.pdf', 'MAPT4_2012.pdf', 'MAPT4_2013.pdf', 'MAPT4_2014.pdf',
 'MAPT4_2015.pdf', 'MAPT4_2016.pdf', 'MAPT4_2017.pdf', 'MAPT4_2018.pdf',
 'MAPT4_2019.pdf', 'MAPT4_2020.pdf', 'MAPT4_2021.pdf', 'MAPT4_2022.pdf'],
 ['MSPA3_2011.pdf', 'MSPA3_2012.pdf', 'MSPA3_2013.pdf', 'MSPA3_2014.pdf',
 'MSPA3_2015.pdf', 'MSPA3_2016.pdf', 'MSPA3_2017.pdf', 'MSPA3_2018.pdf',
 'MSPA3_2019.pdf', 'MSPA3_2020.pdf', 'MSPA3_2021.pdf', 'MSPA3_2022.pdf'],
 ['MSPA4_2011.pdf', 'MSPA4_2012.pdf', 'MSPA4_2013.pdf', 'MSPA4_2014.pdf',
 'MSPA4_2015.pdf', 'MSPA4_2016.pdf', 'MSPA4_2017.pdf', 'MSPA4_2018.pdf',
 'MSPA4_2019.pdf', 'MSPA4_2020.pdf', 'MSPA4_2021.pdf', 'MSPA4_2022.pdf'],
 ['NEMO3_2011.pdf', 'NEMO3_2012.pdf', 'NEMO3_2013.pdf', 'NEMO3_2014.pdf',
 'NEMO3_2015.pdf', 'NEMO3_2016.pdf', 'NEMO3_2017.pdf', 'NEMO3_2018.pdf',
 'NEMO3_2019.pdf', 'NEMO3_2020.pdf', 'NEMO3_2021.pdf', 'NEMO3_2022.pdf'],
 ['NEMO6_2011.pdf', 'NEMO6_2012.pdf', 'NEMO6_2013.pdf', 'NEMO6_2014.pdf',
 'NEMO6_2015.pdf', 'NEMO6_2016.pdf', 'NEMO6_2017.pdf', 'NEMO6_2018.pdf',


```

'NEMO6_2019.pdf', 'NEMO6_2020.pdf', 'NEMO6_2021.pdf', 'NEMO6_2022.pdf'],
['PETR3_2011.pdf', 'PETR3_2012.pdf', 'PETR3_2013.pdf', 'PETR3_2014.pdf',
'PETR3_2015.pdf', 'PETR3_2016.pdf', 'PETR3_2017.pdf', 'PETR3_2018.pdf',
'PETR3_2019.pdf', 'PETR3_2020.pdf', 'PETR3_2021.pdf', 'PETR3_2022.pdf'],
['PETR4_2011.pdf', 'PETR4_2012.pdf', 'PETR4_2013.pdf', 'PETR4_2014.pdf',
'PETR4_2015.pdf', 'PETR4_2016.pdf', 'PETR4_2017.pdf', 'PETR4_2018.pdf',
'PETR4_2019.pdf', 'PETR4_2020.pdf', 'PETR4_2021.pdf', 'PETR4_2022.pdf'],
['PGMN3_2011.pdf', 'PGMN3_2012.pdf', 'PGMN3_2013.pdf', 'PGMN3_2014.pdf',
'PGMN3_2015.pdf', 'PGMN3_2016.pdf', 'PGMN3_2017.pdf', 'PGMN3_2018.pdf',
'PGMN3_2019.pdf', 'PGMN3_2020.pdf', 'PGMN3_2021.pdf', 'PGMN3_2022.pdf'],
['POMO4_2011.pdf', 'POMO4_2012.pdf', 'POMO4_2013.pdf', 'POMO4_2014.pdf',
'POMO4_2015.pdf', 'POMO4_2016.pdf', 'POMO4_2017.pdf', 'POMO4_2018.pdf',
'POMO4_2019.pdf', 'POMO4_2020.pdf', 'POMO4_2021.pdf', 'POMO4_2022.pdf'],
['QUAL3_2011.pdf', 'QUAL3_2012.pdf', 'QUAL3_2013.pdf', 'QUAL3_2014.pdf',
'QUAL3_2015.pdf', 'QUAL3_2016.pdf', 'QUAL3_2017.pdf', 'QUAL3_2018.pdf',
'QUAL3_2019.pdf', 'QUAL3_2020.pdf', 'QUAL3_2021.pdf', 'QUAL3_2022.pdf'],
['ROMI3_2011.pdf', 'ROMI3_2012.pdf', 'ROMI3_2013.pdf', 'ROMI3_2014.pdf',
'ROMI3_2015.pdf', 'ROMI3_2016.pdf', 'ROMI3_2017.pdf', 'ROMI3_2018.pdf',
'ROMI3_2019.pdf', 'ROMI3_2020.pdf', 'ROMI3_2021.pdf', 'ROMI3_2022.pdf'],
['SAPR11_2011.pdf', 'SAPR11_2012.pdf', 'SAPR11_2013.pdf', 'SAPR11_2014.pdf',
'SAPR11_2015.pdf', 'SAPR11_2016.pdf', 'SAPR11_2017.pdf', 'SAPR11_2018.pdf',
'SAPR11_2019.pdf', 'SAPR11_2020.pdf', 'SAPR11_2021.pdf', 'SAPR11_2022.pdf'],
['SAPR3_2011.pdf', 'SAPR3_2012.pdf', 'SAPR3_2013.pdf', 'SAPR3_2014.pdf',
'SAPR3_2015.pdf', 'SAPR3_2016.pdf', 'SAPR3_2017.pdf', 'SAPR3_2018.pdf',
'SAPR3_2019.pdf', 'SAPR3_2020.pdf', 'SAPR3_2021.pdf', 'SAPR3_2022.pdf'],
['SAPR4_2011.pdf', 'SAPR4_2012.pdf', 'SAPR4_2013.pdf', 'SAPR4_2014.pdf',
'SAPR4_2015.pdf', 'SAPR4_2016.pdf', 'SAPR4_2017.pdf', 'SAPR4_2018.pdf',
'SAPR4_2019.pdf', 'SAPR4_2020.pdf', 'SAPR4_2021.pdf', 'SAPR4_2022.pdf'],
['STBP3_2011.pdf', 'STBP3_2012.pdf', 'STBP3_2013.pdf', 'STBP3_2014.pdf',
'STBP3_2015.pdf', 'STBP3_2016.pdf', 'STBP3_2017.pdf', 'STBP3_2018.pdf',
'STBP3_2019.pdf', 'STBP3_2020.pdf', 'STBP3_2021.pdf', 'STBP3_2022.pdf'],
['STKF3_2011.pdf', 'STKF3_2012.pdf', 'STKF3_2013.pdf', 'STKF3_2014.pdf',
'STKF3_2015.pdf', 'STKF3_2016.pdf', 'STKF3_2017.pdf', 'STKF3_2018.pdf',
'STKF3_2019.pdf', 'STKF3_2020.pdf', 'STKF3_2021.pdf', 'STKF3_2022.pdf'],
['TOTS3_2011.pdf', 'TOTS3_2012.pdf', 'TOTS3_2013.pdf', 'TOTS3_2014.pdf',
'TOTS3_2015.pdf', 'TOTS3_2016.pdf', 'TOTS3_2017.pdf', 'TOTS3_2018.pdf',
'TOTS3_2019.pdf', 'TOTS3_2020.pdf', 'TOTS3_2021.pdf', 'TOTS3_2022.pdf'],
['VALE3_2011.pdf', 'VALE3_2012.pdf', 'VALE3_2013.pdf', 'VALE3_2014.pdf',
'VALE3_2015.pdf', 'VALE3_2016.pdf', 'VALE3_2017.pdf', 'VALE3_2018.pdf',
'VALE3_2019.pdf', 'VALE3_2020.pdf', 'VALE3_2021.pdf', 'VALE3_2022.pdf'],
['VIVT3_2011.pdf', 'VIVT3_2012.pdf', 'VIVT3_2013.pdf', 'VIVT3_2014.pdf',
'VIVT3_2015.pdf', 'VIVT3_2016.pdf', 'VIVT3_2017.pdf', 'VIVT3_2018.pdf',
'VIVT3_2019.pdf', 'VIVT3_2020.pdf', 'VIVT3_2021.pdf', 'VIVT3_2022.pdf']]

```

53

```

[ ]: #quantidade de relatórios em cada empresa
tam_emp = np.zeros(53, dtype = int)

```

```

i = 0
d11 = 0
empresas_11r = []
for pesquisa in lista_de_empresas_2011:
    #print(pesquisa)
    for k in pesquisa:
        #print(k)
        tam_emp[i] = tam_emp[i] + 1
        if tam_emp[i] == 11:
            d11 = d11 + 1
            empresas_11r.append(k)
    i = i + 1
print(tam_emp)
print("Empresa com menor quantidade de relatorios: ", min(tam_emp))
print("Empresas com 12 relatórios na sua pasta: ", d11 - 1)
i = 0
for lista1 in empresas_11r:
    c = lista1.split("_")
    empresas_11r[i] = c[0]
    i = i + 1
print(empresas_11r)
#print(len(empresas_11r))

```

```

[12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12
 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12
 12 12 12 12 12]

```

Empresa com menor quantidade de relatorios: 12

Empresas com 12 relatórios na sua pasta: 52

```

['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',
'TOTS3', 'VALE3', 'VIVT3']

```

```

[ ]: #empresas com 10 relatorios
quantidade_relatorios = 12
empresas_2011r = []
for i in range(quantidade_relatorios, 11, -1):
    name = []
    #print(name)
    for pesquisa in lista_de_empresas_2011:
        #print(pesquisa)
        #print(len(pesquisa))
        if i == len(pesquisa):
            c = pesquisa[0].split("_")

```

```

        name.append(c[0])
    print("Empresas com ", i , "relatórios")
    print(name)
    empresas_2011r.append(name)
#print(empresas_2011r)

grafico = []
for i in empresas_2011r:
    #print(len(i))
    grafico.append(len(i))
print(grafico)
print(sum(grafico))

```

Empresas com 12 relatórios

```

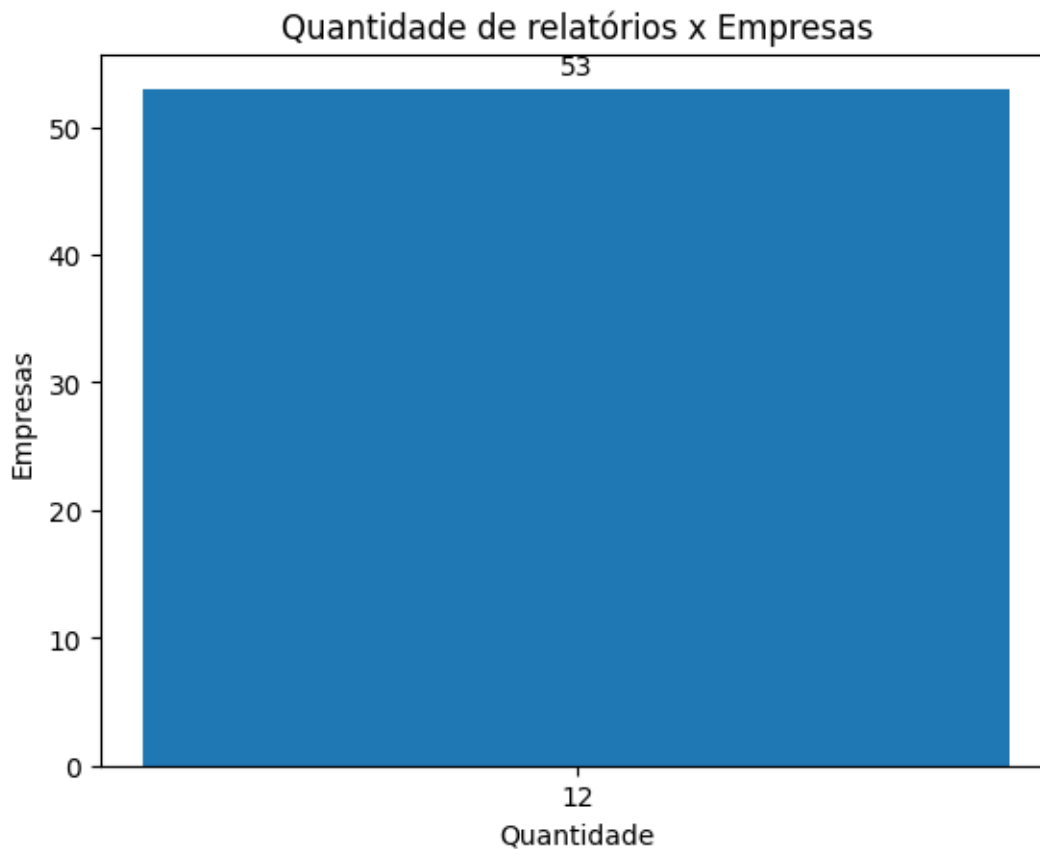
['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',
'TOTS3', 'VALE3', 'VIVT3']
[53]
53

```

```

[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ['12']
rect1 = ax.bar(X, grafico)
ax.set_ylabel('Empresas')
ax.set_title("Quantidade de relatórios x Empresas")
ax.set_xlabel('Quantidade')
ax.bar_label(rect1, padding = 3)
plt.show()

```



```
[ ]: #Empresa 2012
      empresa_2012 = []
      names_empresas_2012 = []
      for name in lista:
          #print(name)
          org = name.split('_')
          #print(org)
          org2 = org[1].split('.')
          #print(org2[0])
          if org2[0] == '2012':
              names_empresas_2012.append(org[0])
              empresa_2012.append(name)
      print(empresa_2012)
      #o tamanho de anos deve ser igual a t
      print(len(empresa_2012))
```

```
['AFLT3_2012.pdf', 'AGRO3_2012.pdf', 'AHEB3_2012.pdf', 'AHEB5_2012.pdf',
'AHEB6_2012.pdf', 'ALPA3_2012.pdf', 'ALPA4_2012.pdf', 'ALUP11_2012.pdf',
'ALUP3_2012.pdf', 'ALUP4_2012.pdf', 'AMAR3_2012.pdf', 'AMER3_2012.pdf',
'APTI3_2012.pdf', 'APTI4_2012.pdf', 'ARZZ3_2012.pdf', 'ATMP3_2012.pdf',
```

'ATOM3_2012.pdf', 'AZE3_2012.pdf', 'AZE4_2012.pdf', 'BAH3_2012.pdf',
 'BALM3_2012.pdf', 'BALM4_2012.pdf', 'BAUH3_2012.pdf', 'BAUH4_2012.pdf',
 'BDLL3_2012.pdf', 'BDLL4_2012.pdf', 'BEEF3_2012.pdf', 'BETP3B_2012.pdf',
 'BIOM3_2012.pdf', 'BLUT3_2012.pdf', 'BLUT4_2012.pdf', 'BMKS3_2012.pdf',
 'BOBR3_2012.pdf', 'BOBR4_2012.pdf', 'BRAP3_2012.pdf', 'BRAP4_2012.pdf',
 'BRAP99_2012.pdf', 'BRFS3_2012.pdf', 'BRKM3_2012.pdf', 'BRKM5_2012.pdf',
 'BRKM6_2012.pdf', 'CABI3B_2012.pdf', 'CALI3_2012.pdf', 'CALI4_2012.pdf',
 'CAMB3_2012.pdf', 'CAMB4_2012.pdf', 'CASN3_2012.pdf', 'CASN4_2012.pdf',
 'CATA3_2012.pdf', 'CATA4_2012.pdf', 'CBEE3_2012.pdf', 'CCR03_2012.pdf',
 'CEBR3_2012.pdf', 'CEBR5_2012.pdf', 'CEBR6_2012.pdf', 'CED03_2012.pdf',
 'CED04_2012.pdf', 'CEEB3_2012.pdf', 'CEEB5_2012.pdf', 'CEEB6_2012.pdf',
 'CEED3_2012.pdf', 'CEED4_2012.pdf', 'CEGR3_2012.pdf', 'CEPE3_2012.pdf',
 'CEPE5_2012.pdf', 'CEPE6_2012.pdf', 'CGAS3_2012.pdf', 'CGAS5_2012.pdf',
 'CGRA3_2012.pdf', 'CGRA4_2012.pdf', 'CLSC3_2012.pdf', 'CLSC4_2012.pdf',
 'CMIG3_2012.pdf', 'CMIG4_2012.pdf', 'CMSA3_2012.pdf', 'CMSA4_2012.pdf',
 'COCE3_2012.pdf', 'COCE5_2012.pdf', 'COCE6_2012.pdf', 'COGN3_2012.pdf',
 'CPFE3_2012.pdf', 'CPLE11_2012.pdf', 'CPLE3_2012.pdf', 'CPLE5_2012.pdf',
 'CPLE6_2012.pdf', 'CPRE3_2012.pdf', 'CRDE3_2012.pdf', 'CRPG3_2012.pdf',
 'CRPG5_2012.pdf', 'CRPG6_2012.pdf', 'CRTE3B_2012.pdf', 'CRTE5B_2012.pdf',
 'CSAN3_2012.pdf', 'CSMG3_2012.pdf', 'CSNA3_2012.pdf', 'CSR3_2012.pdf',
 'CSR5_2012.pdf', 'CSR6_2012.pdf', 'CTKA3_2012.pdf', 'CTKA4_2012.pdf',
 'CTNM3_2012.pdf', 'CTNM4_2012.pdf', 'CTSA3_2012.pdf', 'CTSA4_2012.pdf',
 'CTSA8_2012.pdf', 'CYRE3_2012.pdf', 'DASA3_2012.pdf', 'DEXP3_2012.pdf',
 'DEXP4_2012.pdf', 'DIRR3_2012.pdf', 'DOHL3_2012.pdf', 'DOHL4_2012.pdf',
 'DTCY3_2012.pdf', 'DTCY4_2012.pdf', 'DXC03_2012.pdf', 'EALT3_2012.pdf',
 'EALT4_2012.pdf', 'ECOR3_2012.pdf', 'EGIE3_2012.pdf', 'EKTR3_2012.pdf',
 'EKTR4_2012.pdf', 'ELET3_2012.pdf', 'ELET5_2012.pdf', 'ELET6_2012.pdf',
 'EMAE3_2012.pdf', 'EMAE4_2012.pdf', 'EMBR3_2012.pdf', 'ENAT3_2012.pdf',
 'ENBR3_2012.pdf', 'ENEV3_2012.pdf', 'ENGI11_2012.pdf', 'ENGI3_2012.pdf',
 'ENGI4_2012.pdf', 'ENMT3_2012.pdf', 'ENMT4_2012.pdf', 'EPAR3_2012.pdf',
 'EPAR4_2012.pdf', 'EQMA3B_2012.pdf', 'EQMA5B_2012.pdf', 'EQMA6B_2012.pdf',
 'EQPA3_2012.pdf', 'EQPA5_2012.pdf', 'EQPA6_2012.pdf', 'EQPA7_2012.pdf',
 'EQTL11_2012.pdf', 'EQTL3_2012.pdf', 'ESTR3_2012.pdf', 'ESTR4_2012.pdf',
 'ETER3_2012.pdf', 'EUCA3_2012.pdf', 'EUCA4_2012.pdf', 'EVEN3_2012.pdf',
 'EZTC3_2012.pdf', 'FESA3_2012.pdf', 'FESA4_2012.pdf', 'FHER3_2012.pdf',
 'FIGE3_2012.pdf', 'FIGE4_2012.pdf', 'FLRY3_2012.pdf', 'FRAS3_2012.pdf',
 'FRAS4_2012.pdf', 'FRI03_2012.pdf', 'FRRN3B_2012.pdf', 'FRRN5B_2012.pdf',
 'FRRN6B_2012.pdf', 'FRTA3_2012.pdf', 'GEPA3_2012.pdf', 'GEPA4_2012.pdf',
 'GFSA3_2012.pdf', 'GGBR3_2012.pdf', 'GGBR4_2012.pdf', 'GOAU3_2012.pdf',
 'GOAU4_2012.pdf', 'GOLL3_2012.pdf', 'GOLL4_2012.pdf', 'GPAP3_2012.pdf',
 'GRND3_2012.pdf', 'GUAR3_2012.pdf', 'HAGA3_2012.pdf', 'HAGA4_2012.pdf',
 'HBOR3_2012.pdf', 'HBSA3_2012.pdf', 'HETA3_2012.pdf', 'HETA4_2012.pdf',
 'HOOT3_2012.pdf', 'HOOT4_2012.pdf', 'HYPE3_2012.pdf', 'INEP4_2012.pdf',
 'IVPR3B_2012.pdf', 'IVPR4B_2012.pdf', 'JBSS3_2012.pdf', 'JFEN3_2012.pdf',
 'JHSF3_2012.pdf', 'JOPA3_2012.pdf', 'JOPA4_2012.pdf', 'JSLG11_2012.pdf',
 'JSLG3_2012.pdf', 'KEPL3_2012.pdf', 'KEPL4_2012.pdf', 'KLBN11_2012.pdf',
 'KLBN3_2012.pdf', 'KLBN4_2012.pdf', 'LEVE3_2012.pdf', 'LIGT3_2012.pdf',
 'LIPR3_2012.pdf', 'LOGN3_2012.pdf', 'LREN3_2012.pdf', 'LTEL3B_2012.pdf',

'LTEL5B_2012.pdf', 'LUXM3_2012.pdf', 'LUXM4_2012.pdf', 'MAPT3_2012.pdf',
'MAPT4_2012.pdf', 'MDNE3_2012.pdf', 'MGEL3_2012.pdf', 'MGEL4_2012.pdf',
'MGLU3_2012.pdf', 'MILS3_2012.pdf', 'MMAQ3_2012.pdf', 'MMAQ4_2012.pdf',
'MMXM3_2012.pdf', 'MNDL3_2012.pdf', 'MNPR3_2012.pdf', 'MRFG3_2012.pdf',
'MRSA3B_2012.pdf', 'MRSA5B_2012.pdf', 'MRSA6B_2012.pdf', 'MRVE3_2012.pdf',
'MSPA3_2012.pdf', 'MSPA4_2012.pdf', 'MTSA3_2012.pdf', 'MTSA4_2012.pdf',
'MWET3_2012.pdf', 'MWET4_2012.pdf', 'MYPK3_2012.pdf', 'NEMO3_2012.pdf',
'NEMO5_2012.pdf', 'NEMO6_2012.pdf', 'NEOE3_2012.pdf', 'NORD3_2012.pdf',
'NRTQ3_2012.pdf', 'NRTQ4_2012.pdf', 'NUTR3_2012.pdf', 'ODER3_2012.pdf',
'ODER4_2012.pdf', 'ODPV3_2012.pdf', 'OIBR3_2012.pdf', 'OIBR4_2012.pdf',
'OPGM3B_2012.pdf', 'OPSE3B_2012.pdf', 'OPTS3B_2012.pdf', 'OSXB3_2012.pdf',
'PATI3_2012.pdf', 'PATI4_2012.pdf', 'PCAR3_2012.pdf', 'PCAR99_2012.pdf',
'PDGR3_2012.pdf', 'PDTC3_2012.pdf', 'PETR3_2012.pdf', 'PETR4_2012.pdf',
'PFRM3_2012.pdf', 'PGMN3_2012.pdf', 'PLAS3_2012.pdf', 'PMAM3_2012.pdf',
'PNVL3_2012.pdf', 'POMO3_2012.pdf', 'POMO4_2012.pdf', 'POSI3_2012.pdf',
'PPAR3_2012.pdf', 'PPAR4_2012.pdf', 'PRI03_2012.pdf', 'PRMN3B_2012.pdf',
'PRPT3B_2012.pdf', 'PTBL3_2012.pdf', 'PTNT3_2012.pdf', 'PTNT4_2012.pdf',
'QUAL3_2012.pdf', 'QVQP3B_2012.pdf', 'RADL3_2012.pdf', 'RAIL3_2012.pdf',
'RANI3_2012.pdf', 'RANI4_2012.pdf', 'RAPT3_2012.pdf', 'RAPT4_2012.pdf',
'RCSL3_2012.pdf', 'RCSL4_2012.pdf', 'RDNI3_2012.pdf', 'REDE3_2012.pdf',
'RENT3_2012.pdf', 'RNEW11_2012.pdf', 'RNEW3_2012.pdf', 'RNEW4_2012.pdf',
'ROMI3_2012.pdf', 'RPMG3_2012.pdf', 'RSID3_2012.pdf', 'RSUL3_2012.pdf',
'RSUL4_2012.pdf', 'SAPR11_2012.pdf', 'SAPR3_2012.pdf', 'SAPR4_2012.pdf',
'SBSP3_2012.pdf', 'SGPS3_2012.pdf', 'SHOW3_2012.pdf', 'SHUL3_2012.pdf',
'SHUL4_2012.pdf', 'SLCE3_2012.pdf', 'SLED3_2012.pdf', 'SLED4_2012.pdf',
'SMT03_2012.pdf', 'SNSY3_2012.pdf', 'SNSY5_2012.pdf', 'SNSY6_2012.pdf',
'SOND3_2012.pdf', 'SOND5_2012.pdf', 'SOND6_2012.pdf', 'SQIA3_2012.pdf',
'STBP3_2012.pdf', 'STKF3_2012.pdf', 'SUZB3_2012.pdf', 'SYNE3_2012.pdf',
'TAEE11_2012.pdf', 'TAEE3_2012.pdf', 'TAEE4_2012.pdf', 'TASA3_2012.pdf',
'TASA4_2012.pdf', 'TCN03_2012.pdf', 'TCN04_2012.pdf', 'TCSA3_2012.pdf',
'TECN3_2012.pdf', 'TEKA3_2012.pdf', 'TEKA4_2012.pdf', 'TELB3_2012.pdf',
'TELB4_2012.pdf', 'TEND3_2012.pdf', 'TGMA3_2012.pdf', 'TKN03_2012.pdf',
'TKN04_2012.pdf', 'TOTS3_2012.pdf', 'TPIS3_2012.pdf', 'TRIS3_2012.pdf',
'TRPL3_2012.pdf', 'TRPL4_2012.pdf', 'TUPY3_2012.pdf', 'TXRX11_2012.pdf',
'TXRX3_2012.pdf', 'TXRX4_2012.pdf', 'UCAS3_2012.pdf', 'UGPA3_2012.pdf',
'UNIP3_2012.pdf', 'UNIP5_2012.pdf', 'UNIP6_2012.pdf', 'UPKP3B_2012.pdf',
'USIM3_2012.pdf', 'USIM5_2012.pdf', 'USIM6_2012.pdf', 'VALE3_2012.pdf',
'VIIA11_2012.pdf', 'VIIA3_2012.pdf', 'VIIA4_2012.pdf', 'VIVR3_2012.pdf',
'VIVT3_2012.pdf', 'VIVT4_2012.pdf', 'VLID3_2012.pdf', 'VSPT3_2012.pdf',
'VSPT4_2012.pdf', 'VULC3_2012.pdf', 'WEGE3_2012.pdf', 'WHRL3_2012.pdf',
'WHRL4_2012.pdf', 'WLMM3_2012.pdf', 'WLMM4_2012.pdf', 'YBRA3B_2012.pdf',
'YBRA4B_2012.pdf', 'YDUQ3_2012.pdf']

374

```
[ ]: print(names_empresas_2011)
      print(names_empresas_2012)
      print(len(names_empresas_2012))
```

```

c = []

for i in names_empresas_2012:
    a = 0
    for j in names_empresas_2011:
        if i == j:
            a += 1
    if a == 0:
        c.append(i)
names_empresas_2012 = c
print(names_empresas_2012)
print(len(names_empresas_2012))

```

```

['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',
'TOTS3', 'VALE3', 'VIVT3']
['AFLT3', 'AGRO3', 'AHEB3', 'AHEB5', 'AHEB6', 'ALPA3', 'ALPA4', 'ALUP11',
'ALUP3', 'ALUP4', 'AMAR3', 'AMER3', 'APTI3', 'APTI4', 'ARZZ3', 'ATMP3', 'ATOM3',
'AZE3', 'AZE4', 'BAHI3', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3', 'BDLL4',
'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3', 'BOBR4',
'BRAP3', 'BRAP4', 'BRAP99', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B',
'CALI3', 'CALI4', 'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA3', 'CATA4', 'CBEE3',
'CCRO3', 'CEBR3', 'CEBR5', 'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6',
'CEED3', 'CEED4', 'CEGR3', 'CEPE3', 'CEPE5', 'CEPE6', 'CGAS3', 'CGAS5', 'CGRA3',
'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4', 'CMSA3', 'CMSA4', 'COCE3', 'COCE5',
'COCE6', 'COGN3', 'CPFE3', 'CPLE11', 'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3',
'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6', 'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3',
'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6', 'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3',
'CTSA4', 'CTSA8', 'CYRE3', 'DASA3', 'DEXP3', 'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4',
'DTCY3', 'DTCY4', 'DXCO3', 'EALT3', 'EALT4', 'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4',
'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4', 'EMBR3', 'ENAT3', 'ENBR3', 'ENEV3',
'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4', 'EPAR3', 'EPAR4', 'EQMA3B',
'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6', 'EQPA7', 'EQTL11', 'EQTL3',
'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4', 'EVEN3', 'EZTC3', 'FESA3', 'FESA4',
'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3', 'FRAS4', 'FRI03', 'FRRN3B',
'FRRN5B', 'FRRN6B', 'FRTA3', 'GEP3', 'GEP4', 'GFSA3', 'GGBR3', 'GGBR4',
'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3', 'GUAR3', 'HAGA3', 'HAGA4',
'HBOR3', 'HBSA3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'INEP4',
'IVPR3B', 'IVPR4B', 'JBSS3', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11',
'JSLG3', 'KEPL3', 'KEPL4', 'KLBN11', 'KLBN3', 'KLBN4', 'LEVE3', 'LIGT3',
'LIPR3', 'LOGN3', 'LREN3', 'LTEL3B', 'LTEL5B', 'LUXM3', 'LUXM4', 'MAPT3',
'MAPT4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4', 'MMXM3',
'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3', 'MSPA3',
'MSPA4', 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO3', 'NEMO5', 'NEMO6',

```

'NEOE3', 'NORD3', 'NRTQ3', 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3',
'OIBR4', 'OPGM3B', 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3',
'PCAR99', 'PDGR3', 'PDT3', 'PETR3', 'PETR4', 'PFRM3', 'PGMN3', 'PLAS3',
'PMAM3', 'PNVL3', 'POM03', 'POM04', 'POSI3', 'PPAR3', 'PPAR4', 'PRIO3',
'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QUAL3', 'QVQP3B', 'RADL3',
'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3',
'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'ROMI3', 'RPMG3', 'RSID3', 'RSUL3',
'RSUL4', 'SAPR11', 'SAPR3', 'SAPR4', 'SBSP3', 'SGPS3', 'SHOW3', 'SHUL3',
'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03', 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3',
'SOND5', 'SOND6', 'SQIA3', 'STBP3', 'STKF3', 'SUZB3', 'SYNE3', 'TAEE11',
'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3', 'TECN3', 'TEKA3',
'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4', 'TOTS3', 'TPIS3',
'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4', 'UCAS3',
'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5', 'USIM6',
'VALE3', 'VIAA11', 'VIAA3', 'VIAA4', 'VIVR3', 'VIVT3', 'VIVT4', 'VLID3',
'VSPT3', 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4',
'YBRA3B', 'YBRA4B', 'YDUQ3']

374

['AHEB3', 'AHEB5', 'AHEB6', 'ALUP11', 'ALUP3', 'ALUP4', 'AMER3', 'ARZZ3',
'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3',
'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3',
'BOBR4', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4',
'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA4', 'CBEE3', 'CCRO3', 'CEBR3', 'CEBR5',
'CEBR6', 'CED03', 'CED04', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',
'CEPE3', 'CEPE5', 'CEPE6', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',
'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',
'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6',
'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CYRE3', 'DEXP3',
'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXCO3', 'EALT3', 'EALT4',
'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4',
'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4',
'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6',
'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4',
'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3',
'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'GEPA3', 'GEPA4', 'GFSA3',
'HAGA4', 'HBOR3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'INEP4',
'IVPR3B', 'IVPR4B', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3',
'KEPL3', 'KEPL4', 'KLB3', 'LEVE3', 'LIGT3', 'LOGN3', 'LREN3', 'LTEL3B',
'LUXM3', 'LUXM4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',
'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',
'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO5', 'NEOE3', 'NORD3', 'NRTQ3',
'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3', 'OIBR4', 'OPGM3B',
'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',
'PDT3', 'PFRM3', 'PLAS3', 'PMAM3', 'PNVL3', 'POM03', 'POSI3', 'PPAR3', 'PPAR4',
'PRIO3', 'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QVQP3B', 'RADL3',
'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3',
'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',


```
'SBSP3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03',
'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'SUZB3', 'SYNE3',
'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',
'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKN03', 'TKN04',
'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',
'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',
'USIM6', 'VIAA11', 'VIAA3', 'VIAA4', 'VIVR3', 'VIVT4', 'VLID3', 'VSPT3',
'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B',
'YBRA4B', 'YDUQ3']
```

321

```
[ ]: #Quantidade de relatorios a partir de 2012
#realizar pesquisa nas empresas de 2012
lista_de_empresas_2012 = []

for name_emp in names_empresas_2012:
    for empresa in lista_caminho:
        if empresa == name_emp:
            path_caminho_pdf_2012 = 'C:
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa
            relatorio_pdf_2012 = os.listdir(path_caminho_pdf_2012)
            att = []
            for lista_pdf_2012 in relatorio_pdf_2012:
                #print(lista_pdf)
                att.append(lista_pdf_2012)
            lista_de_empresas_2012.append(att)
#quantidade total de relatorios baixados
print(lista_de_empresas_2012)
print(len(lista_de_empresas_2012))
```

```
[['AHEB3_2012.pdf', 'AHEB3_2013.pdf', 'AHEB3_2014.pdf', 'AHEB3_2015.pdf',
'AHEB3_2016.pdf', 'AHEB3_2017.pdf', 'AHEB3_2018.pdf', 'AHEB3_2019.pdf',
'AHEB3_2020.pdf', 'AHEB3_2021.pdf', 'AHEB3_2022.pdf'], ['AHEB5_2012.pdf',
'AHEB5_2013.pdf', 'AHEB5_2014.pdf', 'AHEB5_2015.pdf', 'AHEB5_2016.pdf',
'AHEB5_2017.pdf', 'AHEB5_2018.pdf', 'AHEB5_2019.pdf', 'AHEB5_2020.pdf',
'AHEB5_2021.pdf', 'AHEB5_2022.pdf'], ['AHEB6_2012.pdf', 'AHEB6_2013.pdf',
'AHEB6_2014.pdf', 'AHEB6_2015.pdf', 'AHEB6_2016.pdf', 'AHEB6_2017.pdf',
'AHEB6_2018.pdf', 'AHEB6_2019.pdf', 'AHEB6_2020.pdf', 'AHEB6_2021.pdf',
'AHEB6_2022.pdf'], ['ALUP11_2012.pdf', 'ALUP11_2013.pdf', 'ALUP11_2014.pdf',
'ALUP11_2015.pdf', 'ALUP11_2016.pdf', 'ALUP11_2017.pdf', 'ALUP11_2018.pdf',
'ALUP11_2019.pdf', 'ALUP11_2020.pdf', 'ALUP11_2021.pdf', 'ALUP11_2022.pdf'],
['ALUP3_2012.pdf', 'ALUP3_2013.pdf', 'ALUP3_2014.pdf', 'ALUP3_2015.pdf',
'ALUP3_2016.pdf', 'ALUP3_2017.pdf', 'ALUP3_2018.pdf', 'ALUP3_2019.pdf',
'ALUP3_2020.pdf', 'ALUP3_2021.pdf', 'ALUP3_2022.pdf'], ['ALUP4_2012.pdf',
'ALUP4_2013.pdf', 'ALUP4_2014.pdf', 'ALUP4_2015.pdf', 'ALUP4_2016.pdf',
'ALUP4_2017.pdf', 'ALUP4_2018.pdf', 'ALUP4_2019.pdf', 'ALUP4_2020.pdf',
'ALUP4_2021.pdf', 'ALUP4_2022.pdf'], ['AMER3_2012.pdf', 'AMER3_2013.pdf',
'AMER3_2014.pdf', 'AMER3_2015.pdf', 'AMER3_2016.pdf', 'AMER3_2017.pdf',
```

'AMER3_2018.pdf', 'AMER3_2019.pdf', 'AMER3_2020.pdf', 'AMER3_2021.pdf',
 'AMER3_2022.pdf'], ['ARZZ3_2012.pdf', 'ARZZ3_2013.pdf', 'ARZZ3_2014.pdf',
 'ARZZ3_2015.pdf', 'ARZZ3_2016.pdf', 'ARZZ3_2017.pdf', 'ARZZ3_2018.pdf',
 'ARZZ3_2019.pdf', 'ARZZ3_2020.pdf', 'ARZZ3_2021.pdf', 'ARZZ3_2022.pdf'],
 ['ATMP3_2012.pdf', 'ATMP3_2013.pdf', 'ATMP3_2014.pdf', 'ATMP3_2015.pdf',
 'ATMP3_2016.pdf', 'ATMP3_2017.pdf', 'ATMP3_2018.pdf', 'ATMP3_2019.pdf',
 'ATMP3_2020.pdf', 'ATMP3_2021.pdf', 'ATMP3_2022.pdf'], ['ATOM3_2012.pdf',
 'ATOM3_2013.pdf', 'ATOM3_2014.pdf', 'ATOM3_2015.pdf', 'ATOM3_2016.pdf',
 'ATOM3_2017.pdf', 'ATOM3_2018.pdf', 'ATOM3_2019.pdf', 'ATOM3_2020.pdf',
 'ATOM3_2021.pdf', 'ATOM3_2022.pdf'], ['AZE3_2012.pdf', 'AZE3_2013.pdf',
 'AZE3_2014.pdf', 'AZE3_2015.pdf', 'AZE3_2016.pdf', 'AZE3_2017.pdf',
 'AZE3_2018.pdf', 'AZE3_2019.pdf', 'AZE3_2020.pdf', 'AZE3_2021.pdf',
 'AZE3_2022.pdf'], ['AZE4_2012.pdf', 'AZE4_2013.pdf', 'AZE4_2014.pdf',
 'AZE4_2015.pdf', 'AZE4_2016.pdf', 'AZE4_2017.pdf', 'AZE4_2018.pdf',
 'AZE4_2019.pdf', 'AZE4_2020.pdf', 'AZE4_2021.pdf', 'AZE4_2022.pdf'],
 ['BALM3_2012.pdf', 'BALM3_2013.pdf', 'BALM3_2014.pdf', 'BALM3_2015.pdf',
 'BALM3_2016.pdf', 'BALM3_2017.pdf', 'BALM3_2018.pdf', 'BALM3_2019.pdf',
 'BALM3_2020.pdf', 'BALM3_2021.pdf', 'BALM3_2022.pdf'], ['BALM4_2012.pdf',
 'BALM4_2013.pdf', 'BALM4_2014.pdf', 'BALM4_2015.pdf', 'BALM4_2016.pdf',
 'BALM4_2017.pdf', 'BALM4_2018.pdf', 'BALM4_2019.pdf', 'BALM4_2020.pdf',
 'BALM4_2021.pdf', 'BALM4_2022.pdf'], ['BAUH3_2012.pdf', 'BAUH3_2013.pdf',
 'BAUH3_2014.pdf', 'BAUH3_2015.pdf', 'BAUH3_2016.pdf', 'BAUH3_2017.pdf',
 'BAUH3_2018.pdf', 'BAUH3_2019.pdf', 'BAUH3_2020.pdf', 'BAUH3_2021.pdf',
 'BAUH3_2022.pdf'], ['BAUH4_2012.pdf', 'BAUH4_2013.pdf', 'BAUH4_2014.pdf',
 'BAUH4_2015.pdf', 'BAUH4_2016.pdf', 'BAUH4_2017.pdf', 'BAUH4_2018.pdf',
 'BAUH4_2019.pdf', 'BAUH4_2020.pdf', 'BAUH4_2021.pdf', 'BAUH4_2022.pdf'],
 ['BDLL3_2012.pdf', 'BDLL3_2013.pdf', 'BDLL3_2014.pdf', 'BDLL3_2015.pdf',
 'BDLL3_2016.pdf', 'BDLL3_2017.pdf', 'BDLL3_2018.pdf', 'BDLL3_2019.pdf',
 'BDLL3_2020.pdf', 'BDLL3_2021.pdf', 'BDLL3_2022.pdf'], ['BDLL4_2012.pdf',
 'BDLL4_2013.pdf', 'BDLL4_2014.pdf', 'BDLL4_2015.pdf', 'BDLL4_2016.pdf',
 'BDLL4_2017.pdf', 'BDLL4_2018.pdf', 'BDLL4_2019.pdf', 'BDLL4_2020.pdf',
 'BDLL4_2021.pdf', 'BDLL4_2022.pdf'], ['BEEF3_2012.pdf', 'BEEF3_2013.pdf',
 'BEEF3_2014.pdf', 'BEEF3_2015.pdf', 'BEEF3_2016.pdf', 'BEEF3_2017.pdf',
 'BEEF3_2018.pdf', 'BEEF3_2019.pdf', 'BEEF3_2020.pdf', 'BEEF3_2021.pdf',
 'BEEF3_2022.pdf'], ['BETP3B_2012.pdf', 'BETP3B_2013.pdf', 'BETP3B_2014.pdf',
 'BETP3B_2015.pdf', 'BETP3B_2016.pdf', 'BETP3B_2017.pdf', 'BETP3B_2018.pdf',
 'BETP3B_2019.pdf', 'BETP3B_2020.pdf', 'BETP3B_2021.pdf', 'BETP3B_2022.pdf'],
 ['BIOM3_2012.pdf', 'BIOM3_2013.pdf', 'BIOM3_2014.pdf', 'BIOM3_2015.pdf',
 'BIOM3_2016.pdf', 'BIOM3_2017.pdf', 'BIOM3_2018.pdf', 'BIOM3_2019.pdf',
 'BIOM3_2020.pdf', 'BIOM3_2021.pdf', 'BIOM3_2022.pdf'], ['BLUT3_2012.pdf',
 'BLUT3_2013.pdf', 'BLUT3_2014.pdf', 'BLUT3_2015.pdf', 'BLUT3_2016.pdf',
 'BLUT3_2017.pdf', 'BLUT3_2018.pdf', 'BLUT3_2019.pdf', 'BLUT3_2020.pdf',
 'BLUT3_2021.pdf', 'BLUT3_2022.pdf'], ['BLUT4_2012.pdf', 'BLUT4_2013.pdf',
 'BLUT4_2014.pdf', 'BLUT4_2015.pdf', 'BLUT4_2016.pdf', 'BLUT4_2017.pdf',
 'BLUT4_2018.pdf', 'BLUT4_2019.pdf', 'BLUT4_2020.pdf', 'BLUT4_2021.pdf',
 'BLUT4_2022.pdf'], ['BMKS3_2012.pdf', 'BMKS3_2013.pdf', 'BMKS3_2014.pdf',
 'BMKS3_2015.pdf', 'BMKS3_2016.pdf', 'BMKS3_2017.pdf', 'BMKS3_2018.pdf',
 'BMKS3_2019.pdf', 'BMKS3_2020.pdf', 'BMKS3_2021.pdf', 'BMKS3_2022.pdf'],

['BOBR3_2012.pdf', 'BOBR3_2013.pdf', 'BOBR3_2014.pdf', 'BOBR3_2015.pdf',
 'BOBR3_2016.pdf', 'BOBR3_2017.pdf', 'BOBR3_2018.pdf', 'BOBR3_2019.pdf',
 'BOBR3_2020.pdf', 'BOBR3_2021.pdf', 'BOBR3_2022.pdf'], ['BOBR4_2012.pdf',
 'BOBR4_2013.pdf', 'BOBR4_2014.pdf', 'BOBR4_2015.pdf', 'BOBR4_2016.pdf',
 'BOBR4_2017.pdf', 'BOBR4_2018.pdf', 'BOBR4_2019.pdf', 'BOBR4_2020.pdf',
 'BOBR4_2021.pdf', 'BOBR4_2022.pdf'], ['BRFS3_2012.pdf', 'BRFS3_2013.pdf',
 'BRFS3_2014.pdf', 'BRFS3_2015.pdf', 'BRFS3_2016.pdf', 'BRFS3_2017.pdf',
 'BRFS3_2018.pdf', 'BRFS3_2019.pdf', 'BRFS3_2020.pdf', 'BRFS3_2021.pdf',
 'BRFS3_2022.pdf'], ['BRKM3_2012.pdf', 'BRKM3_2013.pdf', 'BRKM3_2014.pdf',
 'BRKM3_2015.pdf', 'BRKM3_2016.pdf', 'BRKM3_2017.pdf', 'BRKM3_2018.pdf',
 'BRKM3_2019.pdf', 'BRKM3_2020.pdf', 'BRKM3_2021.pdf', 'BRKM3_2022.pdf'],
 ['BRKM5_2012.pdf', 'BRKM5_2013.pdf', 'BRKM5_2014.pdf', 'BRKM5_2015.pdf',
 'BRKM5_2016.pdf', 'BRKM5_2017.pdf', 'BRKM5_2018.pdf', 'BRKM5_2019.pdf',
 'BRKM5_2020.pdf', 'BRKM5_2021.pdf', 'BRKM5_2022.pdf'], ['BRKM6_2012.pdf',
 'BRKM6_2013.pdf', 'BRKM6_2014.pdf', 'BRKM6_2015.pdf', 'BRKM6_2016.pdf',
 'BRKM6_2017.pdf', 'BRKM6_2018.pdf', 'BRKM6_2019.pdf', 'BRKM6_2020.pdf',
 'BRKM6_2021.pdf', 'BRKM6_2022.pdf'], ['CABI3B_2012.pdf', 'CABI3B_2013.pdf',
 'CABI3B_2014.pdf', 'CABI3B_2015.pdf', 'CABI3B_2016.pdf', 'CABI3B_2017.pdf',
 'CABI3B_2018.pdf', 'CABI3B_2019.pdf', 'CABI3B_2020.pdf', 'CABI3B_2021.pdf',
 'CABI3B_2022.pdf'], ['CALI3_2012.pdf', 'CALI3_2013.pdf', 'CALI3_2014.pdf',
 'CALI3_2015.pdf', 'CALI3_2016.pdf', 'CALI3_2017.pdf', 'CALI3_2018.pdf',
 'CALI3_2019.pdf', 'CALI3_2020.pdf', 'CALI3_2021.pdf', 'CALI3_2022.pdf'],
 ['CALI4_2012.pdf', 'CALI4_2013.pdf', 'CALI4_2014.pdf', 'CALI4_2015.pdf',
 'CALI4_2016.pdf', 'CALI4_2017.pdf', 'CALI4_2018.pdf', 'CALI4_2019.pdf',
 'CALI4_2020.pdf', 'CALI4_2021.pdf', 'CALI4_2022.pdf'], ['CAMB3_2012.pdf',
 'CAMB3_2013.pdf', 'CAMB3_2014.pdf', 'CAMB3_2015.pdf', 'CAMB3_2016.pdf',
 'CAMB3_2017.pdf', 'CAMB3_2018.pdf', 'CAMB3_2019.pdf', 'CAMB3_2020.pdf',
 'CAMB3_2021.pdf', 'CAMB3_2022.pdf'], ['CAMB4_2012.pdf', 'CAMB4_2013.pdf',
 'CAMB4_2014.pdf', 'CAMB4_2015.pdf', 'CAMB4_2016.pdf', 'CAMB4_2017.pdf',
 'CAMB4_2018.pdf', 'CAMB4_2019.pdf', 'CAMB4_2020.pdf', 'CAMB4_2021.pdf',
 'CAMB4_2022.pdf'], ['CASN3_2012.pdf', 'CASN3_2013.pdf', 'CASN3_2014.pdf',
 'CASN3_2015.pdf', 'CASN3_2016.pdf', 'CASN3_2017.pdf', 'CASN3_2018.pdf',
 'CASN3_2019.pdf', 'CASN3_2020.pdf', 'CASN3_2021.pdf', 'CASN3_2022.pdf'],
 ['CASN4_2012.pdf', 'CASN4_2013.pdf', 'CASN4_2014.pdf', 'CASN4_2015.pdf',
 'CASN4_2016.pdf', 'CASN4_2017.pdf', 'CASN4_2018.pdf', 'CASN4_2019.pdf',
 'CASN4_2020.pdf', 'CASN4_2021.pdf', 'CASN4_2022.pdf'], ['CATA4_2012.pdf',
 'CATA4_2013.pdf', 'CATA4_2014.pdf', 'CATA4_2015.pdf', 'CATA4_2016.pdf',
 'CATA4_2017.pdf', 'CATA4_2018.pdf', 'CATA4_2019.pdf', 'CATA4_2020.pdf',
 'CATA4_2021.pdf', 'CATA4_2022.pdf'], ['CBEE3_2012.pdf', 'CBEE3_2013.pdf',
 'CBEE3_2014.pdf', 'CBEE3_2015.pdf', 'CBEE3_2016.pdf', 'CBEE3_2017.pdf',
 'CBEE3_2018.pdf', 'CBEE3_2019.pdf', 'CBEE3_2020.pdf', 'CBEE3_2021.pdf',
 'CBEE3_2022.pdf'], ['CCR03_2012.pdf', 'CCR03_2013.pdf', 'CCR03_2014.pdf',
 'CCR03_2015.pdf', 'CCR03_2016.pdf', 'CCR03_2017.pdf', 'CCR03_2018.pdf',
 'CCR03_2019.pdf', 'CCR03_2020.pdf', 'CCR03_2021.pdf', 'CCR03_2022.pdf'],
 ['CEBR3_2012.pdf', 'CEBR3_2013.pdf', 'CEBR3_2014.pdf', 'CEBR3_2015.pdf',
 'CEBR3_2016.pdf', 'CEBR3_2017.pdf', 'CEBR3_2018.pdf', 'CEBR3_2019.pdf',
 'CEBR3_2020.pdf', 'CEBR3_2021.pdf', 'CEBR3_2022.pdf'], ['CEBR5_2012.pdf',
 'CEBR5_2013.pdf', 'CEBR5_2014.pdf', 'CEBR5_2015.pdf', 'CEBR5_2016.pdf',

'CEBR5_2017.pdf', 'CEBR5_2018.pdf', 'CEBR5_2019.pdf', 'CEBR5_2020.pdf',
 'CEBR5_2021.pdf', 'CEBR5_2022.pdf'], ['CEBR6_2012.pdf', 'CEBR6_2013.pdf',
 'CEBR6_2014.pdf', 'CEBR6_2015.pdf', 'CEBR6_2016.pdf', 'CEBR6_2017.pdf',
 'CEBR6_2018.pdf', 'CEBR6_2019.pdf', 'CEBR6_2020.pdf', 'CEBR6_2021.pdf',
 'CEBR6_2022.pdf'], ['CED03_2012.pdf', 'CED03_2013.pdf', 'CED03_2014.pdf',
 'CED03_2015.pdf', 'CED03_2016.pdf', 'CED03_2017.pdf', 'CED03_2018.pdf',
 'CED03_2019.pdf', 'CED03_2020.pdf', 'CED03_2021.pdf', 'CED03_2022.pdf'],
 ['CED04_2012.pdf', 'CED04_2013.pdf', 'CED04_2014.pdf', 'CED04_2015.pdf',
 'CED04_2016.pdf', 'CED04_2017.pdf', 'CED04_2018.pdf', 'CED04_2019.pdf',
 'CED04_2020.pdf', 'CED04_2021.pdf', 'CED04_2022.pdf'], ['CEEB3_2012.pdf',
 'CEEB3_2013.pdf', 'CEEB3_2014.pdf', 'CEEB3_2015.pdf', 'CEEB3_2016.pdf',
 'CEEB3_2017.pdf', 'CEEB3_2018.pdf', 'CEEB3_2019.pdf', 'CEEB3_2020.pdf',
 'CEEB3_2021.pdf', 'CEEB3_2022.pdf'], ['CEEB5_2012.pdf', 'CEEB5_2013.pdf',
 'CEEB5_2014.pdf', 'CEEB5_2015.pdf', 'CEEB5_2016.pdf', 'CEEB5_2017.pdf',
 'CEEB5_2018.pdf', 'CEEB5_2019.pdf', 'CEEB5_2020.pdf', 'CEEB5_2021.pdf',
 'CEEB5_2022.pdf'], ['CEEB6_2012.pdf', 'CEEB6_2013.pdf', 'CEEB6_2014.pdf',
 'CEEB6_2015.pdf', 'CEEB6_2016.pdf', 'CEEB6_2017.pdf', 'CEEB6_2018.pdf',
 'CEEB6_2019.pdf', 'CEEB6_2020.pdf', 'CEEB6_2021.pdf', 'CEEB6_2022.pdf'],
 ['CED03_2017.pdf', 'CED03_2022.pdf', 'CEED3_2012.pdf', 'CEED3_2013.pdf',
 'CEED3_2014.pdf', 'CEED3_2015.pdf', 'CEED3_2016.pdf', 'CEED3_2017.pdf',
 'CEED3_2018.pdf', 'CEED3_2019.pdf', 'CEED3_2020.pdf', 'CEED3_2021.pdf',
 'CEED3_2022.pdf'], ['CEED4_2012.pdf', 'CEED4_2013.pdf', 'CEED4_2014.pdf',
 'CEED4_2015.pdf', 'CEED4_2016.pdf', 'CEED4_2017.pdf', 'CEED4_2018.pdf',
 'CEED4_2019.pdf', 'CEED4_2020.pdf', 'CEED4_2021.pdf', 'CEED4_2022.pdf'],
 ['CEGR3_2012.pdf', 'CEGR3_2013.pdf', 'CEGR3_2014.pdf', 'CEGR3_2015.pdf',
 'CEGR3_2016.pdf', 'CEGR3_2017.pdf', 'CEGR3_2018.pdf', 'CEGR3_2019.pdf',
 'CEGR3_2020.pdf', 'CEGR3_2021.pdf', 'CEGR3_2022.pdf'], ['CEPE3_2012.pdf',
 'CEPE3_2013.pdf', 'CEPE3_2014.pdf', 'CEPE3_2015.pdf', 'CEPE3_2016.pdf',
 'CEPE3_2017.pdf', 'CEPE3_2018.pdf', 'CEPE3_2019.pdf', 'CEPE3_2020.pdf',
 'CEPE3_2021.pdf', 'CEPE3_2022.pdf'], ['CEPE5_2012.pdf', 'CEPE5_2013.pdf',
 'CEPE5_2014.pdf', 'CEPE5_2015.pdf', 'CEPE5_2016.pdf', 'CEPE5_2017.pdf',
 'CEPE5_2018.pdf', 'CEPE5_2019.pdf', 'CEPE5_2020.pdf', 'CEPE5_2021.pdf',
 'CEPE5_2022.pdf'], ['CEPE6_2012.pdf', 'CEPE6_2013.pdf', 'CEPE6_2014.pdf',
 'CEPE6_2015.pdf', 'CEPE6_2016.pdf', 'CEPE6_2017.pdf', 'CEPE6_2018.pdf',
 'CEPE6_2019.pdf', 'CEPE6_2020.pdf', 'CEPE6_2021.pdf', 'CEPE6_2022.pdf'],
 ['CGRA3_2012.pdf', 'CGRA3_2013.pdf', 'CGRA3_2014.pdf', 'CGRA3_2015.pdf',
 'CGRA3_2016.pdf', 'CGRA3_2017.pdf', 'CGRA3_2018.pdf', 'CGRA3_2019.pdf',
 'CGRA3_2020.pdf', 'CGRA3_2021.pdf', 'CGRA3_2022.pdf'], ['CGRA4_2012.pdf',
 'CGRA4_2013.pdf', 'CGRA4_2014.pdf', 'CGRA4_2015.pdf', 'CGRA4_2016.pdf',
 'CGRA4_2017.pdf', 'CGRA4_2018.pdf', 'CGRA4_2019.pdf', 'CGRA4_2020.pdf',
 'CGRA4_2021.pdf', 'CGRA4_2022.pdf'], ['CLSC3_2012.pdf', 'CLSC3_2013.pdf',
 'CLSC3_2014.pdf', 'CLSC3_2015.pdf', 'CLSC3_2016.pdf', 'CLSC3_2017.pdf',
 'CLSC3_2018.pdf', 'CLSC3_2019.pdf', 'CLSC3_2020.pdf', 'CLSC3_2021.pdf',
 'CLSC3_2022.pdf'], ['CLSC4_2012.pdf', 'CLSC4_2013.pdf', 'CLSC4_2014.pdf',
 'CLSC4_2015.pdf', 'CLSC4_2016.pdf', 'CLSC4_2017.pdf', 'CLSC4_2018.pdf',
 'CLSC4_2019.pdf', 'CLSC4_2020.pdf', 'CLSC4_2021.pdf', 'CLSC4_2022.pdf'],
 ['CMIG3_2012.pdf', 'CMIG3_2013.pdf', 'CMIG3_2014.pdf', 'CMIG3_2015.pdf',
 'CMIG3_2016.pdf', 'CMIG3_2017.pdf', 'CMIG3_2018.pdf', 'CMIG3_2019.pdf',

'CMIG3_2020.pdf', 'CMIG3_2021.pdf', 'CMIG3_2022.pdf'], ['CMIG4_2012.pdf',
 'CMIG4_2013.pdf', 'CMIG4_2014.pdf', 'CMIG4_2015.pdf', 'CMIG4_2016.pdf',
 'CMIG4_2017.pdf', 'CMIG4_2018.pdf', 'CMIG4_2019.pdf', 'CMIG4_2020.pdf',
 'CMIG4_2021.pdf', 'CMIG4_2022.pdf'], ['CMSA3_2012.pdf', 'CMSA3_2013.pdf',
 'CMSA3_2014.pdf', 'CMSA3_2015.pdf', 'CMSA3_2016.pdf', 'CMSA3_2017.pdf',
 'CMSA3_2018.pdf', 'CMSA3_2019.pdf', 'CMSA3_2020.pdf', 'CMSA3_2021.pdf',
 'CMSA3_2022.pdf'], ['CMSA4_2012.pdf', 'CMSA4_2013.pdf', 'CMSA4_2014.pdf',
 'CMSA4_2015.pdf', 'CMSA4_2016.pdf', 'CMSA4_2017.pdf', 'CMSA4_2018.pdf',
 'CMSA4_2019.pdf', 'CMSA4_2020.pdf', 'CMSA4_2021.pdf', 'CMSA4_2022.pdf'],
 ['COCE3_2012.pdf', 'COCE3_2013.pdf', 'COCE3_2014.pdf', 'COCE3_2015.pdf',
 'COCE3_2016.pdf', 'COCE3_2017.pdf', 'COCE3_2018.pdf', 'COCE3_2019.pdf',
 'COCE3_2020.pdf', 'COCE3_2021.pdf', 'COCE3_2022.pdf'], ['COCE5_2012.pdf',
 'COCE5_2013.pdf', 'COCE5_2014.pdf', 'COCE5_2015.pdf', 'COCE5_2016.pdf',
 'COCE5_2017.pdf', 'COCE5_2018.pdf', 'COCE5_2019.pdf', 'COCE5_2020.pdf',
 'COCE5_2021.pdf', 'COCE5_2022.pdf'], ['COCE6_2012.pdf', 'COCE6_2013.pdf',
 'COCE6_2014.pdf', 'COCE6_2015.pdf', 'COCE6_2016.pdf', 'COCE6_2017.pdf',
 'COCE6_2018.pdf', 'COCE6_2019.pdf', 'COCE6_2020.pdf', 'COCE6_2021.pdf',
 'COCE6_2022.pdf'], ['COGN3_2012.pdf', 'COGN3_2013.pdf', 'COGN3_2014.pdf',
 'COGN3_2015.pdf', 'COGN3_2016.pdf', 'COGN3_2017.pdf', 'COGN3_2018.pdf',
 'COGN3_2019.pdf', 'COGN3_2020.pdf', 'COGN3_2021.pdf', 'COGN3_2022.pdf'],
 ['CPFE3_2012.pdf', 'CPFE3_2013.pdf', 'CPFE3_2014.pdf', 'CPFE3_2015.pdf',
 'CPFE3_2016.pdf', 'CPFE3_2017.pdf', 'CPFE3_2018.pdf', 'CPFE3_2019.pdf',
 'CPFE3_2020.pdf', 'CPFE3_2021.pdf', 'CPFE3_2022.pdf'], ['CPLE11_2012.pdf',
 'CPLE11_2013.pdf', 'CPLE11_2014.pdf', 'CPLE11_2015.pdf', 'CPLE11_2016.pdf',
 'CPLE11_2017.pdf', 'CPLE11_2018.pdf', 'CPLE11_2019.pdf', 'CPLE11_2020.pdf',
 'CPLE11_2021.pdf', 'CPLE11_2022.pdf'], ['CPLE3_2012.pdf', 'CPLE3_2013.pdf',
 'CPLE3_2014.pdf', 'CPLE3_2015.pdf', 'CPLE3_2016.pdf', 'CPLE3_2017.pdf',
 'CPLE3_2018.pdf', 'CPLE3_2019.pdf', 'CPLE3_2020.pdf', 'CPLE3_2021.pdf',
 'CPLE3_2022.pdf'], ['CPLE5_2012.pdf', 'CPLE5_2013.pdf', 'CPLE5_2014.pdf',
 'CPLE5_2015.pdf', 'CPLE5_2016.pdf', 'CPLE5_2017.pdf', 'CPLE5_2018.pdf',
 'CPLE5_2019.pdf', 'CPLE5_2020.pdf', 'CPLE5_2021.pdf', 'CPLE5_2022.pdf'],
 ['CPLE6_2012.pdf', 'CPLE6_2013.pdf', 'CPLE6_2014.pdf', 'CPLE6_2015.pdf',
 'CPLE6_2016.pdf', 'CPLE6_2017.pdf', 'CPLE6_2018.pdf', 'CPLE6_2019.pdf',
 'CPLE6_2020.pdf', 'CPLE6_2021.pdf', 'CPLE6_2022.pdf'], ['CPRE3_2012.pdf',
 'CPRE3_2013.pdf', 'CPRE3_2014.pdf', 'CPRE3_2015.pdf', 'CPRE3_2016.pdf',
 'CPRE3_2017.pdf', 'CPRE3_2018.pdf', 'CPRE3_2019.pdf', 'CPRE3_2020.pdf',
 'CPRE3_2021.pdf', 'CPRE3_2022.pdf'], ['CRDE3_2012.pdf', 'CRDE3_2013.pdf',
 'CRDE3_2014.pdf', 'CRDE3_2015.pdf', 'CRDE3_2016.pdf', 'CRDE3_2017.pdf',
 'CRDE3_2018.pdf', 'CRDE3_2019.pdf', 'CRDE3_2020.pdf', 'CRDE3_2021.pdf',
 'CRDE3_2022.pdf'], ['CRPG3_2012.pdf', 'CRPG3_2013.pdf', 'CRPG3_2014.pdf',
 'CRPG3_2015.pdf', 'CRPG3_2016.pdf', 'CRPG3_2017.pdf', 'CRPG3_2018.pdf',
 'CRPG3_2019.pdf', 'CRPG3_2020.pdf', 'CRPG3_2021.pdf', 'CRPG3_2022.pdf'],
 ['CRPG5_2012.pdf', 'CRPG5_2013.pdf', 'CRPG5_2014.pdf', 'CRPG5_2015.pdf',
 'CRPG5_2016.pdf', 'CRPG5_2017.pdf', 'CRPG5_2018.pdf', 'CRPG5_2019.pdf',
 'CRPG5_2020.pdf', 'CRPG5_2021.pdf', 'CRPG5_2022.pdf'], ['CRPG6_2012.pdf',
 'CRPG6_2013.pdf', 'CRPG6_2014.pdf', 'CRPG6_2015.pdf', 'CRPG6_2016.pdf',
 'CRPG6_2017.pdf', 'CRPG6_2018.pdf', 'CRPG6_2019.pdf', 'CRPG6_2020.pdf',
 'CRPG6_2021.pdf', 'CRPG6_2022.pdf'], ['CRTE3B_2012.pdf', 'CRTE3B_2013.pdf',

'CRTE3B_2014.pdf', 'CRTE3B_2015.pdf', 'CRTE3B_2016.pdf', 'CRTE3B_2017.pdf',
 'CRTE3B_2018.pdf', 'CRTE3B_2019.pdf', 'CRTE3B_2020.pdf', 'CRTE3B_2021.pdf',
 'CRTE3B_2022.pdf'], ['CRTE5B_2012.pdf', 'CRTE5B_2013.pdf', 'CRTE5B_2014.pdf',
 'CRTE5B_2015.pdf', 'CRTE5B_2016.pdf', 'CRTE5B_2017.pdf', 'CRTE5B_2018.pdf',
 'CRTE5B_2019.pdf', 'CRTE5B_2020.pdf', 'CRTE5B_2021.pdf', 'CRTE5B_2022.pdf'],
 ['CSAN3_2012.pdf', 'CSAN3_2013.pdf', 'CSAN3_2014.pdf', 'CSAN3_2015.pdf',
 'CSAN3_2016.pdf', 'CSAN3_2017.pdf', 'CSAN3_2018.pdf', 'CSAN3_2019.pdf',
 'CSAN3_2020.pdf', 'CSAN3_2021.pdf', 'CSAN3_2022.pdf'], ['CSMG3_2012.pdf',
 'CSMG3_2013.pdf', 'CSMG3_2014.pdf', 'CSMG3_2015.pdf', 'CSMG3_2016.pdf',
 'CSMG3_2017.pdf', 'CSMG3_2018.pdf', 'CSMG3_2019.pdf', 'CSMG3_2020.pdf',
 'CSMG3_2021.pdf', 'CSMG3_2022.pdf'], ['CSNA3_2012.pdf', 'CSNA3_2013.pdf',
 'CSNA3_2014.pdf', 'CSNA3_2015.pdf', 'CSNA3_2016.pdf', 'CSNA3_2017.pdf',
 'CSNA3_2018.pdf', 'CSNA3_2019.pdf', 'CSNA3_2020.pdf', 'CSNA3_2021.pdf',
 'CSNA3_2022.pdf'], ['CSRN3_2012.pdf', 'CSRN3_2013.pdf', 'CSRN3_2014.pdf',
 'CSRN3_2015.pdf', 'CSRN3_2016.pdf', 'CSRN3_2017.pdf', 'CSRN3_2018.pdf',
 'CSRN3_2019.pdf', 'CSRN3_2020.pdf', 'CSRN3_2021.pdf', 'CSRN3_2022.pdf'],
 ['CSRN5_2012.pdf', 'CSRN5_2013.pdf', 'CSRN5_2014.pdf', 'CSRN5_2015.pdf',
 'CSRN5_2016.pdf', 'CSRN5_2017.pdf', 'CSRN5_2018.pdf', 'CSRN5_2019.pdf',
 'CSRN5_2020.pdf', 'CSRN5_2021.pdf', 'CSRN5_2022.pdf'], ['CSRN6_2012.pdf',
 'CSRN6_2013.pdf', 'CSRN6_2014.pdf', 'CSRN6_2015.pdf', 'CSRN6_2016.pdf',
 'CSRN6_2017.pdf', 'CSRN6_2018.pdf', 'CSRN6_2019.pdf', 'CSRN6_2020.pdf',
 'CSRN6_2021.pdf', 'CSRN6_2022.pdf'], ['CTKA3_2012.pdf', 'CTKA3_2013.pdf',
 'CTKA3_2014.pdf', 'CTKA3_2015.pdf', 'CTKA3_2016.pdf', 'CTKA3_2017.pdf',
 'CTKA3_2018.pdf', 'CTKA3_2019.pdf', 'CTKA3_2020.pdf', 'CTKA3_2021.pdf',
 'CTKA3_2022.pdf'], ['CTKA4_2012.pdf', 'CTKA4_2013.pdf', 'CTKA4_2014.pdf',
 'CTKA4_2015.pdf', 'CTKA4_2016.pdf', 'CTKA4_2017.pdf', 'CTKA4_2018.pdf',
 'CTKA4_2019.pdf', 'CTKA4_2020.pdf', 'CTKA4_2021.pdf', 'CTKA4_2022.pdf'],
 ['CTNM3_2012.pdf', 'CTNM3_2013.pdf', 'CTNM3_2014.pdf', 'CTNM3_2015.pdf',
 'CTNM3_2016.pdf', 'CTNM3_2017.pdf', 'CTNM3_2018.pdf', 'CTNM3_2019.pdf',
 'CTNM3_2020.pdf', 'CTNM3_2021.pdf', 'CTNM3_2022.pdf'], ['CTNM4_2012.pdf',
 'CTNM4_2013.pdf', 'CTNM4_2014.pdf', 'CTNM4_2015.pdf', 'CTNM4_2016.pdf',
 'CTNM4_2017.pdf', 'CTNM4_2018.pdf', 'CTNM4_2019.pdf', 'CTNM4_2020.pdf',
 'CTNM4_2021.pdf', 'CTNM4_2022.pdf'], ['CTSA3_2012.pdf', 'CTSA3_2013.pdf',
 'CTSA3_2014.pdf', 'CTSA3_2015.pdf', 'CTSA3_2016.pdf', 'CTSA3_2017.pdf',
 'CTSA3_2018.pdf', 'CTSA3_2019.pdf', 'CTSA3_2020.pdf', 'CTSA3_2021.pdf',
 'CTSA3_2022.pdf'], ['CTSA4_2012.pdf', 'CTSA4_2013.pdf', 'CTSA4_2014.pdf',
 'CTSA4_2015.pdf', 'CTSA4_2016.pdf', 'CTSA4_2017.pdf', 'CTSA4_2018.pdf',
 'CTSA4_2019.pdf', 'CTSA4_2020.pdf', 'CTSA4_2021.pdf', 'CTSA4_2022.pdf'],
 ['CTSA8_2012.pdf', 'CTSA8_2013.pdf', 'CTSA8_2014.pdf', 'CTSA8_2015.pdf',
 'CTSA8_2016.pdf', 'CTSA8_2017.pdf', 'CTSA8_2018.pdf', 'CTSA8_2019.pdf',
 'CTSA8_2020.pdf', 'CTSA8_2021.pdf', 'CTSA8_2022.pdf'], ['CYRE3_2012.pdf',
 'CYRE3_2013.pdf', 'CYRE3_2014.pdf', 'CYRE3_2015.pdf', 'CYRE3_2016.pdf',
 'CYRE3_2017.pdf', 'CYRE3_2018.pdf', 'CYRE3_2019.pdf', 'CYRE3_2020.pdf',
 'CYRE3_2021.pdf', 'CYRE3_2022.pdf'], ['DEXP3_2012.pdf', 'DEXP3_2013.pdf',
 'DEXP3_2014.pdf', 'DEXP3_2015.pdf', 'DEXP3_2016.pdf', 'DEXP3_2017.pdf',
 'DEXP3_2018.pdf', 'DEXP3_2019.pdf', 'DEXP3_2020.pdf', 'DEXP3_2021.pdf',
 'DEXP3_2022.pdf'], ['DEXP4_2012.pdf', 'DEXP4_2013.pdf', 'DEXP4_2014.pdf',
 'DEXP4_2015.pdf', 'DEXP4_2016.pdf', 'DEXP4_2017.pdf', 'DEXP4_2018.pdf',

'DEXP4_2019.pdf', 'DEXP4_2020.pdf', 'DEXP4_2021.pdf', 'DEXP4_2022.pdf'],
 ['DIRR3_2012.pdf', 'DIRR3_2013.pdf', 'DIRR3_2014.pdf', 'DIRR3_2015.pdf',
 'DIRR3_2016.pdf', 'DIRR3_2017.pdf', 'DIRR3_2018.pdf', 'DIRR3_2019.pdf',
 'DIRR3_2020.pdf', 'DIRR3_2021.pdf', 'DIRR3_2022.pdf'], ['DOHL3_2012.pdf',
 'DOHL3_2013.pdf', 'DOHL3_2014.pdf', 'DOHL3_2015.pdf', 'DOHL3_2016.pdf',
 'DOHL3_2017.pdf', 'DOHL3_2018.pdf', 'DOHL3_2019.pdf', 'DOHL3_2020.pdf',
 'DOHL3_2021.pdf', 'DOHL3_2022.pdf'], ['DOHL4_2012.pdf', 'DOHL4_2013.pdf',
 'DOHL4_2014.pdf', 'DOHL4_2015.pdf', 'DOHL4_2016.pdf', 'DOHL4_2017.pdf',
 'DOHL4_2018.pdf', 'DOHL4_2019.pdf', 'DOHL4_2020.pdf', 'DOHL4_2021.pdf',
 'DOHL4_2022.pdf'], ['DTCY3_2012.pdf', 'DTCY3_2013.pdf', 'DTCY3_2014.pdf',
 'DTCY3_2015.pdf', 'DTCY3_2016.pdf', 'DTCY3_2017.pdf', 'DTCY3_2018.pdf',
 'DTCY3_2019.pdf', 'DTCY3_2020.pdf', 'DTCY3_2021.pdf', 'DTCY3_2022.pdf'],
 ['DTCY4_2012.pdf', 'DTCY4_2013.pdf', 'DTCY4_2014.pdf', 'DTCY4_2015.pdf',
 'DTCY4_2016.pdf', 'DTCY4_2017.pdf', 'DTCY4_2018.pdf', 'DTCY4_2019.pdf',
 'DTCY4_2020.pdf', 'DTCY4_2021.pdf', 'DTCY4_2022.pdf'], ['DXC03_2012.pdf',
 'DXC03_2013.pdf', 'DXC03_2014.pdf', 'DXC03_2015.pdf', 'DXC03_2016.pdf',
 'DXC03_2017.pdf', 'DXC03_2018.pdf', 'DXC03_2019.pdf', 'DXC03_2020.pdf',
 'DXC03_2021.pdf', 'DXC03_2022.pdf'], ['EALT3_2012.pdf', 'EALT3_2013.pdf',
 'EALT3_2014.pdf', 'EALT3_2015.pdf', 'EALT3_2016.pdf', 'EALT3_2017.pdf',
 'EALT3_2018.pdf', 'EALT3_2019.pdf', 'EALT3_2020.pdf', 'EALT3_2021.pdf',
 'EALT3_2022.pdf'], ['EALT4_2012.pdf', 'EALT4_2013.pdf', 'EALT4_2014.pdf',
 'EALT4_2015.pdf', 'EALT4_2016.pdf', 'EALT4_2017.pdf', 'EALT4_2018.pdf',
 'EALT4_2019.pdf', 'EALT4_2020.pdf', 'EALT4_2021.pdf', 'EALT4_2022.pdf'],
 ['ECOR3_2012.pdf', 'ECOR3_2013.pdf', 'ECOR3_2014.pdf', 'ECOR3_2015.pdf',
 'ECOR3_2016.pdf', 'ECOR3_2017.pdf', 'ECOR3_2018.pdf', 'ECOR3_2019.pdf',
 'ECOR3_2020.pdf', 'ECOR3_2021.pdf', 'ECOR3_2022.pdf'], ['EGIE3_2012.pdf',
 'EGIE3_2013.pdf', 'EGIE3_2014.pdf', 'EGIE3_2015.pdf', 'EGIE3_2016.pdf',
 'EGIE3_2017.pdf', 'EGIE3_2018.pdf', 'EGIE3_2019.pdf', 'EGIE3_2020.pdf',
 'EGIE3_2021.pdf', 'EGIE3_2022.pdf'], ['EKTR3_2012.pdf', 'EKTR3_2013.pdf',
 'EKTR3_2014.pdf', 'EKTR3_2015.pdf', 'EKTR3_2016.pdf', 'EKTR3_2017.pdf',
 'EKTR3_2018.pdf', 'EKTR3_2019.pdf', 'EKTR3_2020.pdf', 'EKTR3_2021.pdf',
 'EKTR3_2022.pdf'], ['EKTR4_2012.pdf', 'EKTR4_2013.pdf', 'EKTR4_2014.pdf',
 'EKTR4_2015.pdf', 'EKTR4_2016.pdf', 'EKTR4_2017.pdf', 'EKTR4_2018.pdf',
 'EKTR4_2019.pdf', 'EKTR4_2020.pdf', 'EKTR4_2021.pdf', 'EKTR4_2022.pdf'],
 ['ELET3_2012.pdf', 'ELET3_2013.pdf', 'ELET3_2014.pdf', 'ELET3_2015.pdf',
 'ELET3_2016.pdf', 'ELET3_2017.pdf', 'ELET3_2018.pdf', 'ELET3_2019.pdf',
 'ELET3_2020.pdf', 'ELET3_2021.pdf', 'ELET3_2022.pdf'], ['ELET5_2012.pdf',
 'ELET5_2013.pdf', 'ELET5_2014.pdf', 'ELET5_2015.pdf', 'ELET5_2016.pdf',
 'ELET5_2017.pdf', 'ELET5_2018.pdf', 'ELET5_2019.pdf', 'ELET5_2020.pdf',
 'ELET5_2021.pdf', 'ELET5_2022.pdf'], ['ELET6_2012.pdf', 'ELET6_2013.pdf',
 'ELET6_2014.pdf', 'ELET6_2015.pdf', 'ELET6_2016.pdf', 'ELET6_2017.pdf',
 'ELET6_2018.pdf', 'ELET6_2019.pdf', 'ELET6_2020.pdf', 'ELET6_2021.pdf',
 'ELET6_2022.pdf'], ['EMAE3_2012.pdf', 'EMAE3_2013.pdf', 'EMAE3_2014.pdf',
 'EMAE3_2015.pdf', 'EMAE3_2016.pdf', 'EMAE3_2017.pdf', 'EMAE3_2018.pdf',
 'EMAE3_2019.pdf', 'EMAE3_2020.pdf', 'EMAE3_2021.pdf', 'EMAE3_2022.pdf'],
 ['EMAE4_2012.pdf', 'EMAE4_2013.pdf', 'EMAE4_2014.pdf', 'EMAE4_2015.pdf',
 'EMAE4_2016.pdf', 'EMAE4_2017.pdf', 'EMAE4_2018.pdf', 'EMAE4_2019.pdf',
 'EMAE4_2020.pdf', 'EMAE4_2021.pdf', 'EMAE4_2022.pdf'], ['ENAT3_2012.pdf',

'ENAT3_2013.pdf', 'ENAT3_2014.pdf', 'ENAT3_2015.pdf', 'ENAT3_2016.pdf',
 'ENAT3_2017.pdf', 'ENAT3_2018.pdf', 'ENAT3_2019.pdf', 'ENAT3_2020.pdf',
 'ENAT3_2021.pdf', 'ENAT3_2022.pdf'], ['ENBR3_2012.pdf', 'ENBR3_2013.pdf',
 'ENBR3_2014.pdf', 'ENBR3_2015.pdf', 'ENBR3_2016.pdf', 'ENBR3_2017.pdf',
 'ENBR3_2018.pdf', 'ENBR3_2019.pdf', 'ENBR3_2020.pdf', 'ENBR3_2021.pdf',
 'ENBR3_2022.pdf'], ['ENEV3_2012.pdf', 'ENEV3_2013.pdf', 'ENEV3_2014.pdf',
 'ENEV3_2015.pdf', 'ENEV3_2016.pdf', 'ENEV3_2017.pdf', 'ENEV3_2018.pdf',
 'ENEV3_2019.pdf', 'ENEV3_2020.pdf', 'ENEV3_2021.pdf', 'ENEV3_2022.pdf'],
 ['ENGI11_2012.pdf', 'ENGI11_2013.pdf', 'ENGI11_2014.pdf', 'ENGI11_2015.pdf',
 'ENGI11_2016.pdf', 'ENGI11_2017.pdf', 'ENGI11_2018.pdf', 'ENGI11_2019.pdf',
 'ENGI11_2020.pdf', 'ENGI11_2021.pdf', 'ENGI11_2022.pdf'], ['ENGI3_2012.pdf',
 'ENGI3_2013.pdf', 'ENGI3_2014.pdf', 'ENGI3_2015.pdf', 'ENGI3_2016.pdf',
 'ENGI3_2017.pdf', 'ENGI3_2018.pdf', 'ENGI3_2019.pdf', 'ENGI3_2020.pdf',
 'ENGI3_2021.pdf', 'ENGI3_2022.pdf'], ['ENGI4_2012.pdf', 'ENGI4_2013.pdf',
 'ENGI4_2014.pdf', 'ENGI4_2015.pdf', 'ENGI4_2016.pdf', 'ENGI4_2017.pdf',
 'ENGI4_2018.pdf', 'ENGI4_2019.pdf', 'ENGI4_2020.pdf', 'ENGI4_2021.pdf',
 'ENGI4_2022.pdf'], ['ENMT3_2012.pdf', 'ENMT3_2013.pdf', 'ENMT3_2014.pdf',
 'ENMT3_2015.pdf', 'ENMT3_2016.pdf', 'ENMT3_2017.pdf', 'ENMT3_2018.pdf',
 'ENMT3_2019.pdf', 'ENMT3_2020.pdf', 'ENMT3_2021.pdf', 'ENMT3_2022.pdf'],
 ['ENMT4_2012.pdf', 'ENMT4_2013.pdf', 'ENMT4_2014.pdf', 'ENMT4_2015.pdf',
 'ENMT4_2016.pdf', 'ENMT4_2017.pdf', 'ENMT4_2018.pdf', 'ENMT4_2019.pdf',
 'ENMT4_2020.pdf', 'ENMT4_2021.pdf', 'ENMT4_2022.pdf'], ['EPAR3_2012.pdf',
 'EPAR3_2013.pdf', 'EPAR3_2014.pdf', 'EPAR3_2015.pdf', 'EPAR3_2016.pdf',
 'EPAR3_2017.pdf', 'EPAR3_2018.pdf', 'EPAR3_2019.pdf', 'EPAR3_2020.pdf',
 'EPAR3_2021.pdf', 'EPAR3_2022.pdf'], ['EPAR4_2012.pdf', 'EPAR4_2013.pdf',
 'EPAR4_2014.pdf', 'EPAR4_2015.pdf', 'EPAR4_2016.pdf', 'EPAR4_2017.pdf',
 'EPAR4_2018.pdf', 'EPAR4_2019.pdf', 'EPAR4_2020.pdf', 'EPAR4_2021.pdf',
 'EPAR4_2022.pdf'], ['EQMA3B_2012.pdf', 'EQMA3B_2013.pdf', 'EQMA3B_2014.pdf',
 'EQMA3B_2015.pdf', 'EQMA3B_2016.pdf', 'EQMA3B_2017.pdf', 'EQMA3B_2018.pdf',
 'EQMA3B_2019.pdf', 'EQMA3B_2020.pdf', 'EQMA3B_2021.pdf', 'EQMA3B_2022.pdf'],
 ['EQMA5B_2012.pdf', 'EQMA5B_2013.pdf', 'EQMA5B_2014.pdf', 'EQMA5B_2015.pdf',
 'EQMA5B_2016.pdf', 'EQMA5B_2017.pdf', 'EQMA5B_2018.pdf', 'EQMA5B_2019.pdf',
 'EQMA5B_2020.pdf', 'EQMA5B_2021.pdf', 'EQMA5B_2022.pdf'], ['EQMA6B_2012.pdf',
 'EQMA6B_2013.pdf', 'EQMA6B_2014.pdf', 'EQMA6B_2015.pdf', 'EQMA6B_2016.pdf',
 'EQMA6B_2017.pdf', 'EQMA6B_2018.pdf', 'EQMA6B_2019.pdf', 'EQMA6B_2020.pdf',
 'EQMA6B_2021.pdf', 'EQMA6B_2022.pdf'], ['EQPA3_2012.pdf', 'EQPA3_2013.pdf',
 'EQPA3_2014.pdf', 'EQPA3_2015.pdf', 'EQPA3_2016.pdf', 'EQPA3_2017.pdf',
 'EQPA3_2018.pdf', 'EQPA3_2019.pdf', 'EQPA3_2020.pdf', 'EQPA3_2021.pdf',
 'EQPA3_2022.pdf'], ['EQPA5_2012.pdf', 'EQPA5_2013.pdf', 'EQPA5_2014.pdf',
 'EQPA5_2015.pdf', 'EQPA5_2016.pdf', 'EQPA5_2017.pdf', 'EQPA5_2018.pdf',
 'EQPA5_2019.pdf', 'EQPA5_2020.pdf', 'EQPA5_2021.pdf', 'EQPA5_2022.pdf'],
 ['EQPA6_2012.pdf', 'EQPA6_2013.pdf', 'EQPA6_2014.pdf', 'EQPA6_2015.pdf',
 'EQPA6_2016.pdf', 'EQPA6_2017.pdf', 'EQPA6_2018.pdf', 'EQPA6_2019.pdf',
 'EQPA6_2020.pdf', 'EQPA6_2021.pdf', 'EQPA6_2022.pdf'], ['EQPA7_2012.pdf',
 'EQPA7_2013.pdf', 'EQPA7_2014.pdf', 'EQPA7_2015.pdf', 'EQPA7_2016.pdf',
 'EQPA7_2017.pdf', 'EQPA7_2018.pdf', 'EQPA7_2019.pdf', 'EQPA7_2020.pdf',
 'EQPA7_2021.pdf', 'EQPA7_2022.pdf'], ['EQTL11_2012.pdf', 'EQTL11_2013.pdf',
 'EQTL11_2014.pdf', 'EQTL11_2015.pdf', 'EQTL11_2016.pdf', 'EQTL11_2017.pdf',

'EQTL11_2018.pdf', 'EQTL11_2019.pdf', 'EQTL11_2020.pdf', 'EQTL11_2021.pdf',
 'EQTL11_2022.pdf'], ['EQTL3_2012.pdf', 'EQTL3_2013.pdf', 'EQTL3_2014.pdf',
 'EQTL3_2015.pdf', 'EQTL3_2016.pdf', 'EQTL3_2017.pdf', 'EQTL3_2018.pdf',
 'EQTL3_2019.pdf', 'EQTL3_2020.pdf', 'EQTL3_2021.pdf', 'EQTL3_2022.pdf'],
 ['ESTR3_2012.pdf', 'ESTR3_2013.pdf', 'ESTR3_2014.pdf', 'ESTR3_2015.pdf',
 'ESTR3_2016.pdf', 'ESTR3_2017.pdf', 'ESTR3_2018.pdf', 'ESTR3_2019.pdf',
 'ESTR3_2020.pdf', 'ESTR3_2021.pdf', 'ESTR3_2022.pdf'], ['ESTR4_2012.pdf',
 'ESTR4_2013.pdf', 'ESTR4_2014.pdf', 'ESTR4_2015.pdf', 'ESTR4_2016.pdf',
 'ESTR4_2017.pdf', 'ESTR4_2018.pdf', 'ESTR4_2019.pdf', 'ESTR4_2020.pdf',
 'ESTR4_2021.pdf', 'ESTR4_2022.pdf'], ['ETER3_2012.pdf', 'ETER3_2013.pdf',
 'ETER3_2014.pdf', 'ETER3_2015.pdf', 'ETER3_2016.pdf', 'ETER3_2017.pdf',
 'ETER3_2018.pdf', 'ETER3_2019.pdf', 'ETER3_2020.pdf', 'ETER3_2021.pdf',
 'ETER3_2022.pdf'], ['EUCA3_2012.pdf', 'EUCA3_2013.pdf', 'EUCA3_2014.pdf',
 'EUCA3_2015.pdf', 'EUCA3_2016.pdf', 'EUCA3_2017.pdf', 'EUCA3_2018.pdf',
 'EUCA3_2019.pdf', 'EUCA3_2020.pdf', 'EUCA3_2021.pdf', 'EUCA3_2022.pdf'],
 ['EUCA4_2012.pdf', 'EUCA4_2013.pdf', 'EUCA4_2014.pdf', 'EUCA4_2015.pdf',
 'EUCA4_2016.pdf', 'EUCA4_2017.pdf', 'EUCA4_2018.pdf', 'EUCA4_2019.pdf',
 'EUCA4_2020.pdf', 'EUCA4_2021.pdf', 'EUCA4_2022.pdf'], ['EVEN3_2012.pdf',
 'EVEN3_2013.pdf', 'EVEN3_2014.pdf', 'EVEN3_2015.pdf', 'EVEN3_2016.pdf',
 'EVEN3_2017.pdf', 'EVEN3_2018.pdf', 'EVEN3_2019.pdf', 'EVEN3_2020.pdf',
 'EVEN3_2021.pdf', 'EVEN3_2022.pdf'], ['EZTC3_2012.pdf', 'EZTC3_2013.pdf',
 'EZTC3_2014.pdf', 'EZTC3_2015.pdf', 'EZTC3_2016.pdf', 'EZTC3_2017.pdf',
 'EZTC3_2018.pdf', 'EZTC3_2019.pdf', 'EZTC3_2020.pdf', 'EZTC3_2021.pdf',
 'EZTC3_2022.pdf'], ['FESA3_2012.pdf', 'FESA3_2013.pdf', 'FESA3_2014.pdf',
 'FESA3_2015.pdf', 'FESA3_2016.pdf', 'FESA3_2017.pdf', 'FESA3_2018.pdf',
 'FESA3_2019.pdf', 'FESA3_2020.pdf', 'FESA3_2021.pdf', 'FESA3_2022.pdf'],
 ['FESA4_2012.pdf', 'FESA4_2013.pdf', 'FESA4_2014.pdf', 'FESA4_2015.pdf',
 'FESA4_2016.pdf', 'FESA4_2017.pdf', 'FESA4_2018.pdf', 'FESA4_2019.pdf',
 'FESA4_2020.pdf', 'FESA4_2021.pdf', 'FESA4_2022.pdf'], ['FHER3_2012.pdf',
 'FHER3_2013.pdf', 'FHER3_2014.pdf', 'FHER3_2015.pdf', 'FHER3_2016.pdf',
 'FHER3_2017.pdf', 'FHER3_2018.pdf', 'FHER3_2019.pdf', 'FHER3_2020.pdf',
 'FHER3_2021.pdf', 'FHER3_2022.pdf'], ['FIGE3_2012.pdf', 'FIGE3_2013.pdf',
 'FIGE3_2014.pdf', 'FIGE3_2015.pdf', 'FIGE3_2016.pdf', 'FIGE3_2017.pdf',
 'FIGE3_2018.pdf', 'FIGE3_2019.pdf', 'FIGE3_2020.pdf', 'FIGE3_2021.pdf',
 'FIGE3_2022.pdf'], ['FIGE4_2012.pdf', 'FIGE4_2013.pdf', 'FIGE4_2014.pdf',
 'FIGE4_2015.pdf', 'FIGE4_2016.pdf', 'FIGE4_2017.pdf', 'FIGE4_2018.pdf',
 'FIGE4_2019.pdf', 'FIGE4_2020.pdf', 'FIGE4_2021.pdf', 'FIGE4_2022.pdf'],
 ['FLRY3_2012.pdf', 'FLRY3_2013.pdf', 'FLRY3_2014.pdf', 'FLRY3_2015.pdf',
 'FLRY3_2016.pdf', 'FLRY3_2017.pdf', 'FLRY3_2018.pdf', 'FLRY3_2019.pdf',
 'FLRY3_2020.pdf', 'FLRY3_2021.pdf', 'FLRY3_2022.pdf'], ['FRAS3_2012.pdf',
 'FRAS3_2013.pdf', 'FRAS3_2014.pdf', 'FRAS3_2015.pdf', 'FRAS3_2016.pdf',
 'FRAS3_2017.pdf', 'FRAS3_2018.pdf', 'FRAS3_2019.pdf', 'FRAS3_2020.pdf',
 'FRAS3_2021.pdf', 'FRAS3_2022.pdf'], ['FRAS4_2012.pdf', 'FRAS4_2013.pdf',
 'FRAS4_2014.pdf', 'FRAS4_2015.pdf', 'FRAS4_2016.pdf', 'FRAS4_2017.pdf',
 'FRAS4_2018.pdf', 'FRAS4_2019.pdf', 'FRAS4_2020.pdf', 'FRAS4_2021.pdf',
 'FRAS4_2022.pdf'], ['FRI03_2012.pdf', 'FRI03_2013.pdf', 'FRI03_2014.pdf',
 'FRI03_2015.pdf', 'FRI03_2016.pdf', 'FRI03_2017.pdf', 'FRI03_2018.pdf',
 'FRI03_2019.pdf', 'FRI03_2020.pdf', 'FRI03_2021.pdf', 'FRI03_2022.pdf'],

'JHSF3_2021.pdf', 'JHSF3_2022.pdf'], ['JOPA3_2012.pdf', 'JOPA3_2013.pdf',
 'JOPA3_2014.pdf', 'JOPA3_2015.pdf', 'JOPA3_2016.pdf', 'JOPA3_2017.pdf',
 'JOPA3_2018.pdf', 'JOPA3_2019.pdf', 'JOPA3_2020.pdf', 'JOPA3_2021.pdf',
 'JOPA3_2022.pdf'], ['JOPA4_2012.pdf', 'JOPA4_2013.pdf', 'JOPA4_2014.pdf',
 'JOPA4_2015.pdf', 'JOPA4_2016.pdf', 'JOPA4_2017.pdf', 'JOPA4_2018.pdf',
 'JOPA4_2019.pdf', 'JOPA4_2020.pdf', 'JOPA4_2021.pdf', 'JOPA4_2022.pdf'],
 ['JSLG11_2012.pdf', 'JSLG11_2013.pdf', 'JSLG11_2014.pdf', 'JSLG11_2015.pdf',
 'JSLG11_2016.pdf', 'JSLG11_2017.pdf', 'JSLG11_2018.pdf', 'JSLG11_2019.pdf',
 'JSLG11_2020.pdf', 'JSLG11_2021.pdf', 'JSLG11_2022.pdf'], ['JSLG3_2012.pdf',
 'JSLG3_2013.pdf', 'JSLG3_2014.pdf', 'JSLG3_2015.pdf', 'JSLG3_2016.pdf',
 'JSLG3_2017.pdf', 'JSLG3_2018.pdf', 'JSLG3_2019.pdf', 'JSLG3_2020.pdf',
 'JSLG3_2021.pdf', 'JSLG3_2022.pdf'], ['KEPL3_2012.pdf', 'KEPL3_2013.pdf',
 'KEPL3_2014.pdf', 'KEPL3_2015.pdf', 'KEPL3_2016.pdf', 'KEPL3_2017.pdf',
 'KEPL3_2018.pdf', 'KEPL3_2019.pdf', 'KEPL3_2020.pdf', 'KEPL3_2021.pdf',
 'KEPL3_2022.pdf'], ['KEPL4_2012.pdf', 'KEPL4_2013.pdf', 'KEPL4_2014.pdf',
 'KEPL4_2015.pdf', 'KEPL4_2016.pdf', 'KEPL4_2017.pdf', 'KEPL4_2018.pdf',
 'KEPL4_2019.pdf', 'KEPL4_2020.pdf', 'KEPL4_2021.pdf', 'KEPL4_2022.pdf'],
 ['KLB3_2012.pdf', 'KLB3_2013.pdf', 'KLB3_2014.pdf', 'KLB3_2015.pdf',
 'KLB3_2016.pdf', 'KLB3_2017.pdf', 'KLB3_2018.pdf', 'KLB3_2019.pdf',
 'KLB3_2020.pdf', 'KLB3_2021.pdf', 'KLB3_2022.pdf'], ['LEVE3_2012.pdf',
 'LEVE3_2013.pdf', 'LEVE3_2014.pdf', 'LEVE3_2015.pdf', 'LEVE3_2016.pdf',
 'LEVE3_2017.pdf', 'LEVE3_2018.pdf', 'LEVE3_2019.pdf', 'LEVE3_2020.pdf',
 'LEVE3_2021.pdf', 'LEVE3_2022.pdf'], ['LIGT3_2012.pdf', 'LIGT3_2013.pdf',
 'LIGT3_2014.pdf', 'LIGT3_2015.pdf', 'LIGT3_2016.pdf', 'LIGT3_2017.pdf',
 'LIGT3_2018.pdf', 'LIGT3_2019.pdf', 'LIGT3_2020.pdf', 'LIGT3_2021.pdf',
 'LIGT3_2022.pdf'], ['LOGN3_2012.pdf', 'LOGN3_2013.pdf', 'LOGN3_2014.pdf',
 'LOGN3_2015.pdf', 'LOGN3_2016.pdf', 'LOGN3_2017.pdf', 'LOGN3_2018.pdf',
 'LOGN3_2019.pdf', 'LOGN3_2020.pdf', 'LOGN3_2021.pdf', 'LOGN3_2022.pdf'],
 ['LREN3_2012.pdf', 'LREN3_2013.pdf', 'LREN3_2014.pdf', 'LREN3_2015.pdf',
 'LREN3_2016.pdf', 'LREN3_2017.pdf', 'LREN3_2018.pdf', 'LREN3_2019.pdf',
 'LREN3_2020.pdf', 'LREN3_2021.pdf', 'LREN3_2022.pdf'], ['LTEL3B_2012.pdf',
 'LTEL3B_2013.pdf', 'LTEL3B_2014.pdf', 'LTEL3B_2015.pdf', 'LTEL3B_2016.pdf',
 'LTEL3B_2017.pdf', 'LTEL3B_2018.pdf', 'LTEL3B_2019.pdf', 'LTEL3B_2020.pdf',
 'LTEL3B_2021.pdf', 'LTEL3B_2022.pdf'], ['LUXM3_2012.pdf', 'LUXM3_2013.pdf',
 'LUXM3_2014.pdf', 'LUXM3_2015.pdf', 'LUXM3_2016.pdf', 'LUXM3_2017.pdf',
 'LUXM3_2018.pdf', 'LUXM3_2019.pdf', 'LUXM3_2020.pdf', 'LUXM3_2021.pdf',
 'LUXM3_2022.pdf'], ['LUXM4_2012.pdf', 'LUXM4_2013.pdf', 'LUXM4_2014.pdf',
 'LUXM4_2015.pdf', 'LUXM4_2016.pdf', 'LUXM4_2017.pdf', 'LUXM4_2018.pdf',
 'LUXM4_2019.pdf', 'LUXM4_2020.pdf', 'LUXM4_2021.pdf', 'LUXM4_2022.pdf'],
 ['MDNE3_2012.pdf', 'MDNE3_2013.pdf', 'MDNE3_2014.pdf', 'MDNE3_2015.pdf',
 'MDNE3_2016.pdf', 'MDNE3_2017.pdf', 'MDNE3_2018.pdf', 'MDNE3_2019.pdf',
 'MDNE3_2020.pdf', 'MDNE3_2021.pdf', 'MDNE3_2022.pdf'], ['MGEL3_2012.pdf',
 'MGEL3_2013.pdf', 'MGEL3_2014.pdf', 'MGEL3_2015.pdf', 'MGEL3_2016.pdf',
 'MGEL3_2017.pdf', 'MGEL3_2018.pdf', 'MGEL3_2019.pdf', 'MGEL3_2020.pdf',
 'MGEL3_2021.pdf', 'MGEL3_2022.pdf'], ['MGEL4_2012.pdf', 'MGEL4_2013.pdf',
 'MGEL4_2014.pdf', 'MGEL4_2015.pdf', 'MGEL4_2016.pdf', 'MGEL4_2017.pdf',
 'MGEL4_2018.pdf', 'MGEL4_2019.pdf', 'MGEL4_2020.pdf', 'MGEL4_2021.pdf',
 'MGEL4_2022.pdf'], ['MGLU3_2012.pdf', 'MGLU3_2013.pdf', 'MGLU3_2014.pdf',

'MGLU3_2015.pdf', 'MGLU3_2016.pdf', 'MGLU3_2017.pdf', 'MGLU3_2018.pdf',
 'MGLU3_2019.pdf', 'MGLU3_2020.pdf', 'MGLU3_2021.pdf', 'MGLU3_2022.pdf'],
 ['MILS3_2012.pdf', 'MILS3_2013.pdf', 'MILS3_2014.pdf', 'MILS3_2015.pdf',
 'MILS3_2016.pdf', 'MILS3_2017.pdf', 'MILS3_2018.pdf', 'MILS3_2019.pdf',
 'MILS3_2020.pdf', 'MILS3_2021.pdf', 'MILS3_2022.pdf'], ['MMAQ3_2012.pdf',
 'MMAQ3_2013.pdf', 'MMAQ3_2014.pdf', 'MMAQ3_2015.pdf', 'MMAQ3_2016.pdf',
 'MMAQ3_2017.pdf', 'MMAQ3_2018.pdf', 'MMAQ3_2019.pdf', 'MMAQ3_2020.pdf',
 'MMAQ3_2021.pdf', 'MMAQ3_2022.pdf'], ['MMAQ4_2012.pdf', 'MMAQ4_2013.pdf',
 'MMAQ4_2014.pdf', 'MMAQ4_2015.pdf', 'MMAQ4_2016.pdf', 'MMAQ4_2017.pdf',
 'MMAQ4_2018.pdf', 'MMAQ4_2019.pdf', 'MMAQ4_2020.pdf', 'MMAQ4_2021.pdf',
 'MMAQ4_2022.pdf'], ['MMXM3_2012.pdf', 'MMXM3_2013.pdf', 'MMXM3_2014.pdf',
 'MMXM3_2015.pdf', 'MMXM3_2016.pdf', 'MMXM3_2017.pdf', 'MMXM3_2018.pdf',
 'MMXM3_2019.pdf', 'MMXM3_2020.pdf', 'MMXM3_2021.pdf'], ['MNDL3_2012.pdf',
 'MNDL3_2013.pdf', 'MNDL3_2014.pdf', 'MNDL3_2015.pdf', 'MNDL3_2016.pdf',
 'MNDL3_2017.pdf', 'MNDL3_2018.pdf', 'MNDL3_2019.pdf', 'MNDL3_2020.pdf',
 'MNDL3_2021.pdf', 'MNDL3_2022.pdf'], ['MNPR3_2012.pdf', 'MNPR3_2013.pdf',
 'MNPR3_2014.pdf', 'MNPR3_2015.pdf', 'MNPR3_2016.pdf', 'MNPR3_2017.pdf',
 'MNPR3_2018.pdf', 'MNPR3_2019.pdf', 'MNPR3_2020.pdf', 'MNPR3_2021.pdf',
 'MNPR3_2022.pdf'], ['MRFG3_2012.pdf', 'MRFG3_2013.pdf', 'MRFG3_2014.pdf',
 'MRFG3_2015.pdf', 'MRFG3_2016.pdf', 'MRFG3_2017.pdf', 'MRFG3_2018.pdf',
 'MRFG3_2019.pdf', 'MRFG3_2020.pdf', 'MRFG3_2021.pdf', 'MRFG3_2022.pdf'],
 ['MRSAB3_2012.pdf', 'MRSAB3_2013.pdf', 'MRSAB3_2014.pdf', 'MRSAB3_2015.pdf',
 'MRSAB3_2016.pdf', 'MRSAB3_2017.pdf', 'MRSAB3_2018.pdf', 'MRSAB3_2019.pdf',
 'MRSAB3_2020.pdf', 'MRSAB3_2021.pdf', 'MRSAB3_2022.pdf'], ['MRSAB5_2012.pdf',
 'MRSAB5_2013.pdf', 'MRSAB5_2014.pdf', 'MRSAB5_2015.pdf', 'MRSAB5_2016.pdf',
 'MRSAB5_2017.pdf', 'MRSAB5_2018.pdf', 'MRSAB5_2019.pdf', 'MRSAB5_2020.pdf',
 'MRSAB5_2021.pdf', 'MRSAB5_2022.pdf'], ['MRSAB6_2012.pdf', 'MRSAB6_2013.pdf',
 'MRSAB6_2014.pdf', 'MRSAB6_2015.pdf', 'MRSAB6_2016.pdf', 'MRSAB6_2017.pdf',
 'MRSAB6_2018.pdf', 'MRSAB6_2019.pdf', 'MRSAB6_2020.pdf', 'MRSAB6_2021.pdf',
 'MRSAB6_2022.pdf'], ['MRVE3_2012.pdf', 'MRVE3_2013.pdf', 'MRVE3_2014.pdf',
 'MRVE3_2015.pdf', 'MRVE3_2016.pdf', 'MRVE3_2017.pdf', 'MRVE3_2018.pdf',
 'MRVE3_2019.pdf', 'MRVE3_2020.pdf', 'MRVE3_2021.pdf', 'MRVE3_2022.pdf'],
 ['MTSA3_2012.pdf', 'MTSA3_2013.pdf', 'MTSA3_2014.pdf', 'MTSA3_2015.pdf',
 'MTSA3_2016.pdf', 'MTSA3_2017.pdf', 'MTSA3_2018.pdf', 'MTSA3_2019.pdf',
 'MTSA3_2020.pdf', 'MTSA3_2021.pdf', 'MTSA3_2022.pdf'], ['MTSA4_2012.pdf',
 'MTSA4_2013.pdf', 'MTSA4_2014.pdf', 'MTSA4_2015.pdf', 'MTSA4_2016.pdf',
 'MTSA4_2017.pdf', 'MTSA4_2018.pdf', 'MTSA4_2019.pdf', 'MTSA4_2020.pdf',
 'MTSA4_2021.pdf', 'MTSA4_2022.pdf'], ['MWET3_2012.pdf', 'MWET3_2013.pdf',
 'MWET3_2014.pdf', 'MWET3_2015.pdf', 'MWET3_2016.pdf', 'MWET3_2017.pdf',
 'MWET3_2018.pdf', 'MWET3_2019.pdf', 'MWET3_2020.pdf', 'MWET3_2021.pdf',
 'MWET3_2022.pdf'], ['MWET4_2012.pdf', 'MWET4_2013.pdf', 'MWET4_2014.pdf',
 'MWET4_2015.pdf', 'MWET4_2016.pdf', 'MWET4_2017.pdf', 'MWET4_2018.pdf',
 'MWET4_2019.pdf', 'MWET4_2020.pdf', 'MWET4_2021.pdf', 'MWET4_2022.pdf'],
 ['MYPK3_2012.pdf', 'MYPK3_2013.pdf', 'MYPK3_2014.pdf', 'MYPK3_2015.pdf',
 'MYPK3_2016.pdf', 'MYPK3_2017.pdf', 'MYPK3_2018.pdf', 'MYPK3_2019.pdf',
 'MYPK3_2020.pdf', 'MYPK3_2021.pdf', 'MYPK3_2022.pdf'], ['NEMO5_2012.pdf',
 'NEMO5_2013.pdf', 'NEMO5_2014.pdf', 'NEMO5_2015.pdf', 'NEMO5_2016.pdf',
 'NEMO5_2017.pdf', 'NEMO5_2018.pdf', 'NEMO5_2019.pdf', 'NEMO5_2020.pdf',

'PCAR99_2015.pdf', 'PCAR99_2016.pdf', 'PCAR99_2017.pdf', 'PCAR99_2018.pdf',
 'PCAR99_2019.pdf', 'PCAR99_2020.pdf', 'PCAR99_2021.pdf', 'PCAR99_2022.pdf'],
 ['PDGR3_2012.pdf', 'PDGR3_2013.pdf', 'PDGR3_2014.pdf', 'PDGR3_2015.pdf',
 'PDGR3_2016.pdf', 'PDGR3_2017.pdf', 'PDGR3_2018.pdf', 'PDGR3_2019.pdf',
 'PDGR3_2020.pdf', 'PDGR3_2021.pdf', 'PDGR3_2022.pdf'], ['PDT3_2012.pdf',
 'PDT3_2013.pdf', 'PDT3_2014.pdf', 'PDT3_2015.pdf', 'PDT3_2016.pdf',
 'PDT3_2017.pdf', 'PDT3_2018.pdf', 'PDT3_2019.pdf', 'PDT3_2020.pdf',
 'PDT3_2021.pdf', 'PDT3_2022.pdf'], ['PFRM3_2012.pdf', 'PFRM3_2013.pdf',
 'PFRM3_2014.pdf', 'PFRM3_2015.pdf', 'PFRM3_2016.pdf', 'PFRM3_2017.pdf',
 'PFRM3_2018.pdf', 'PFRM3_2019.pdf', 'PFRM3_2020.pdf', 'PFRM3_2021.pdf',
 'PFRM3_2022.pdf'], ['PLAS3_2012.pdf', 'PLAS3_2013.pdf', 'PLAS3_2014.pdf',
 'PLAS3_2015.pdf', 'PLAS3_2016.pdf', 'PLAS3_2017.pdf', 'PLAS3_2018.pdf',
 'PLAS3_2019.pdf', 'PLAS3_2020.pdf', 'PLAS3_2021.pdf', 'PLAS3_2022.pdf'],
 ['PMAM3_2012.pdf', 'PMAM3_2013.pdf', 'PMAM3_2014.pdf', 'PMAM3_2015.pdf',
 'PMAM3_2016.pdf', 'PMAM3_2017.pdf', 'PMAM3_2018.pdf', 'PMAM3_2019.pdf',
 'PMAM3_2020.pdf', 'PMAM3_2021.pdf', 'PMAM3_2022.pdf'], ['PNVL3_2012.pdf',
 'PNVL3_2013.pdf', 'PNVL3_2014.pdf', 'PNVL3_2015.pdf', 'PNVL3_2016.pdf',
 'PNVL3_2017.pdf', 'PNVL3_2018.pdf', 'PNVL3_2019.pdf', 'PNVL3_2020.pdf',
 'PNVL3_2021.pdf', 'PNVL3_2022.pdf'], ['POM3_2012.pdf', 'POM3_2013.pdf',
 'POM3_2014.pdf', 'POM3_2015.pdf', 'POM3_2016.pdf', 'POM3_2017.pdf',
 'POM3_2018.pdf', 'POM3_2019.pdf', 'POM3_2020.pdf', 'POM3_2021.pdf',
 'POM3_2022.pdf'], ['POSI3_2012.pdf', 'POSI3_2013.pdf', 'POSI3_2014.pdf',
 'POSI3_2015.pdf', 'POSI3_2016.pdf', 'POSI3_2017.pdf', 'POSI3_2018.pdf',
 'POSI3_2019.pdf', 'POSI3_2020.pdf', 'POSI3_2021.pdf', 'POSI3_2022.pdf'],
 ['PPAR3_2012.pdf', 'PPAR3_2013.pdf', 'PPAR3_2014.pdf', 'PPAR3_2015.pdf',
 'PPAR3_2016.pdf', 'PPAR3_2017.pdf', 'PPAR3_2018.pdf', 'PPAR3_2019.pdf',
 'PPAR3_2020.pdf', 'PPAR3_2021.pdf', 'PPAR3_2022.pdf'], ['PPAR4_2012.pdf',
 'PPAR4_2013.pdf', 'PPAR4_2014.pdf', 'PPAR4_2015.pdf', 'PPAR4_2016.pdf',
 'PPAR4_2017.pdf', 'PPAR4_2018.pdf', 'PPAR4_2019.pdf', 'PPAR4_2020.pdf',
 'PPAR4_2021.pdf', 'PPAR4_2022.pdf'], ['PRI3_2012.pdf', 'PRI3_2013.pdf',
 'PRI3_2014.pdf', 'PRI3_2015.pdf', 'PRI3_2016.pdf', 'PRI3_2017.pdf',
 'PRI3_2018.pdf', 'PRI3_2019.pdf', 'PRI3_2020.pdf', 'PRI3_2021.pdf',
 'PRI3_2022.pdf'], ['PRMN3B_2012.pdf', 'PRMN3B_2013.pdf', 'PRMN3B_2014.pdf',
 'PRMN3B_2015.pdf', 'PRMN3B_2016.pdf', 'PRMN3B_2017.pdf', 'PRMN3B_2018.pdf',
 'PRMN3B_2019.pdf', 'PRMN3B_2020.pdf', 'PRMN3B_2021.pdf', 'PRMN3B_2022.pdf'],
 ['PRPT3B_2012.pdf', 'PRPT3B_2013.pdf', 'PRPT3B_2014.pdf', 'PRPT3B_2015.pdf',
 'PRPT3B_2016.pdf', 'PRPT3B_2017.pdf', 'PRPT3B_2018.pdf', 'PRPT3B_2019.pdf',
 'PRPT3B_2020.pdf', 'PRPT3B_2021.pdf', 'PRPT3B_2022.pdf'], ['PTBL3_2012.pdf',
 'PTBL3_2013.pdf', 'PTBL3_2014.pdf', 'PTBL3_2015.pdf', 'PTBL3_2016.pdf',
 'PTBL3_2017.pdf', 'PTBL3_2018.pdf', 'PTBL3_2019.pdf', 'PTBL3_2020.pdf',
 'PTBL3_2021.pdf', 'PTBL3_2022.pdf'], ['PTNT3_2012.pdf', 'PTNT3_2013.pdf',
 'PTNT3_2014.pdf', 'PTNT3_2015.pdf', 'PTNT3_2016.pdf', 'PTNT3_2017.pdf',
 'PTNT3_2018.pdf', 'PTNT3_2019.pdf', 'PTNT3_2020.pdf', 'PTNT3_2021.pdf',
 'PTNT3_2022.pdf'], ['PTNT4_2012.pdf', 'PTNT4_2013.pdf', 'PTNT4_2014.pdf',
 'PTNT4_2015.pdf', 'PTNT4_2016.pdf', 'PTNT4_2017.pdf', 'PTNT4_2018.pdf',
 'PTNT4_2019.pdf', 'PTNT4_2020.pdf', 'PTNT4_2021.pdf', 'PTNT4_2022.pdf'],
 ['QVQP3B_2012.pdf', 'QVQP3B_2013.pdf', 'QVQP3B_2014.pdf', 'QVQP3B_2015.pdf',
 'QVQP3B_2016.pdf', 'QVQP3B_2017.pdf', 'QVQP3B_2018.pdf', 'QVQP3B_2019.pdf',

'QVQP3B_2020.pdf', 'QVQP3B_2021.pdf', 'QVQP3B_2022.pdf', ['RADL3_2012.pdf', 'RADL3_2013.pdf', 'RADL3_2014.pdf', 'RADL3_2015.pdf', 'RADL3_2016.pdf', 'RADL3_2017.pdf', 'RADL3_2018.pdf', 'RADL3_2019.pdf', 'RADL3_2020.pdf', 'RADL3_2021.pdf', 'RADL3_2022.pdf'], ['RAIL3_2012.pdf', 'RAIL3_2013.pdf', 'RAIL3_2014.pdf', 'RAIL3_2015.pdf', 'RAIL3_2016.pdf', 'RAIL3_2017.pdf', 'RAIL3_2018.pdf', 'RAIL3_2019.pdf', 'RAIL3_2020.pdf', 'RAIL3_2021.pdf', 'RAIL3_2022.pdf'], ['RANI3_2012.pdf', 'RANI3_2013.pdf', 'RANI3_2014.pdf', 'RANI3_2015.pdf', 'RANI3_2016.pdf', 'RANI3_2017.pdf', 'RANI3_2018.pdf', 'RANI3_2019.pdf', 'RANI3_2020.pdf', 'RANI3_2021.pdf', 'RANI3_2022.pdf'], ['RANI4_2012.pdf', 'RANI4_2013.pdf', 'RANI4_2014.pdf', 'RANI4_2015.pdf', 'RANI4_2016.pdf', 'RANI4_2017.pdf', 'RANI4_2018.pdf', 'RANI4_2019.pdf', 'RANI4_2020.pdf', 'RANI4_2021.pdf', 'RANI4_2022.pdf'], ['RAPT3_2012.pdf', 'RAPT3_2013.pdf', 'RAPT3_2014.pdf', 'RAPT3_2015.pdf', 'RAPT3_2016.pdf', 'RAPT3_2017.pdf', 'RAPT3_2018.pdf', 'RAPT3_2019.pdf', 'RAPT3_2020.pdf', 'RAPT3_2021.pdf', 'RAPT3_2022.pdf'], ['RAPT4_2012.pdf', 'RAPT4_2013.pdf', 'RAPT4_2014.pdf', 'RAPT4_2015.pdf', 'RAPT4_2016.pdf', 'RAPT4_2017.pdf', 'RAPT4_2018.pdf', 'RAPT4_2019.pdf', 'RAPT4_2020.pdf', 'RAPT4_2021.pdf', 'RAPT4_2022.pdf'], ['RCSL3_2012.pdf', 'RCSL3_2013.pdf', 'RCSL3_2014.pdf', 'RCSL3_2015.pdf', 'RCSL3_2016.pdf', 'RCSL3_2017.pdf', 'RCSL3_2018.pdf', 'RCSL3_2019.pdf', 'RCSL3_2020.pdf', 'RCSL3_2021.pdf', 'RCSL3_2022.pdf'], ['RCSL4_2012.pdf', 'RCSL4_2013.pdf', 'RCSL4_2014.pdf', 'RCSL4_2015.pdf', 'RCSL4_2016.pdf', 'RCSL4_2017.pdf', 'RCSL4_2018.pdf', 'RCSL4_2019.pdf', 'RCSL4_2020.pdf', 'RCSL4_2021.pdf', 'RCSL4_2022.pdf'], ['RDNI3_2012.pdf', 'RDNI3_2013.pdf', 'RDNI3_2014.pdf', 'RDNI3_2015.pdf', 'RDNI3_2016.pdf', 'RDNI3_2017.pdf', 'RDNI3_2018.pdf', 'RDNI3_2019.pdf', 'RDNI3_2020.pdf', 'RDNI3_2021.pdf', 'RDNI3_2022.pdf'], ['REDE3_2012.pdf', 'REDE3_2013.pdf', 'REDE3_2014.pdf', 'REDE3_2015.pdf', 'REDE3_2016.pdf', 'REDE3_2017.pdf', 'REDE3_2018.pdf', 'REDE3_2019.pdf', 'REDE3_2020.pdf', 'REDE3_2021.pdf', 'REDE3_2022.pdf'], ['RENT3_2012.pdf', 'RENT3_2013.pdf', 'RENT3_2014.pdf', 'RENT3_2015.pdf', 'RENT3_2016.pdf', 'RENT3_2017.pdf', 'RENT3_2018.pdf', 'RENT3_2019.pdf', 'RENT3_2020.pdf', 'RENT3_2021.pdf', 'RENT3_2022.pdf'], ['RNEW11_2012.pdf', 'RNEW11_2013.pdf', 'RNEW11_2014.pdf', 'RNEW11_2015.pdf', 'RNEW11_2016.pdf', 'RNEW11_2017.pdf', 'RNEW11_2018.pdf', 'RNEW11_2019.pdf', 'RNEW11_2020.pdf', 'RNEW11_2021.pdf', 'RNEW11_2022.pdf'], ['RNEW3_2012.pdf', 'RNEW3_2013.pdf', 'RNEW3_2014.pdf', 'RNEW3_2015.pdf', 'RNEW3_2016.pdf', 'RNEW3_2017.pdf', 'RNEW3_2018.pdf', 'RNEW3_2019.pdf', 'RNEW3_2020.pdf', 'RNEW3_2021.pdf', 'RNEW3_2022.pdf'], ['RNEW4_2012.pdf', 'RNEW4_2013.pdf', 'RNEW4_2014.pdf', 'RNEW4_2015.pdf', 'RNEW4_2016.pdf', 'RNEW4_2017.pdf', 'RNEW4_2018.pdf', 'RNEW4_2019.pdf', 'RNEW4_2020.pdf', 'RNEW4_2021.pdf', 'RNEW4_2022.pdf'], ['RPMG3_2012.pdf', 'RPMG3_2013.pdf', 'RPMG3_2014.pdf', 'RPMG3_2015.pdf', 'RPMG3_2016.pdf', 'RPMG3_2017.pdf', 'RPMG3_2018.pdf', 'RPMG3_2019.pdf', 'RPMG3_2020.pdf', 'RPMG3_2021.pdf', 'RPMG3_2022.pdf'], ['RSID3_2012.pdf', 'RSID3_2013.pdf', 'RSID3_2014.pdf', 'RSID3_2015.pdf', 'RSID3_2016.pdf', 'RSID3_2017.pdf', 'RSID3_2018.pdf', 'RSID3_2019.pdf', 'RSID3_2020.pdf', 'RSID3_2021.pdf', 'RSID3_2022.pdf'], ['RSUL3_2012.pdf', 'RSUL3_2013.pdf', 'RSUL3_2014.pdf', 'RSUL3_2015.pdf', 'RSUL3_2016.pdf', 'RSUL3_2017.pdf', 'RSUL3_2018.pdf', 'RSUL3_2019.pdf', 'RSUL3_2020.pdf', 'RSUL3_2021.pdf', 'RSUL3_2022.pdf'], ['RSUL4_2012.pdf', 'RSUL4_2013.pdf',

'SUZB3_2019.pdf', 'SUZB3_2020.pdf', 'SUZB3_2021.pdf', 'SUZB3_2022.pdf'],
 ['SYNE3_2012.pdf', 'SYNE3_2013.pdf', 'SYNE3_2014.pdf', 'SYNE3_2015.pdf',
 'SYNE3_2016.pdf', 'SYNE3_2017.pdf', 'SYNE3_2018.pdf', 'SYNE3_2019.pdf',
 'SYNE3_2020.pdf', 'SYNE3_2021.pdf', 'SYNE3_2022.pdf'], ['TAE11_2012.pdf',
 'TAE11_2013.pdf', 'TAE11_2014.pdf', 'TAE11_2015.pdf', 'TAE11_2016.pdf',
 'TAE11_2017.pdf', 'TAE11_2018.pdf', 'TAE11_2019.pdf', 'TAE11_2020.pdf',
 'TAE11_2021.pdf', 'TAE11_2022.pdf'], ['TAE3_2012.pdf', 'TAE3_2013.pdf',
 'TAE3_2014.pdf', 'TAE3_2015.pdf', 'TAE3_2016.pdf', 'TAE3_2017.pdf',
 'TAE3_2018.pdf', 'TAE3_2019.pdf', 'TAE3_2020.pdf', 'TAE3_2021.pdf',
 'TAE3_2022.pdf'], ['TAE4_2012.pdf', 'TAE4_2013.pdf', 'TAE4_2014.pdf',
 'TAE4_2015.pdf', 'TAE4_2016.pdf', 'TAE4_2017.pdf', 'TAE4_2018.pdf',
 'TAE4_2019.pdf', 'TAE4_2020.pdf', 'TAE4_2021.pdf', 'TAE4_2022.pdf'],
 ['TAS3_2012.pdf', 'TAS3_2013.pdf', 'TAS3_2014.pdf', 'TAS3_2015.pdf',
 'TAS3_2016.pdf', 'TAS3_2017.pdf', 'TAS3_2018.pdf', 'TAS3_2019.pdf',
 'TAS3_2020.pdf', 'TAS3_2021.pdf', 'TAS3_2022.pdf'], ['TAS4_2012.pdf',
 'TAS4_2013.pdf', 'TAS4_2014.pdf', 'TAS4_2015.pdf', 'TAS4_2016.pdf',
 'TAS4_2017.pdf', 'TAS4_2018.pdf', 'TAS4_2019.pdf', 'TAS4_2020.pdf',
 'TAS4_2021.pdf', 'TAS4_2022.pdf'], ['TCN03_2012.pdf', 'TCN03_2013.pdf',
 'TCN03_2014.pdf', 'TCN03_2015.pdf', 'TCN03_2016.pdf', 'TCN03_2017.pdf',
 'TCN03_2018.pdf', 'TCN03_2019.pdf', 'TCN03_2020.pdf', 'TCN03_2021.pdf',
 'TCN03_2022.pdf'], ['TCN04_2012.pdf', 'TCN04_2013.pdf', 'TCN04_2014.pdf',
 'TCN04_2015.pdf', 'TCN04_2016.pdf', 'TCN04_2017.pdf', 'TCN04_2018.pdf',
 'TCN04_2019.pdf', 'TCN04_2020.pdf', 'TCN04_2021.pdf', 'TCN04_2022.pdf'],
 ['TCS3_2012.pdf', 'TCS3_2013.pdf', 'TCS3_2014.pdf', 'TCS3_2015.pdf',
 'TCS3_2016.pdf', 'TCS3_2017.pdf', 'TCS3_2018.pdf', 'TCS3_2019.pdf',
 'TCS3_2020.pdf', 'TCS3_2021.pdf', 'TCS3_2022.pdf'], ['TECN3_2012.pdf',
 'TECN3_2013.pdf', 'TECN3_2014.pdf', 'TECN3_2015.pdf', 'TECN3_2016.pdf',
 'TECN3_2017.pdf', 'TECN3_2018.pdf', 'TECN3_2019.pdf', 'TECN3_2020.pdf',
 'TECN3_2021.pdf', 'TECN3_2022.pdf'], ['TEKA3_2012.pdf', 'TEKA3_2013.pdf',
 'TEKA3_2014.pdf', 'TEKA3_2015.pdf', 'TEKA3_2016.pdf', 'TEKA3_2017.pdf',
 'TEKA3_2018.pdf', 'TEKA3_2019.pdf', 'TEKA3_2020.pdf', 'TEKA3_2021.pdf',
 'TEKA3_2022.pdf'], ['TEKA4_2012.pdf', 'TEKA4_2013.pdf', 'TEKA4_2014.pdf',
 'TEKA4_2015.pdf', 'TEKA4_2016.pdf', 'TEKA4_2017.pdf', 'TEKA4_2018.pdf',
 'TEKA4_2019.pdf', 'TEKA4_2020.pdf', 'TEKA4_2021.pdf', 'TEKA4_2022.pdf'],
 ['TELB3_2012.pdf', 'TELB3_2013.pdf', 'TELB3_2014.pdf', 'TELB3_2015.pdf',
 'TELB3_2016.pdf', 'TELB3_2017.pdf', 'TELB3_2018.pdf', 'TELB3_2019.pdf',
 'TELB3_2020.pdf', 'TELB3_2021.pdf', 'TELB3_2022.pdf'], ['TELB4_2012.pdf',
 'TELB4_2013.pdf', 'TELB4_2014.pdf', 'TELB4_2015.pdf', 'TELB4_2016.pdf',
 'TELB4_2017.pdf', 'TELB4_2018.pdf', 'TELB4_2019.pdf', 'TELB4_2020.pdf',
 'TELB4_2021.pdf', 'TELB4_2022.pdf'], ['TEND3_2012.pdf', 'TEND3_2013.pdf',
 'TEND3_2014.pdf', 'TEND3_2015.pdf', 'TEND3_2016.pdf', 'TEND3_2017.pdf',
 'TEND3_2018.pdf', 'TEND3_2019.pdf', 'TEND3_2020.pdf', 'TEND3_2021.pdf',
 'TEND3_2022.pdf'], ['TGMA3_2012.pdf', 'TGMA3_2013.pdf', 'TGMA3_2014.pdf',
 'TGMA3_2015.pdf', 'TGMA3_2016.pdf', 'TGMA3_2017.pdf', 'TGMA3_2018.pdf',
 'TGMA3_2019.pdf', 'TGMA3_2020.pdf', 'TGMA3_2021.pdf', 'TGMA3_2022.pdf'],
 ['TKN03_2012.pdf', 'TKN03_2013.pdf', 'TKN03_2014.pdf', 'TKN03_2015.pdf',
 'TKN03_2016.pdf', 'TKN03_2017.pdf', 'TKN03_2018.pdf', 'TKN03_2019.pdf',
 'TKN03_2020.pdf', 'TKN03_2021.pdf', 'TKN03_2022.pdf'], ['TKN04_2012.pdf',

'TKN04_2013.pdf', 'TKN04_2014.pdf', 'TKN04_2015.pdf', 'TKN04_2016.pdf',
 'TKN04_2017.pdf', 'TKN04_2018.pdf', 'TKN04_2019.pdf', 'TKN04_2020.pdf',
 'TKN04_2021.pdf', 'TKN04_2022.pdf'], ['TPIS3_2012.pdf', 'TPIS3_2013.pdf',
 'TPIS3_2014.pdf', 'TPIS3_2015.pdf', 'TPIS3_2016.pdf', 'TPIS3_2017.pdf',
 'TPIS3_2018.pdf', 'TPIS3_2019.pdf', 'TPIS3_2020.pdf', 'TPIS3_2021.pdf',
 'TPIS3_2022.pdf'], ['TRIS3_2012.pdf', 'TRIS3_2013.pdf', 'TRIS3_2014.pdf',
 'TRIS3_2015.pdf', 'TRIS3_2016.pdf', 'TRIS3_2017.pdf', 'TRIS3_2018.pdf',
 'TRIS3_2019.pdf', 'TRIS3_2020.pdf', 'TRIS3_2021.pdf', 'TRIS3_2022.pdf'],
 ['TRPL3_2012.pdf', 'TRPL3_2013.pdf', 'TRPL3_2014.pdf', 'TRPL3_2015.pdf',
 'TRPL3_2016.pdf', 'TRPL3_2017.pdf', 'TRPL3_2018.pdf', 'TRPL3_2019.pdf',
 'TRPL3_2020.pdf', 'TRPL3_2021.pdf', 'TRPL3_2022.pdf'], ['TRPL4_2012.pdf',
 'TRPL4_2013.pdf', 'TRPL4_2014.pdf', 'TRPL4_2015.pdf', 'TRPL4_2016.pdf',
 'TRPL4_2017.pdf', 'TRPL4_2018.pdf', 'TRPL4_2019.pdf', 'TRPL4_2020.pdf',
 'TRPL4_2021.pdf', 'TRPL4_2022.pdf'], ['TUPY3_2012.pdf', 'TUPY3_2013.pdf',
 'TUPY3_2014.pdf', 'TUPY3_2015.pdf', 'TUPY3_2016.pdf', 'TUPY3_2017.pdf',
 'TUPY3_2018.pdf', 'TUPY3_2019.pdf', 'TUPY3_2020.pdf', 'TUPY3_2021.pdf',
 'TUPY3_2022.pdf'], ['TXRX11_2012.pdf', 'TXRX11_2013.pdf', 'TXRX11_2014.pdf',
 'TXRX11_2015.pdf', 'TXRX11_2016.pdf', 'TXRX11_2017.pdf', 'TXRX11_2018.pdf',
 'TXRX11_2019.pdf', 'TXRX11_2020.pdf', 'TXRX11_2021.pdf', 'TXRX11_2022.pdf'],
 ['TXRX3_2012.pdf', 'TXRX3_2013.pdf', 'TXRX3_2014.pdf', 'TXRX3_2015.pdf',
 'TXRX3_2016.pdf', 'TXRX3_2017.pdf', 'TXRX3_2018.pdf', 'TXRX3_2019.pdf',
 'TXRX3_2020.pdf', 'TXRX3_2021.pdf', 'TXRX3_2022.pdf'], ['TXRX4_2012.pdf',
 'TXRX4_2013.pdf', 'TXRX4_2014.pdf', 'TXRX4_2015.pdf', 'TXRX4_2016.pdf',
 'TXRX4_2017.pdf', 'TXRX4_2018.pdf', 'TXRX4_2019.pdf', 'TXRX4_2020.pdf',
 'TXRX4_2021.pdf', 'TXRX4_2022.pdf'], ['UCAS3_2012.pdf', 'UCAS3_2013.pdf',
 'UCAS3_2014.pdf', 'UCAS3_2015.pdf', 'UCAS3_2016.pdf', 'UCAS3_2017.pdf',
 'UCAS3_2018.pdf', 'UCAS3_2019.pdf', 'UCAS3_2020.pdf', 'UCAS3_2021.pdf',
 'UCAS3_2022.pdf'], ['UGPA3_2012.pdf', 'UGPA3_2013.pdf', 'UGPA3_2014.pdf',
 'UGPA3_2015.pdf', 'UGPA3_2016.pdf', 'UGPA3_2017.pdf', 'UGPA3_2018.pdf',
 'UGPA3_2019.pdf', 'UGPA3_2020.pdf', 'UGPA3_2021.pdf', 'UGPA3_2022.pdf'],
 ['UNIP3_2012.pdf', 'UNIP3_2013.pdf', 'UNIP3_2014.pdf', 'UNIP3_2015.pdf',
 'UNIP3_2016.pdf', 'UNIP3_2017.pdf', 'UNIP3_2018.pdf', 'UNIP3_2019.pdf',
 'UNIP3_2020.pdf', 'UNIP3_2021.pdf', 'UNIP3_2022.pdf'], ['UNIP5_2012.pdf',
 'UNIP5_2013.pdf', 'UNIP5_2014.pdf', 'UNIP5_2015.pdf', 'UNIP5_2016.pdf',
 'UNIP5_2017.pdf', 'UNIP5_2018.pdf', 'UNIP5_2019.pdf', 'UNIP5_2020.pdf',
 'UNIP5_2021.pdf', 'UNIP5_2022.pdf'], ['UNIP6_2012.pdf', 'UNIP6_2013.pdf',
 'UNIP6_2014.pdf', 'UNIP6_2015.pdf', 'UNIP6_2016.pdf', 'UNIP6_2017.pdf',
 'UNIP6_2018.pdf', 'UNIP6_2019.pdf', 'UNIP6_2020.pdf', 'UNIP6_2021.pdf',
 'UNIP6_2022.pdf'], ['UPKP3B_2012.pdf', 'UPKP3B_2013.pdf', 'UPKP3B_2014.pdf',
 'UPKP3B_2015.pdf', 'UPKP3B_2016.pdf', 'UPKP3B_2017.pdf', 'UPKP3B_2018.pdf',
 'UPKP3B_2019.pdf', 'UPKP3B_2020.pdf', 'UPKP3B_2021.pdf', 'UPKP3B_2022.pdf'],
 ['USIM3_2012.pdf', 'USIM3_2013.pdf', 'USIM3_2014.pdf', 'USIM3_2015.pdf',
 'USIM3_2016.pdf', 'USIM3_2017.pdf', 'USIM3_2018.pdf', 'USIM3_2019.pdf',
 'USIM3_2020.pdf', 'USIM3_2021.pdf', 'USIM3_2022.pdf'], ['USIM5_2012.pdf',
 'USIM5_2013.pdf', 'USIM5_2014.pdf', 'USIM5_2015.pdf', 'USIM5_2016.pdf',
 'USIM5_2017.pdf', 'USIM5_2018.pdf', 'USIM5_2019.pdf', 'USIM5_2020.pdf',
 'USIM5_2021.pdf', 'USIM5_2022.pdf'], ['USIM6_2012.pdf', 'USIM6_2013.pdf',
 'USIM6_2014.pdf', 'USIM6_2015.pdf', 'USIM6_2016.pdf', 'USIM6_2017.pdf',

'USIM6_2018.pdf', 'USIM6_2019.pdf', 'USIM6_2020.pdf', 'USIM6_2021.pdf',
 'USIM6_2022.pdf'], ['VIAA11_2012.pdf', 'VIAA11_2013.pdf', 'VIAA11_2014.pdf',
 'VIAA11_2015.pdf', 'VIAA11_2016.pdf', 'VIAA11_2017.pdf', 'VIAA11_2018.pdf',
 'VIAA11_2019.pdf', 'VIAA11_2020.pdf', 'VIAA11_2021.pdf', 'VIAA11_2022.pdf'],
 ['VIAA3_2012.pdf', 'VIAA3_2013.pdf', 'VIAA3_2014.pdf', 'VIAA3_2015.pdf',
 'VIAA3_2016.pdf', 'VIAA3_2017.pdf', 'VIAA3_2018.pdf', 'VIAA3_2019.pdf',
 'VIAA3_2020.pdf', 'VIAA3_2021.pdf', 'VIAA3_2022.pdf'], ['VIAA4_2012.pdf',
 'VIAA4_2013.pdf', 'VIAA4_2014.pdf', 'VIAA4_2015.pdf', 'VIAA4_2016.pdf',
 'VIAA4_2017.pdf', 'VIAA4_2018.pdf', 'VIAA4_2019.pdf', 'VIAA4_2020.pdf',
 'VIAA4_2021.pdf', 'VIAA4_2022.pdf'], ['VIVR3_2012.pdf', 'VIVR3_2013.pdf',
 'VIVR3_2014.pdf', 'VIVR3_2015.pdf', 'VIVR3_2016.pdf', 'VIVR3_2017.pdf',
 'VIVR3_2018.pdf', 'VIVR3_2019.pdf', 'VIVR3_2020.pdf', 'VIVR3_2021.pdf',
 'VIVR3_2022.pdf'], ['VIVT4_2012.pdf', 'VIVT4_2013.pdf', 'VIVT4_2014.pdf',
 'VIVT4_2015.pdf', 'VIVT4_2016.pdf', 'VIVT4_2017.pdf', 'VIVT4_2018.pdf',
 'VIVT4_2019.pdf', 'VIVT4_2020.pdf', 'VIVT4_2021.pdf', 'VIVT4_2022.pdf'],
 ['VLID3_2012.pdf', 'VLID3_2013.pdf', 'VLID3_2014.pdf', 'VLID3_2015.pdf',
 'VLID3_2016.pdf', 'VLID3_2017.pdf', 'VLID3_2018.pdf', 'VLID3_2019.pdf',
 'VLID3_2020.pdf', 'VLID3_2021.pdf', 'VLID3_2022.pdf'], ['VSPT3_2012.pdf',
 'VSPT3_2013.pdf', 'VSPT3_2014.pdf', 'VSPT3_2015.pdf', 'VSPT3_2016.pdf',
 'VSPT3_2017.pdf', 'VSPT3_2018.pdf', 'VSPT3_2019.pdf', 'VSPT3_2020.pdf',
 'VSPT3_2021.pdf', 'VSPT3_2022.pdf'], ['VSPT4_2012.pdf', 'VSPT4_2013.pdf',
 'VSPT4_2014.pdf', 'VSPT4_2015.pdf', 'VSPT4_2016.pdf', 'VSPT4_2017.pdf',
 'VSPT4_2018.pdf', 'VSPT4_2019.pdf', 'VSPT4_2020.pdf', 'VSPT4_2021.pdf',
 'VSPT4_2022.pdf'], ['VULC3_2012.pdf', 'VULC3_2013.pdf', 'VULC3_2014.pdf',
 'VULC3_2015.pdf', 'VULC3_2016.pdf', 'VULC3_2017.pdf', 'VULC3_2018.pdf',
 'VULC3_2019.pdf', 'VULC3_2020.pdf', 'VULC3_2021.pdf', 'VULC3_2022.pdf'],
 ['WEGE3_2012.pdf', 'WEGE3_2013.pdf', 'WEGE3_2014.pdf', 'WEGE3_2015.pdf',
 'WEGE3_2016.pdf', 'WEGE3_2017.pdf', 'WEGE3_2018.pdf', 'WEGE3_2019.pdf',
 'WEGE3_2020.pdf', 'WEGE3_2021.pdf', 'WEGE3_2022.pdf'], ['WHRL3_2012.pdf',
 'WHRL3_2013.pdf', 'WHRL3_2014.pdf', 'WHRL3_2015.pdf', 'WHRL3_2016.pdf',
 'WHRL3_2017.pdf', 'WHRL3_2018.pdf', 'WHRL3_2019.pdf', 'WHRL3_2020.pdf',
 'WHRL3_2021.pdf', 'WHRL3_2022.pdf'], ['WHRL4_2012.pdf', 'WHRL4_2013.pdf',
 'WHRL4_2014.pdf', 'WHRL4_2015.pdf', 'WHRL4_2016.pdf', 'WHRL4_2017.pdf',
 'WHRL4_2018.pdf', 'WHRL4_2019.pdf', 'WHRL4_2020.pdf', 'WHRL4_2021.pdf',
 'WHRL4_2022.pdf'], ['WLMM3_2012.pdf', 'WLMM3_2013.pdf', 'WLMM3_2014.pdf',
 'WLMM3_2015.pdf', 'WLMM3_2016.pdf', 'WLMM3_2017.pdf', 'WLMM3_2018.pdf',
 'WLMM3_2019.pdf', 'WLMM3_2020.pdf', 'WLMM3_2021.pdf', 'WLMM3_2022.pdf'],
 ['WLMM4_2012.pdf', 'WLMM4_2013.pdf', 'WLMM4_2014.pdf', 'WLMM4_2015.pdf',
 'WLMM4_2016.pdf', 'WLMM4_2017.pdf', 'WLMM4_2018.pdf', 'WLMM4_2019.pdf',
 'WLMM4_2020.pdf', 'WLMM4_2021.pdf', 'WLMM4_2022.pdf'], ['YBRA3B_2012.pdf',
 'YBRA3B_2013.pdf', 'YBRA3B_2014.pdf', 'YBRA3B_2015.pdf', 'YBRA3B_2016.pdf',
 'YBRA3B_2017.pdf', 'YBRA3B_2018.pdf', 'YBRA3B_2019.pdf', 'YBRA3B_2020.pdf',
 'YBRA3B_2021.pdf', 'YBRA3B_2022.pdf'], ['YBRA4B_2012.pdf', 'YBRA4B_2013.pdf',
 'YBRA4B_2014.pdf', 'YBRA4B_2015.pdf', 'YBRA4B_2016.pdf', 'YBRA4B_2017.pdf',
 'YBRA4B_2018.pdf', 'YBRA4B_2019.pdf', 'YBRA4B_2020.pdf', 'YBRA4B_2021.pdf',
 'YBRA4B_2022.pdf'], ['YDUQ3_2012.pdf', 'YDUQ3_2013.pdf', 'YDUQ3_2014.pdf',
 'YDUQ3_2015.pdf', 'YDUQ3_2016.pdf', 'YDUQ3_2017.pdf', 'YDUQ3_2018.pdf',
 'YDUQ3_2019.pdf', 'YDUQ3_2020.pdf', 'YDUQ3_2021.pdf', 'YDUQ3_2022.pdf']]

321

```
[ ]: #quantidade de relatórios em cada empresa
tam_emp = np.zeros(321, dtype = int)
i = 0
empresas_12r = []
for pesquisa in lista_de_empresas_2012:
    #print(pesquisa)
    for k in pesquisa:
        #print(k)
        tam_emp[i] = tam_emp[i] + 1
    i = i + 1
print(tam_emp)
print("Empresa com menor quantidade de relatorios: ", min(tam_emp))
print(len(tam_emp))
```

```
[11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11
 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11
 13 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11
 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11
 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11
 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11
 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 7 11 11 11 11 11 11 11
 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 10 11 11 11 11 11 11
 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11
 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11
 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11
 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11
 11 11 11 11 11 11 11 11 11]
Empresa com menor quantidade de relatorios: 7
321
```

```
[ ]: #empresas com 10 relatorios
quantidade_relatorios = 11
empresas_2012r = []
for i in range(quantidade_relatorios, 4, -1):
    name = []
    #print(name)
    for pesquisa in lista_de_empresas_2012:
        #print(pesquisa)
        #print(len(pesquisa))
        if i == len(pesquisa):
            c = pesquisa[0].split("_")
            name.append(c[0])
    print("Empresas com ", i, "relatórios")
    print(name)
    empresas_2012r.append(name)
```

```
#print(empresas_2011r)

grafico = []
for i in empresas_2012r:
    #print(len(i))
    grafico.append(len(i))
print(grafico)
print(sum(grafico))
```

Empresas com 11 relatórios

```
['AHEB3', 'AHEB5', 'AHEB6', 'ALUP11', 'ALUP3', 'ALUP4', 'AMER3', 'ARZZ3',
'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3',
'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3',
'BOBR4', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4',
'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA4', 'CBEE3', 'CCR03', 'CEBR3', 'CEBR5',
'CEBR6', 'CED03', 'CED04', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED4', 'CEGR3', 'CEPE3',
'CEPE5', 'CEPE6', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4', 'CMSA3',
'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11', 'CPLE3',
'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6', 'CRTE3B',
'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6', 'CTKA3',
'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CYRE3', 'DEXP3', 'DEXP4',
'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXC03', 'EALT3', 'EALT4', 'ECOR3',
'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4', 'ENAT3',
'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4', 'EPAR3',
'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6', 'EQPA7',
'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4', 'EVEN3',
'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3', 'FRAS4',
'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'GEP3', 'GEP4', 'GFSA3', 'HAGA4',
'HBOR3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'IVPR3B', 'IVPR4B',
'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3', 'KEPL3', 'KEPL4',
'KLBN3', 'LEVE3', 'LIGT3', 'LOGN3', 'LREN3', 'LTEL3B', 'LUXM3', 'LUXM4',
'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4', 'MNDL3', 'MNPR3',
'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3', 'MTSA3', 'MTSA4', 'MWET3',
'MWET4', 'MYPK3', 'NEM05', 'NEOE3', 'NORD3', 'NRTQ3', 'NRTQ4', 'NUTR3', 'ODER3',
'ODER4', 'ODPV3', 'OIBR3', 'OIBR4', 'OPGM3B', 'OPSE3B', 'OPTS3B', 'OSXB3',
'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3', 'PDTC3', 'PFRM3', 'PLAS3',
'PMAM3', 'PNVL3', 'POMO3', 'POSI3', 'PPAR3', 'PPAR4', 'PRI03', 'PRMN3B',
'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QVQP3B', 'RADL3', 'RAIL3', 'RANI3',
'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3', 'RENT3',
'RNEW11', 'RNEW3', 'RNEW4', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4', 'SBSP3',
'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03', 'SNSY3',
'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'SUZB3', 'SYNE3',
'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',
'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4',
'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',
```

```

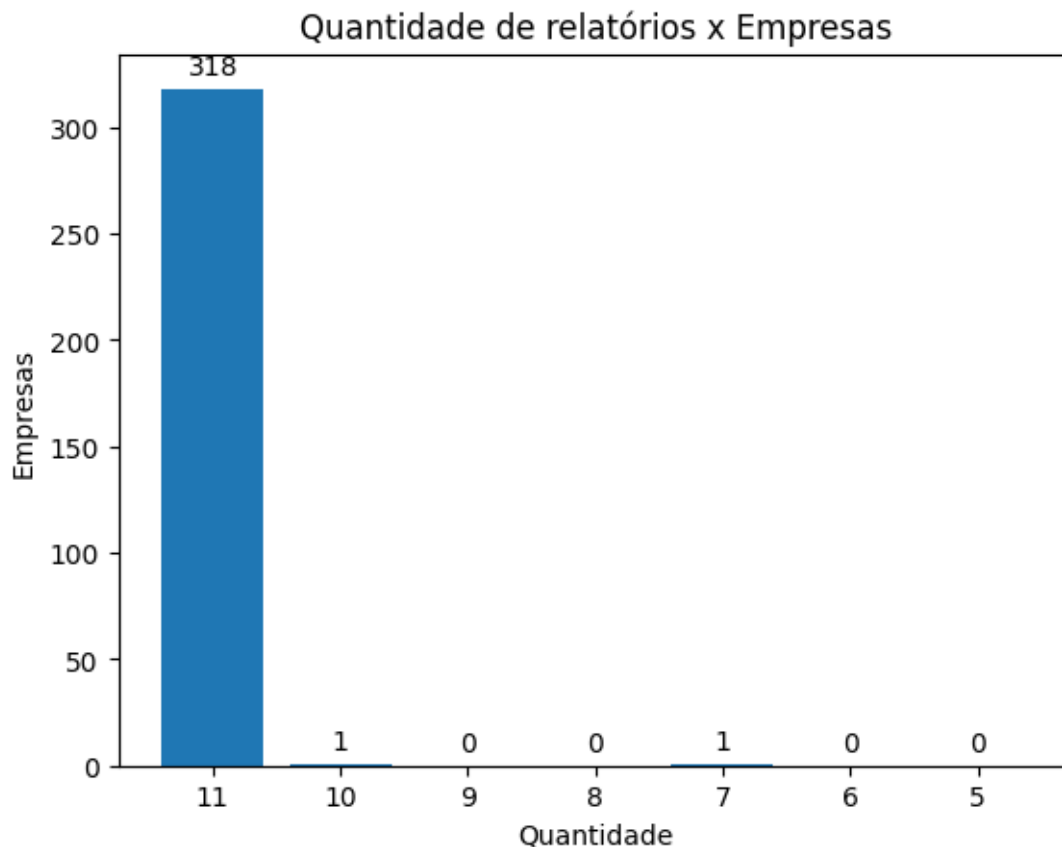
'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',
'USIM6', 'VIIA11', 'VIIA3', 'VIIA4', 'VIVR3', 'VIVT4', 'VLID3', 'VSPT3',
'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B',
'YBRA4B', 'YDUQ3']
Empresas com 10 relatórios
['MMXM3']
Empresas com 9 relatórios
[]
Empresas com 8 relatórios
[]
Empresas com 7 relatórios
['INEP4']
Empresas com 6 relatórios
[]
Empresas com 5 relatórios
[]
[318, 1, 0, 0, 1, 0, 0]
320

```

```

[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ['11',"10", '9', "8", "7",'6',"5"]
rect1 = ax.bar(X, grafico)
ax.set_ylabel('Empresas')
ax.set_title("Quantidade de relatórios x Empresas")
ax.set_xlabel('Quantidade')
ax.bar_label(rect1, padding = 3)
plt.show()

```



```
[ ]: lista_de_empresas_2013 = []
for name in lista:
    c = name.split("_")
    c1 = c[1].split(".")
    if c1[0] == "2013":
        lista_de_empresas_2013.append(name)
print(lista_de_empresas_2013)
print(len(lista_de_empresas_2013))
```

```
['ABEV3_2013.pdf', 'AFLT3_2013.pdf', 'AGRO3_2013.pdf', 'AHEB3_2013.pdf',
'AHEB5_2013.pdf', 'AHEB6_2013.pdf', 'ALPA3_2013.pdf', 'ALPA4_2013.pdf',
'ALUP11_2013.pdf', 'ALUP3_2013.pdf', 'ALUP4_2013.pdf', 'AMAR3_2013.pdf',
'AMER3_2013.pdf', 'ANIM3_2013.pdf', 'APTI3_2013.pdf', 'APTI4_2013.pdf',
'ARZZ3_2013.pdf', 'ATMP3_2013.pdf', 'ATOM3_2013.pdf', 'AZE3_2013.pdf',
'AZE4_2013.pdf', 'BAHI3_2013.pdf', 'BALM3_2013.pdf', 'BALM4_2013.pdf',
'BAUH3_2013.pdf', 'BAUH4_2013.pdf', 'BDLL3_2013.pdf', 'BDLL4_2013.pdf',
'BEEF3_2013.pdf', 'BETP3B_2013.pdf', 'BIOM3_2013.pdf', 'BLUT3_2013.pdf',
'BLUT4_2013.pdf', 'BMKS3_2013.pdf', 'BOBR3_2013.pdf', 'BOBR4_2013.pdf',
'BRAP3_2013.pdf', 'BRAP4_2013.pdf', 'BRAP99_2013.pdf', 'BRFS3_2013.pdf',
'BRKM3_2013.pdf', 'BRKM5_2013.pdf', 'BRKM6_2013.pdf', 'CABI3B_2013.pdf',
```

'CALI3_2013.pdf', 'CALI4_2013.pdf', 'CAMB3_2013.pdf', 'CAMB4_2013.pdf',
 'CASN3_2013.pdf', 'CASN4_2013.pdf', 'CATA3_2013.pdf', 'CATA4_2013.pdf',
 'CBEE3_2013.pdf', 'CCR03_2013.pdf', 'CEBR3_2013.pdf', 'CEBR5_2013.pdf',
 'CEBR6_2013.pdf', 'CED03_2013.pdf', 'CED04_2013.pdf', 'CEEB3_2013.pdf',
 'CEEB5_2013.pdf', 'CEEB6_2013.pdf', 'CEED3_2013.pdf', 'CEED4_2013.pdf',
 'CEGR3_2013.pdf', 'CEPE3_2013.pdf', 'CEPE5_2013.pdf', 'CEPE6_2013.pdf',
 'CGAS3_2013.pdf', 'CGAS5_2013.pdf', 'CGRA3_2013.pdf', 'CGRA4_2013.pdf',
 'CLSC3_2013.pdf', 'CLSC4_2013.pdf', 'CMIG3_2013.pdf', 'CMIG4_2013.pdf',
 'CMSA3_2013.pdf', 'CMSA4_2013.pdf', 'COCE3_2013.pdf', 'COCE5_2013.pdf',
 'COCE6_2013.pdf', 'COGN3_2013.pdf', 'CPFE3_2013.pdf', 'CPLE11_2013.pdf',
 'CPLE3_2013.pdf', 'CPLE5_2013.pdf', 'CPLE6_2013.pdf', 'CPRE3_2013.pdf',
 'CRDE3_2013.pdf', 'CRPG3_2013.pdf', 'CRPG5_2013.pdf', 'CRPG6_2013.pdf',
 'CRTE3B_2013.pdf', 'CRTE5B_2013.pdf', 'CSAN3_2013.pdf', 'CSMG3_2013.pdf',
 'CSNA3_2013.pdf', 'CSRN3_2013.pdf', 'CSRN5_2013.pdf', 'CSRN6_2013.pdf',
 'CTKA3_2013.pdf', 'CTKA4_2013.pdf', 'CTNM3_2013.pdf', 'CTNM4_2013.pdf',
 'CTSA3_2013.pdf', 'CTSA4_2013.pdf', 'CTSA8_2013.pdf', 'CVCB3_2013.pdf',
 'CYRE3_2013.pdf', 'DASA3_2013.pdf', 'DEXP3_2013.pdf', 'DEXP4_2013.pdf',
 'DIRR3_2013.pdf', 'DOHL3_2013.pdf', 'DOHL4_2013.pdf', 'DTCY3_2013.pdf',
 'DTCY4_2013.pdf', 'DXC03_2013.pdf', 'EALT3_2013.pdf', 'EALT4_2013.pdf',
 'ECOR3_2013.pdf', 'EGIE3_2013.pdf', 'EKTR3_2013.pdf', 'EKTR4_2013.pdf',
 'ELET3_2013.pdf', 'ELET5_2013.pdf', 'ELET6_2013.pdf', 'EMAE3_2013.pdf',
 'EMAE4_2013.pdf', 'EMBR3_2013.pdf', 'ENAT3_2013.pdf', 'ENBR3_2013.pdf',
 'ENEV3_2013.pdf', 'ENGI11_2013.pdf', 'ENGI3_2013.pdf', 'ENGI4_2013.pdf',
 'ENMT3_2013.pdf', 'ENMT4_2013.pdf', 'EPAR3_2013.pdf', 'EPAR4_2013.pdf',
 'EQMA3B_2013.pdf', 'EQMA5B_2013.pdf', 'EQMA6B_2013.pdf', 'EQPA3_2013.pdf',
 'EQPA5_2013.pdf', 'EQPA6_2013.pdf', 'EQPA7_2013.pdf', 'EQTL11_2013.pdf',
 'EQTL3_2013.pdf', 'ESTR3_2013.pdf', 'ESTR4_2013.pdf', 'ETER3_2013.pdf',
 'EUCA3_2013.pdf', 'EUCA4_2013.pdf', 'EVEN3_2013.pdf', 'EZTC3_2013.pdf',
 'FESA3_2013.pdf', 'FESA4_2013.pdf', 'FHER3_2013.pdf', 'FIGE3_2013.pdf',
 'FIGE4_2013.pdf', 'FLRY3_2013.pdf', 'FRAS3_2013.pdf', 'FRAS4_2013.pdf',
 'FRI03_2013.pdf', 'FRRN3B_2013.pdf', 'FRRN5B_2013.pdf', 'FRRN6B_2013.pdf',
 'FRTA3_2013.pdf', 'GEPA3_2013.pdf', 'GEPA4_2013.pdf', 'GFSA3_2013.pdf',
 'GGBR3_2013.pdf', 'GGBR4_2013.pdf', 'GOAU3_2013.pdf', 'GOAU4_2013.pdf',
 'GOLL3_2013.pdf', 'GOLL4_2013.pdf', 'GPAR3_2013.pdf', 'GRND3_2013.pdf',
 'GUAR3_2013.pdf', 'HAGA3_2013.pdf', 'HAGA4_2013.pdf', 'HBOR3_2013.pdf',
 'HBSA3_2013.pdf', 'HETA3_2013.pdf', 'HETA4_2013.pdf', 'HOOT3_2013.pdf',
 'HOOT4_2013.pdf', 'HYPE3_2013.pdf', 'IGSN3_2013.pdf', 'INEP3_2013.pdf',
 'INEP4_2013.pdf', 'IVPR3B_2013.pdf', 'IVPR4B_2013.pdf', 'JBSS3_2013.pdf',
 'JFEN3_2013.pdf', 'JHSF3_2013.pdf', 'JOPA3_2013.pdf', 'JOPA4_2013.pdf',
 'JSLG11_2013.pdf', 'JSLG3_2013.pdf', 'KEPL3_2013.pdf', 'KEPL4_2013.pdf',
 'KLBN11_2013.pdf', 'KLBN3_2013.pdf', 'KLBN4_2013.pdf', 'LEVE3_2013.pdf',
 'LIGT3_2013.pdf', 'LIPR3_2013.pdf', 'LOGN3_2013.pdf', 'LREN3_2013.pdf',
 'LTEL3B_2013.pdf', 'LTEL5B_2013.pdf', 'LUXM3_2013.pdf', 'LUXM4_2013.pdf',
 'MAPT3_2013.pdf', 'MAPT4_2013.pdf', 'MDNE3_2013.pdf', 'MGEL3_2013.pdf',
 'MGEL4_2013.pdf', 'MGLU3_2013.pdf', 'MILS3_2013.pdf', 'MMAQ3_2013.pdf',
 'MMAQ4_2013.pdf', 'MMXM3_2013.pdf', 'MNDL3_2013.pdf', 'MNPR3_2013.pdf',
 'MRFG3_2013.pdf', 'MRSA3B_2013.pdf', 'MRSA5B_2013.pdf', 'MRSA6B_2013.pdf',
 'MRVE3_2013.pdf', 'MSPA3_2013.pdf', 'MSPA4_2013.pdf', 'MTSA3_2013.pdf',


```
'MTSA4_2013.pdf', 'MWET3_2013.pdf', 'MWET4_2013.pdf', 'MYPK3_2013.pdf',
'NEMO3_2013.pdf', 'NEMO5_2013.pdf', 'NEMO6_2013.pdf', 'NEOE3_2013.pdf',
'NORD3_2013.pdf', 'NRTQ3_2013.pdf', 'NRTQ4_2013.pdf', 'NUTR3_2013.pdf',
'ODER3_2013.pdf', 'ODER4_2013.pdf', 'ODPV3_2013.pdf', 'OIBR3_2013.pdf',
'OIBR4_2013.pdf', 'OPGM3B_2013.pdf', 'OPSE3B_2013.pdf', 'OPTS3B_2013.pdf',
'OSXB3_2013.pdf', 'PATI3_2013.pdf', 'PATI4_2013.pdf', 'PCAR3_2013.pdf',
'PCAR99_2013.pdf', 'PDGR3_2013.pdf', 'PDTC3_2013.pdf', 'PETR3_2013.pdf',
'PETR4_2013.pdf', 'PFRM3_2013.pdf', 'PGMN3_2013.pdf', 'PLAS3_2013.pdf',
'PMAM3_2013.pdf', 'PNVL3_2013.pdf', 'POM03_2013.pdf', 'POM04_2013.pdf',
'POS13_2013.pdf', 'PPAR3_2013.pdf', 'PPAR4_2013.pdf', 'PRI03_2013.pdf',
'PRMN3B_2013.pdf', 'PRPT3B_2013.pdf', 'PTBL3_2013.pdf', 'PTNT3_2013.pdf',
'PTNT4_2013.pdf', 'QUAL3_2013.pdf', 'QUSW3_2013.pdf', 'QVQP3B_2013.pdf',
'RADL3_2013.pdf', 'RAIL3_2013.pdf', 'RANI3_2013.pdf', 'RANI4_2013.pdf',
'RAPT3_2013.pdf', 'RAPT4_2013.pdf', 'RCSL3_2013.pdf', 'RCSL4_2013.pdf',
'RDNI3_2013.pdf', 'REDE3_2013.pdf', 'RENT3_2013.pdf', 'RNEW11_2013.pdf',
'RNEW3_2013.pdf', 'RNEW4_2013.pdf', 'ROMI3_2013.pdf', 'RPMG3_2013.pdf',
'RSID3_2013.pdf', 'RSUL3_2013.pdf', 'RSUL4_2013.pdf', 'SAPR11_2013.pdf',
'SAPR3_2013.pdf', 'SAPR4_2013.pdf', 'SBSP3_2013.pdf', 'SEER3_2013.pdf',
'SGPS3_2013.pdf', 'SHOW3_2013.pdf', 'SHUL3_2013.pdf', 'SHUL4_2013.pdf',
'SLCE3_2013.pdf', 'SLED3_2013.pdf', 'SLED4_2013.pdf', 'SMT03_2013.pdf',
'SNSY3_2013.pdf', 'SNSY5_2013.pdf', 'SNSY6_2013.pdf', 'SOND3_2013.pdf',
'SOND5_2013.pdf', 'SOND6_2013.pdf', 'SQIA3_2013.pdf', 'STBP3_2013.pdf',
'STKF3_2013.pdf', 'SUZB3_2013.pdf', 'SYNE3_2013.pdf', 'TAE11_2013.pdf',
'TAE3_2013.pdf', 'TAE4_2013.pdf', 'TASA3_2013.pdf', 'TASA4_2013.pdf',
'TCNO3_2013.pdf', 'TCNO4_2013.pdf', 'TCSA3_2013.pdf', 'TECN3_2013.pdf',
'TEKA3_2013.pdf', 'TEKA4_2013.pdf', 'TELB3_2013.pdf', 'TELB4_2013.pdf',
'TEND3_2013.pdf', 'TGMA3_2013.pdf', 'TKNO3_2013.pdf', 'TKNO4_2013.pdf',
'TOTS3_2013.pdf', 'TPIS3_2013.pdf', 'TRIS3_2013.pdf', 'TRPL3_2013.pdf',
'TRPL4_2013.pdf', 'TUPY3_2013.pdf', 'TXRX11_2013.pdf', 'TXRX3_2013.pdf',
'TXRX4_2013.pdf', 'UCAS3_2013.pdf', 'UGPA3_2013.pdf', 'UNIP3_2013.pdf',
'UNIP5_2013.pdf', 'UNIP6_2013.pdf', 'UPKP3B_2013.pdf', 'USIM3_2013.pdf',
'USIM5_2013.pdf', 'USIM6_2013.pdf', 'VALE3_2013.pdf', 'VIA11_2013.pdf',
'VIA3_2013.pdf', 'VIA4_2013.pdf', 'VIVR3_2013.pdf', 'VIVT3_2013.pdf',
'VIVT4_2013.pdf', 'VLID3_2013.pdf', 'VSPT3_2013.pdf', 'VSPT4_2013.pdf',
'VULC3_2013.pdf', 'WEGE3_2013.pdf', 'WHRL3_2013.pdf', 'WHRL4_2013.pdf',
'WLMM3_2013.pdf', 'WLMM4_2013.pdf', 'YBRA3B_2013.pdf', 'YBRA4B_2013.pdf',
'YDUQ3_2013.pdf']
```

381

```
[ ]: names_empresas_2013 = []
print(names_empresas_2011)
print(names_empresas_2012)
for name in lista_de_empresas_2013:
    c = name.split("_")
    names_empresas_2013.append(c[0])
print(names_empresas_2013)
print(len(names_empresas_2013))
```

```

for name in names_empresas_2011:
    for name1 in names_empresas_2013:
        if name1 == name:
            names_empresas_2013.remove(name1)
for name in names_empresas_2012:
    for name1 in names_empresas_2013:
        if name1 == name:
            names_empresas_2013.remove(name1)
print("Após comparação")
print(names_empresas_2013)
print(len(names_empresas_2013))

```

```

['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APT13', 'APT14', 'BAHI3',
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',
'TOTS3', 'VALE3', 'VIVT3']
['AHEB3', 'AHEB5', 'AHEB6', 'ALUP11', 'ALUP3', 'ALUP4', 'AMER3', 'ARZZ3',
'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3',
'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3',
'BOBR4', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4',
'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA4', 'CBEE3', 'CCR03', 'CEBR3', 'CEBR5',
'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',
'CEPE3', 'CEPE5', 'CEPE6', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',
'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',
'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSR3', 'CSR5', 'CSR6',
'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CYRE3', 'DEXP3',
'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXCO3', 'EALT3', 'EALT4',
'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4',
'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4',
'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6',
'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4',
'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3',
'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'GEP3', 'GEP4', 'GFSA3',
'HAGA4', 'HBOR3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'INEP4',
'IVPR3B', 'IVPR4B', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3',
'KEPL3', 'KEPL4', 'KLBN3', 'LEVE3', 'LIGT3', 'LOGN3', 'LREN3', 'LTEL3B',
'LUXM3', 'LUXM4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',
'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',
'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO5', 'NEOE3', 'NORD3', 'NRTQ3',
'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3', 'OIBR4', 'OPGM3B',
'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',
'PDTC3', 'PFRM3', 'PLAS3', 'PMAM3', 'PNVL3', 'POMO3', 'POSI3', 'PPAR3', 'PPAR4',
'PRI03', 'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QVQP3B', 'RADL3',

```

'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3',
 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',
 'SBSP3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03',
 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'SUZB3', 'SYNE3',
 'TAE11', 'TAE3', 'TAE4', 'TASA3', 'TASA4', 'TCN03', 'TCN04', 'TCSA3',
 'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKN03', 'TKN04',
 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',
 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',
 'USIM6', 'VIIA11', 'VIIA3', 'VIIA4', 'VIVR3', 'VIVT4', 'VLID3', 'VSPT3',
 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B',
 'YBRA4B', 'YDUQ3']
 ['ABEV3', 'AFLT3', 'AGRO3', 'AHEB3', 'AHEB5', 'AHEB6', 'ALPA3', 'ALPA4',
 'ALUP11', 'ALUP3', 'ALUP4', 'AMAR3', 'AMER3', 'ANIM3', 'APTI3', 'APTI4',
 'ARZZ3', 'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'BAHI3', 'BALM3', 'BALM4', 'BAUH3',
 'BAUH4', 'BDLL3', 'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4',
 'BMKS3', 'BOBR3', 'BOBR4', 'BRAP3', 'BRAP4', 'BRAP99', 'BRFS3', 'BRKM3',
 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4', 'CAMB3', 'CAMB4', 'CASN3',
 'CASN4', 'CATA3', 'CATA4', 'CBEE3', 'CCR03', 'CEBR3', 'CEBR5', 'CEBR6', 'CEDO3',
 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3', 'CEPE3', 'CEPE5',
 'CEPE6', 'CGAS3', 'CGAS5', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
 'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',
 'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',
 'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6',
 'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CVCB3', 'CYRE3',
 'DASA3', 'DEXP3', 'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXCO3',
 'EALT3', 'EALT4', 'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6',
 'EMAE3', 'EMAE4', 'EMBR3', 'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3',
 'ENGI4', 'ENMT3', 'ENMT4', 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B',
 'EQPA3', 'EQPA5', 'EQPA6', 'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4',
 'ETER3', 'EUCA3', 'EUCA4', 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3',
 'FIGE4', 'FLRY3', 'FRAS3', 'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B',
 'FRTA3', 'GEP3', 'GEP4', 'GFSA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3',
 'GOLL4', 'GPAR3', 'GRND3', 'GUAR3', 'HAGA3', 'HAGA4', 'HBOR3', 'HBSA3', 'HETA3',
 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'IGSN3', 'INEP3', 'INEP4', 'IVPR3B',
 'IVPR4B', 'JBSS3', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3',
 'KEPL3', 'KEPL4', 'KLB11', 'KLB3', 'KLB4', 'LEVE3', 'LIGT3', 'LIPR3',
 'LOGN3', 'LREN3', 'LTEL3B', 'LTEL5B', 'LUXM3', 'LUXM4', 'MAPT3', 'MAPT4',
 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4', 'MMXM3', 'MNDL3',
 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3', 'MSPA3', 'MSPA4',
 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEM03', 'NEM05', 'NEM06', 'NEOE3',
 'NORD3', 'NRTQ3', 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3', 'OIBR4',
 'OPGM3B', 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99',
 'PDGR3', 'PDC3', 'PETR3', 'PETR4', 'PFRM3', 'PGMN3', 'PLAS3', 'PMAM3', 'PNVL3',
 'POM03', 'POM04', 'POSI3', 'PPAR3', 'PPAR4', 'PRI03', 'PRMN3B', 'PRPT3B',
 'PTBL3', 'PTNT3', 'PTNT4', 'QUAL3', 'QUSW3', 'QVQP3B', 'RADL3', 'RAIL3',
 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3', 'RENT3',
 'RNEW11', 'RNEW3', 'RNEW4', 'ROMI3', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',
 'SAPR11', 'SAPR3', 'SAPR4', 'SBSP3', 'SEER3', 'SGPS3', 'SHOW3', 'SHUL3',

```
'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03', 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3',
'SOND5', 'SOND6', 'SQIA3', 'STBP3', 'STKF3', 'SUZB3', 'SYNE3', 'TAEE11',
'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3', 'TECN3', 'TEKA3',
'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4', 'TOTS3', 'TPIS3',
'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4', 'UCAS3',
'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5', 'USIM6',
'VALE3', 'VIAA11', 'VIAA3', 'VIAA4', 'VIVR3', 'VIVT3', 'VIVT4', 'VLID3',
'VSPT3', 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4',
'YBRA3B', 'YBRA4B', 'YDUQ3']
```

381

Após comparação

```
['ABEV3', 'ANIM3', 'CVCB3', 'IGSN3', 'INEP3', 'QUSW3', 'SEER3']
```

7

```
[ ]: #Quantidade de relatorios a partir de 2013
#realizar pesquisa nas empresas de 2013
lista_de_empresas_2013 = []

for name_emp in names_empresas_2013:
    for empresa in lista_caminho:
        if empresa == name_emp:
            path_caminho_pdf_2013 = 'C:
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa
            relatorio_pdf_2013 = os.listdir(path_caminho_pdf_2013)
            att = []
            for lista_pdf_2013 in relatorio_pdf_2013:
                #print(lista_pdf)
                att.append(lista_pdf_2013)
            lista_de_empresas_2013.append(att)
#quantidade total de relatorios baixados
print(lista_de_empresas_2013)
print(len(lista_de_empresas_2013))
```

```
[['ABEV3_2013.pdf', 'ABEV3_2014.pdf', 'ABEV3_2015.pdf', 'ABEV3_2016.pdf',
'ABEV3_2019.pdf', 'ABEV3_2020.pdf', 'ABEV3_2021.pdf'], ['ANIM3_2013.pdf',
'ANIM3_2014.pdf', 'ANIM3_2016.pdf', 'ANIM3_2017.pdf', 'ANIM3_2018.pdf',
'ANIM3_2019.pdf', 'ANIM3_2021.pdf'], ['CVCB3_2013.pdf', 'CVCB3_2014.pdf',
'CVCB3_2015.pdf', 'CVCB3_2016.pdf', 'CVCB3_2017.pdf', 'CVCB3_2018.pdf',
'CVCB3_2019.pdf', 'CVCB3_2020.pdf', 'CVCB3_2021.pdf'], ['IGSN3_2013.pdf',
'IGSN3_2014.pdf', 'IGSN3_2015.pdf', 'IGSN3_2016.pdf', 'IGSN3_2017.pdf',
'IGSN3_2018.pdf', 'IGSN3_2019.pdf', 'IGSN3_2020.pdf', 'IGSN3_2021.pdf'],
['INEP3_2013.pdf', 'INEP3_2014.pdf', 'INEP3_2015.pdf', 'INEP3_2016.pdf',
'INEP3_2018.pdf', 'INEP3_2019.pdf'], ['QUSW3_2013.pdf', 'QUSW3_2014.pdf',
'QUSW3_2015.pdf', 'QUSW3_2016.pdf', 'QUSW3_2017.pdf', 'QUSW3_2018.pdf',
'QUSW3_2019.pdf', 'QUSW3_2020.pdf', 'QUSW3_2021.pdf'], ['SEER3_2013.pdf',
'SEER3_2014.pdf', 'SEER3_2015.pdf', 'SEER3_2016.pdf', 'SEER3_2017.pdf',
'SEER3_2019.pdf', 'SEER3_2021.pdf']]
```

7

7

```
[ ]: #quantidade de relatórios em cada empresa
tam_emp = np.zeros(7, dtype = int)
i = 0
empresas_13r = []
for pesquisa in lista_de_empresas_2013:
    #print(pesquisa)
    for k in pesquisa:
        #print(k)
        tam_emp[i] = tam_emp[i] + 1
    i = i + 1
print(tam_emp)
print("Empresa com menor quantidade de relatorios: ", min(tam_emp))
print(len(tam_emp))
```

[7 7 9 9 6 9 7]

Empresa com menor quantidade de relatorios: 6

7

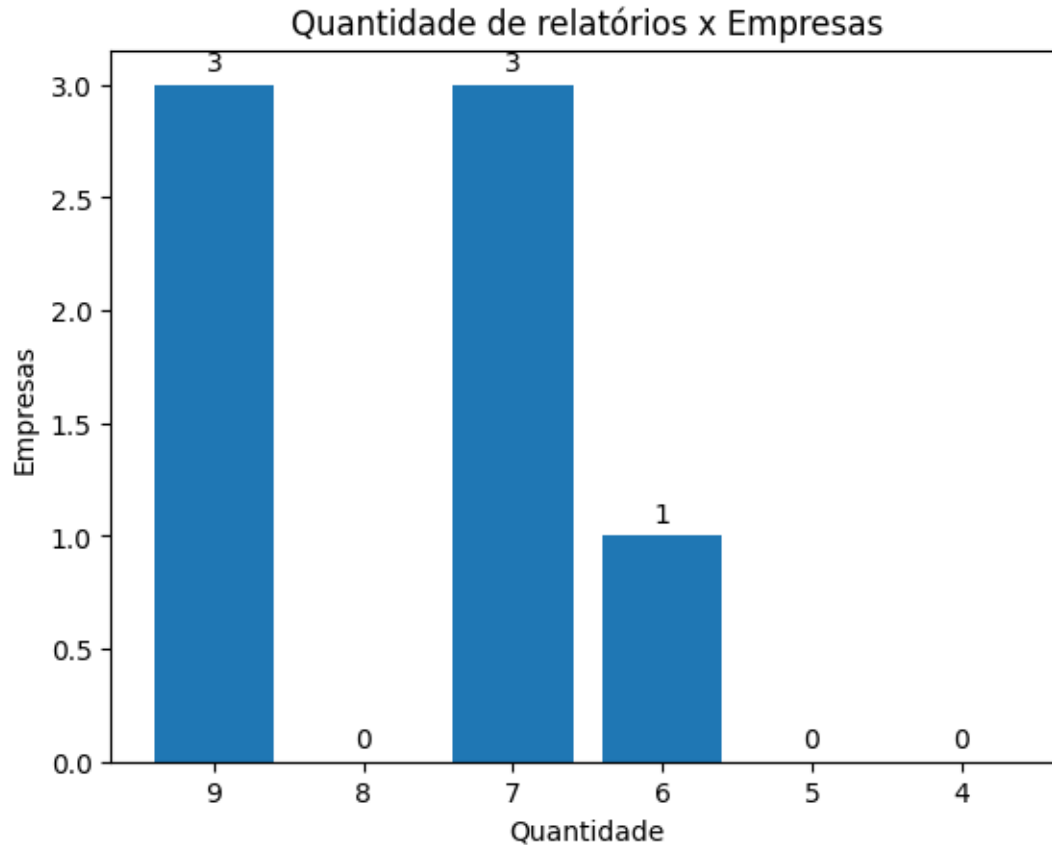
```
[ ]: #empresas com 10 relatorios
quantidade_relatorios = 9
empresas_2013r = []
for i in range(quantidade_relatorios, 3, -1):
    name = []
    #print(name)
    for pesquisa in lista_de_empresas_2013:
        #print(pesquisa)
        #print(len(pesquisa))
        if i == len(pesquisa):
            c = pesquisa[0].split("_")
            name.append(c[0])
    print("Empresas com ", i, "relatórios")
    print(name)
    empresas_2013r.append(name)
#print(empresas_2011r)

grafico = []
for i in empresas_2013r:
    #print(len(i))
    grafico.append(len(i))
print(grafico)
print(sum(grafico))
```

Empresas com 9 relatórios

```
['CVCB3', 'IGSN3', 'QUSW3']
Empresas com 8 relatórios
[]
Empresas com 7 relatórios
['ABEV3', 'ANIM3', 'SEER3']
Empresas com 6 relatórios
['INEP3']
Empresas com 5 relatórios
[]
Empresas com 4 relatórios
[]
[3, 0, 3, 1, 0, 0]
7
```

```
[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ["9", '8', "7", "6", '5', "4"]
rect1 = ax.bar(X, grafico)
ax.set_ylabel('Empresas')
ax.set_title("Quantidade de relatórios x Empresas")
ax.set_xlabel('Quantidade')
ax.bar_label(rect1, padding = 3)
plt.show()
```



```
[ ]: lista_de_empresas_2014 = []
for name in lista:
    c = name.split("_")
    c1 = c[1].split(".")
    if c1[0] == "2014":
        lista_de_empresas_2014.append(name)
print(lista_de_empresas_2014)
print(len(lista_de_empresas_2014))
```

```
['ABEV3_2014.pdf', 'AFLT3_2014.pdf', 'AGRO3_2014.pdf', 'AHEB3_2014.pdf',
'AHEB5_2014.pdf', 'AHEB6_2014.pdf', 'ALPA3_2014.pdf', 'ALPA4_2014.pdf',
'ALUP11_2014.pdf', 'ALUP3_2014.pdf', 'ALUP4_2014.pdf', 'AMAR3_2014.pdf',
'AMER3_2014.pdf', 'ANIM3_2014.pdf', 'APTI3_2014.pdf', 'APTI4_2014.pdf',
'ARZZ3_2014.pdf', 'ATMP3_2014.pdf', 'ATOM3_2014.pdf', 'AZE3_2014.pdf',
'AZE4_2014.pdf', 'BAHI3_2014.pdf', 'BALM3_2014.pdf', 'BALM4_2014.pdf',
'BAUH3_2014.pdf', 'BAUH4_2014.pdf', 'BDLL3_2014.pdf', 'BDLL4_2014.pdf',
'BEEF3_2014.pdf', 'BETP3B_2014.pdf', 'BIOM3_2014.pdf', 'BLUT3_2014.pdf',
'BLUT4_2014.pdf', 'BMKS3_2014.pdf', 'BOBR3_2014.pdf', 'BOBR4_2014.pdf',
'BRAP3_2014.pdf', 'BRAP4_2014.pdf', 'BRAP99_2014.pdf', 'BRFS3_2014.pdf',
'BRKM3_2014.pdf', 'BRKM5_2014.pdf', 'BRKM6_2014.pdf', 'CABI3B_2014.pdf',
'CALI3_2014.pdf', 'CALI4_2014.pdf', 'CAMB3_2014.pdf', 'CAMB4_2014.pdf',
'CASN3_2014.pdf', 'CASN4_2014.pdf', 'CATA3_2014.pdf', 'CATA4_2014.pdf',
'CBEE3_2014.pdf', 'CCR03_2014.pdf', 'CEBR3_2014.pdf', 'CEBR5_2014.pdf',
'CEBR6_2014.pdf', 'CED03_2014.pdf', 'CED04_2014.pdf', 'CEEB3_2014.pdf',
'CEEB5_2014.pdf', 'CEEB6_2014.pdf', 'CEED3_2014.pdf', 'CEED4_2014.pdf',
'CEGR3_2014.pdf', 'CEPE3_2014.pdf', 'CEPE5_2014.pdf', 'CEPE6_2014.pdf',
'CGAS3_2014.pdf', 'CGAS5_2014.pdf', 'CGRA3_2014.pdf', 'CGRA4_2014.pdf',
'CLSC3_2014.pdf', 'CLSC4_2014.pdf', 'CMIG3_2014.pdf', 'CMIG4_2014.pdf',
'CMSA3_2014.pdf', 'CMSA4_2014.pdf', 'COCE3_2014.pdf', 'COCE5_2014.pdf',
'COCE6_2014.pdf', 'COGN3_2014.pdf', 'CPFE3_2014.pdf', 'CPLE11_2014.pdf',
'CPLE3_2014.pdf', 'CPLE5_2014.pdf', 'CPLE6_2014.pdf', 'CPRE3_2014.pdf',
'CRDE3_2014.pdf', 'CRPG3_2014.pdf', 'CRPG5_2014.pdf', 'CRPG6_2014.pdf',
'CRTE3B_2014.pdf', 'CRTE5B_2014.pdf', 'CSAN3_2014.pdf', 'CSMG3_2014.pdf',
'CSNA3_2014.pdf', 'CSRN3_2014.pdf', 'CSRN5_2014.pdf', 'CSRN6_2014.pdf',
'CTKA3_2014.pdf', 'CTKA4_2014.pdf', 'CTNM3_2014.pdf', 'CTNM4_2014.pdf',
'CTSA3_2014.pdf', 'CTSA4_2014.pdf', 'CTSA8_2014.pdf', 'CVCB3_2014.pdf',
'CYRE3_2014.pdf', 'DASA3_2014.pdf', 'DEXP3_2014.pdf', 'DEXP4_2014.pdf',
'DIRR3_2014.pdf', 'DMM03_2014.pdf', 'DOHL3_2014.pdf', 'DOHL4_2014.pdf',
'DTCY3_2014.pdf', 'DTCY4_2014.pdf', 'DXC03_2014.pdf', 'EALT3_2014.pdf',
'EALT4_2014.pdf', 'ECOR3_2014.pdf', 'EGIE3_2014.pdf', 'EKTR3_2014.pdf',
'EKTR4_2014.pdf', 'ELET3_2014.pdf', 'ELET5_2014.pdf', 'ELET6_2014.pdf',
'EMAE3_2014.pdf', 'EMAE4_2014.pdf', 'EMBR3_2014.pdf', 'ENAT3_2014.pdf',
'ENBR3_2014.pdf', 'ENEV3_2014.pdf', 'ENGI11_2014.pdf', 'ENGI3_2014.pdf',
'ENGI4_2014.pdf', 'ENMT3_2014.pdf', 'ENMT4_2014.pdf', 'EPAR3_2014.pdf',
'EPAR4_2014.pdf', 'EQMA3B_2014.pdf', 'EQMA5B_2014.pdf', 'EQMA6B_2014.pdf',
```

'EQPA3_2014.pdf', 'EQPA5_2014.pdf', 'EQPA6_2014.pdf', 'EQPA7_2014.pdf',
 'EQTL11_2014.pdf', 'EQTL3_2014.pdf', 'ESTR3_2014.pdf', 'ESTR4_2014.pdf',
 'ETER3_2014.pdf', 'EUCA3_2014.pdf', 'EUCA4_2014.pdf', 'EVEN3_2014.pdf',
 'EZTC3_2014.pdf', 'FESA3_2014.pdf', 'FESA4_2014.pdf', 'FHER3_2014.pdf',
 'FIGE3_2014.pdf', 'FIGE4_2014.pdf', 'FLRY3_2014.pdf', 'FRAS3_2014.pdf',
 'FRAS4_2014.pdf', 'FRI03_2014.pdf', 'FRRN3B_2014.pdf', 'FRRN5B_2014.pdf',
 'FRRN6B_2014.pdf', 'FRTA3_2014.pdf', 'GEPA3_2014.pdf', 'GEPA4_2014.pdf',
 'GFSA3_2014.pdf', 'GGBR3_2014.pdf', 'GGBR4_2014.pdf', 'GOAU3_2014.pdf',
 'GOAU4_2014.pdf', 'GOLL3_2014.pdf', 'GOLL4_2014.pdf', 'GPAR3_2014.pdf',
 'GRND3_2014.pdf', 'GUAR3_2014.pdf', 'HAGA3_2014.pdf', 'HAGA4_2014.pdf',
 'HBOR3_2014.pdf', 'HBSA3_2014.pdf', 'HETA3_2014.pdf', 'HETA4_2014.pdf',
 'HOOT3_2014.pdf', 'HOOT4_2014.pdf', 'HYPE3_2014.pdf', 'IGSN3_2014.pdf',
 'INEP3_2014.pdf', 'INEP4_2014.pdf', 'IVPR3B_2014.pdf', 'IVPR4B_2014.pdf',
 'JBSS3_2014.pdf', 'JFEN3_2014.pdf', 'JHSF3_2014.pdf', 'JOPA3_2014.pdf',
 'JOPA4_2014.pdf', 'JSLG11_2014.pdf', 'JSLG3_2014.pdf', 'KEPL3_2014.pdf',
 'KEPL4_2014.pdf', 'KLBN11_2014.pdf', 'KLBN3_2014.pdf', 'KLBN4_2014.pdf',
 'LEVE3_2014.pdf', 'LIGT3_2014.pdf', 'LIPR3_2014.pdf', 'LLIS3_2014.pdf',
 'LOGN3_2014.pdf', 'LREN3_2014.pdf', 'LTEL3B_2014.pdf', 'LTEL5B_2014.pdf',
 'LUXM3_2014.pdf', 'LUXM4_2014.pdf', 'MAPT3_2014.pdf', 'MAPT4_2014.pdf',
 'MDNE3_2014.pdf', 'MGEL3_2014.pdf', 'MGEL4_2014.pdf', 'MGLU3_2014.pdf',
 'MILS3_2014.pdf', 'MMAQ3_2014.pdf', 'MMAQ4_2014.pdf', 'MMXM3_2014.pdf',
 'MNDL3_2014.pdf', 'MNPR3_2014.pdf', 'MRFG3_2014.pdf', 'MRSA3B_2014.pdf',
 'MRSA5B_2014.pdf', 'MRSA6B_2014.pdf', 'MRVE3_2014.pdf', 'MSPA3_2014.pdf',
 'MSPA4_2014.pdf', 'MTSA3_2014.pdf', 'MTSA4_2014.pdf', 'MWET3_2014.pdf',
 'MWET4_2014.pdf', 'MYPK3_2014.pdf', 'NEMO3_2014.pdf', 'NEMO5_2014.pdf',
 'NEMO6_2014.pdf', 'NEOE3_2014.pdf', 'NORD3_2014.pdf', 'NRTQ3_2014.pdf',
 'NRTQ4_2014.pdf', 'NUTR3_2014.pdf', 'ODER3_2014.pdf', 'ODER4_2014.pdf',
 'ODPV3_2014.pdf', 'OIBR3_2014.pdf', 'OIBR4_2014.pdf', 'OPGM3B_2014.pdf',
 'OPSE3B_2014.pdf', 'OPTS3B_2014.pdf', 'OSXB3_2014.pdf', 'PATI3_2014.pdf',
 'PATI4_2014.pdf', 'PCAR3_2014.pdf', 'PCAR99_2014.pdf', 'PDGR3_2014.pdf',
 'PDC3_2014.pdf', 'PETR3_2014.pdf', 'PETR4_2014.pdf', 'PFRM3_2014.pdf',
 'PGMN3_2014.pdf', 'PLAS3_2014.pdf', 'PMAM3_2014.pdf', 'PNVL3_2014.pdf',
 'POMO3_2014.pdf', 'POMO4_2014.pdf', 'POSI3_2014.pdf', 'PPAR3_2014.pdf',
 'PPAR4_2014.pdf', 'PRI03_2014.pdf', 'PRMN3B_2014.pdf', 'PRPT3B_2014.pdf',
 'PTBL3_2014.pdf', 'PTNT3_2014.pdf', 'PTNT4_2014.pdf', 'QUAL3_2014.pdf',
 'QUSW3_2014.pdf', 'QVQP3B_2014.pdf', 'RADL3_2014.pdf', 'RAIL3_2014.pdf',
 'RANI3_2014.pdf', 'RANI4_2014.pdf', 'RAPT3_2014.pdf', 'RAPT4_2014.pdf',
 'RCSL3_2014.pdf', 'RCSL4_2014.pdf', 'RDNI3_2014.pdf', 'REDE3_2014.pdf',
 'RENT3_2014.pdf', 'RNEW11_2014.pdf', 'RNEW3_2014.pdf', 'RNEW4_2014.pdf',
 'ROMI3_2014.pdf', 'RPMG3_2014.pdf', 'RSID3_2014.pdf', 'RSUL3_2014.pdf',
 'RSUL4_2014.pdf', 'SAPR11_2014.pdf', 'SAPR3_2014.pdf', 'SAPR4_2014.pdf',
 'SBSP3_2014.pdf', 'SEER3_2014.pdf', 'SGPS3_2014.pdf', 'SHOW3_2014.pdf',
 'SHUL3_2014.pdf', 'SHUL4_2014.pdf', 'SLCE3_2014.pdf', 'SLED3_2014.pdf',
 'SLED4_2014.pdf', 'SMT03_2014.pdf', 'SNSY3_2014.pdf', 'SNSY5_2014.pdf',
 'SNSY6_2014.pdf', 'SOND3_2014.pdf', 'SOND5_2014.pdf', 'SOND6_2014.pdf',
 'SQIA3_2014.pdf', 'STBP3_2014.pdf', 'STKF3_2014.pdf', 'SUZB3_2014.pdf',
 'SYNE3_2014.pdf', 'TAEE11_2014.pdf', 'TAEE3_2014.pdf', 'TAEE4_2014.pdf',
 'TASA3_2014.pdf', 'TASA4_2014.pdf', 'TCN03_2014.pdf', 'TCN04_2014.pdf',


```
'TCSA3_2014.pdf', 'TECN3_2014.pdf', 'TEKA3_2014.pdf', 'TEKA4_2014.pdf',
'TELB3_2014.pdf', 'TELB4_2014.pdf', 'TEND3_2014.pdf', 'TGMA3_2014.pdf',
'TKN03_2014.pdf', 'TKN04_2014.pdf', 'TOTS3_2014.pdf', 'TPIS3_2014.pdf',
'TRIS3_2014.pdf', 'TRPL3_2014.pdf', 'TRPL4_2014.pdf', 'TUPY3_2014.pdf',
'TXRX11_2014.pdf', 'TXRX3_2014.pdf', 'TXRX4_2014.pdf', 'UCAS3_2014.pdf',
'UGPA3_2014.pdf', 'UNIP3_2014.pdf', 'UNIP5_2014.pdf', 'UNIP6_2014.pdf',
'UPKP3B_2014.pdf', 'USIM3_2014.pdf', 'USIM5_2014.pdf', 'USIM6_2014.pdf',
'VALE3_2014.pdf', 'VIAA11_2014.pdf', 'VIAA3_2014.pdf', 'VIAA4_2014.pdf',
'VIVR3_2014.pdf', 'VIVT3_2014.pdf', 'VIVT4_2014.pdf', 'VLID3_2014.pdf',
'VSPT3_2014.pdf', 'VSPT4_2014.pdf', 'VULC3_2014.pdf', 'WEGE3_2014.pdf',
'WHRL3_2014.pdf', 'WHRL4_2014.pdf', 'WLMM3_2014.pdf', 'WLMM4_2014.pdf',
'YBRA3B_2014.pdf', 'YBRA4B_2014.pdf', 'YDUQ3_2014.pdf']
```

383

```
[ ]: names_empresas_2014 = []
print(names_empresas_2011)
print(names_empresas_2012)
print(names_empresas_2013)
for name in lista_de_empresas_2014:
    c = name.split("_")
    names_empresas_2014.append(c[0])
print(names_empresas_2014)
print(len(names_empresas_2014))

for name in names_empresas_2011:
    for name1 in names_empresas_2014:
        if name1 == name:
            names_empresas_2014.remove(name1)
for name in names_empresas_2012:
    for name1 in names_empresas_2014:
        if name1 == name:
            names_empresas_2014.remove(name1)
for name in names_empresas_2013:
    for name1 in names_empresas_2014:
        if name1 == name:
            names_empresas_2014.remove(name1)
print("Após comparação")
print(names_empresas_2014)
print(len(names_empresas_2014))
```

```
['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',
'TOTS3', 'VALE3', 'VIVT3']
['AHEB3', 'AHEB5', 'AHEB6', 'ALUP11', 'ALUP3', 'ALUP4', 'AMER3', 'ARZZ3',
```

'ATMP3', 'ATOM3', 'AZE3V', 'AZE4V', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3',
 'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3',
 'BOBR4', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4',
 'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA4', 'CBEE3', 'CCR03', 'CEBR3', 'CEBR5',
 'CEBR6', 'CED03', 'CED04', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',
 'CEPE3', 'CEPE5', 'CEPE6', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
 'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',
 'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',
 'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6',
 'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CYRE3', 'DEXP3',
 'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXC03', 'EALT3', 'EALT4',
 'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4',
 'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4',
 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6',
 'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4',
 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3',
 'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'GEP3A', 'GEP3A4', 'GFSA3',
 'HAGA4', 'HBOR3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'INEP4',
 'IVPR3B', 'IVPR4B', 'JFEN3', 'JHSF3', 'JOP3A', 'JOP3A4', 'JSLG11', 'JSLG3',
 'KEPL3', 'KEPL4', 'KLBN3', 'LEVE3', 'LIGT3', 'LOGN3', 'LREN3', 'LTEL3B',
 'LUXM3', 'LUXM4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',
 'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',
 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO5', 'NEOE3', 'NORD3', 'NRTQ3',
 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3', 'OIBR4', 'OPGM3B',
 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',
 'PDTC3', 'PFRM3', 'PLAS3', 'PMAM3', 'PNVL3', 'POM03', 'POSI3', 'PPAR3', 'PPAR4',
 'PRI03', 'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QVQP3B', 'RADL3',
 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3',
 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',
 'SBSP3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03',
 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'SUZB3', 'SYNE3',
 'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCN03', 'TCN04', 'TCSA3',
 'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKN03', 'TKN04',
 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',
 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',
 'USIM6', 'VIAA11', 'VIAA3', 'VIAA4', 'VIVR3', 'VIVT4', 'VLID3', 'VSPT3',
 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B',
 'YBRA4B', 'YDUQ3']
 ['ABEV3', 'ANIM3', 'CVCB3', 'IGSN3', 'INEP3', 'QUSW3', 'SEER3']
 ['ABEV3', 'AFLT3', 'AGRO3', 'AHEB3', 'AHEB5', 'AHEB6', 'ALPA3', 'ALPA4',
 'ALUP11', 'ALUP3', 'ALUP4', 'AMAR3', 'AMER3', 'ANIM3', 'APTI3', 'APTI4',
 'ARZZ3', 'ATMP3', 'ATOM3', 'AZE3V', 'AZE4V', 'BAHI3', 'BALM3', 'BALM4', 'BAUH3',
 'BAUH4', 'BDLL3', 'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4',
 'BMKS3', 'BOBR3', 'BOBR4', 'BRAP3', 'BRAP4', 'BRAP99', 'BRFS3', 'BRKM3',
 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4', 'CAMB3', 'CAMB4', 'CASN3',
 'CASN4', 'CATA3', 'CATA4', 'CBEE3', 'CCR03', 'CEBR3', 'CEBR5', 'CEBR6', 'CED03',
 'CED04', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3', 'CEPE3', 'CEPE5',
 'CEPE6', 'CGAS3', 'CGAS5', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',

```
'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',
'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',
'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6',
'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CVCB3', 'CYRE3',
'DASA3', 'DEXP3', 'DEXP4', 'DIRR3', 'DMMO3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4',
'DXC03', 'EALT3', 'EALT4', 'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5',
'ELET6', 'EMAE3', 'EMAE4', 'EMBR3', 'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11',
'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4', 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B',
'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6', 'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3',
'ESTR4', 'ETER3', 'EUCA3', 'EUCA4', 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3',
'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3', 'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B',
'FRRN6B', 'FRTA3', 'GEPA3', 'GEPA4', 'GFS3A', 'GGBR3', 'GGBR4', 'GOAU3',
'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3', 'GUAR3', 'HAGA3', 'HAGA4', 'HBOR3',
'HBSA3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'IGSN3', 'INEP3', 'INEP4',
'IVPR3B', 'IVPR4B', 'JBSS3', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11',
'JSLG3', 'KEPL3', 'KEPL4', 'KLBN11', 'KLBN3', 'KLBN4', 'LEVE3', 'LIGT3',
'LIPR3', 'LLIS3', 'LOGN3', 'LREN3', 'LTEL3B', 'LTEL5B', 'LUXM3', 'LUXM4',
'MAPT3', 'MAPT4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',
'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',
'MSPA3', 'MSPA4', 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO3', 'NEMO5',
'NEMO6', 'NEOE3', 'NORD3', 'NRTQ3', 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3',
'OIBR3', 'OIBR4', 'OPGM3B', 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4',
'PCAR3', 'PCAR99', 'PDGR3', 'PDTC3', 'PETR3', 'PETR4', 'PFRM3', 'PGMN3',
'PLAS3', 'PMAM3', 'PNVL3', 'POM03', 'POM04', 'POSI3', 'PPAR3', 'PPAR4', 'PRI03',
'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QUAL3', 'QUSW3', 'QVQP3B',
'RADL3', 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3',
'REDE3', 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'ROMI3', 'RPMG3', 'RSID3',
'RSUL3', 'RSUL4', 'SAPR11', 'SAPR3', 'SAPR4', 'SBSP3', 'SEER3', 'SGPS3',
'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03', 'SNSY3', 'SNSY5',
'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'STBP3', 'STKF3', 'SUZB3', 'SYNE3',
'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',
'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4',
'TOTS3', 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3',
'TXRX4', 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3',
'USIM5', 'USIM6', 'VALE3', 'VIAA11', 'VIAA3', 'VIAA4', 'VIVR3', 'VIVT3',
'VIVT4', 'VLID3', 'VSPT3', 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3',
'WLMM4', 'YBRA3B', 'YBRA4B', 'YDUQ3']
```

383

Após comparação

['DMMO3', 'LLIS3']

2

```
[ ]: #Quantidade de relatorios a partir de 2014
#realizar pesquisa nas empresas de 2014
lista_de_empresas_2014 = []

for name_emp in names_empresas_2014:
```

```

for empresa in lista_caminho:
    if empresa == name_emp:
        path_caminho_pdf_2014 = 'C:
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa
        relatorio_pdf_2014 = os.listdir(path_caminho_pdf_2014)
        att = []
        for lista_pdf_2014 in relatorio_pdf_2014:
            #print(lista_pdf)
            att.append(lista_pdf_2014)
        lista_de_empresas_2014.append(att)
#quantidade total de relatorios baixados
print(lista_de_empresas_2014)
print(len(lista_de_empresas_2014))

```

```

[['DMM03_2014.pdf', 'DMM03_2015.pdf', 'DMM03_2016.pdf', 'DMM03_2017.pdf',
'DMM03_2018.pdf', 'DMM03_2019.pdf', 'DMM03_2020.pdf', 'DMM03_2021.pdf'],
['LLIS3_2014.pdf', 'LLIS3_2015.pdf', 'LLIS3_2016.pdf', 'LLIS3_2017.pdf',
'LLIS3_2018.pdf', 'LLIS3_2019.pdf', 'LLIS3_2020.pdf', 'LLIS3_2021.pdf']]
2

```

```

[ ]: #quantidade de relatórios em cada empresa
tam_emp = np.zeros(2, dtype = int)
i = 0
empresas_14r = []
for pesquisa in lista_de_empresas_2014:
    #print(pesquisa)
    for k in pesquisa:
        #print(k)
        tam_emp[i] = tam_emp[i] + 1
    i = i + 1
print(tam_emp)
print("Empresa com menor quantidade de relatorios: ", min(tam_emp))
print(len(tam_emp))

```

```

[8 8]
Empresa com menor quantidade de relatorios: 8
2

```

```

[ ]: #empresas com 8 relatorios
quantidade_relatorios = 8
empresas_2014r = []
for i in range(quantidade_relatorios, 7, -1):
    name = []
    #print(name)
    for pesquisa in lista_de_empresas_2014:
        #print(pesquisa)
        #print(len(pesquisa))
        if i == len(pesquisa):

```

```

        c = pesquisa[0].split("_")
        name.append(c[0])
    print("Empresas com ", i ,"relatórios")
    print(name)
    empresas_2014r.append(name)
#print(empresas_2011r)

grafico = []
for i in empresas_2014r:
    #print(len(i))
    grafico.append(len(i))
print(grafico)
print(sum(grafico))

```

```

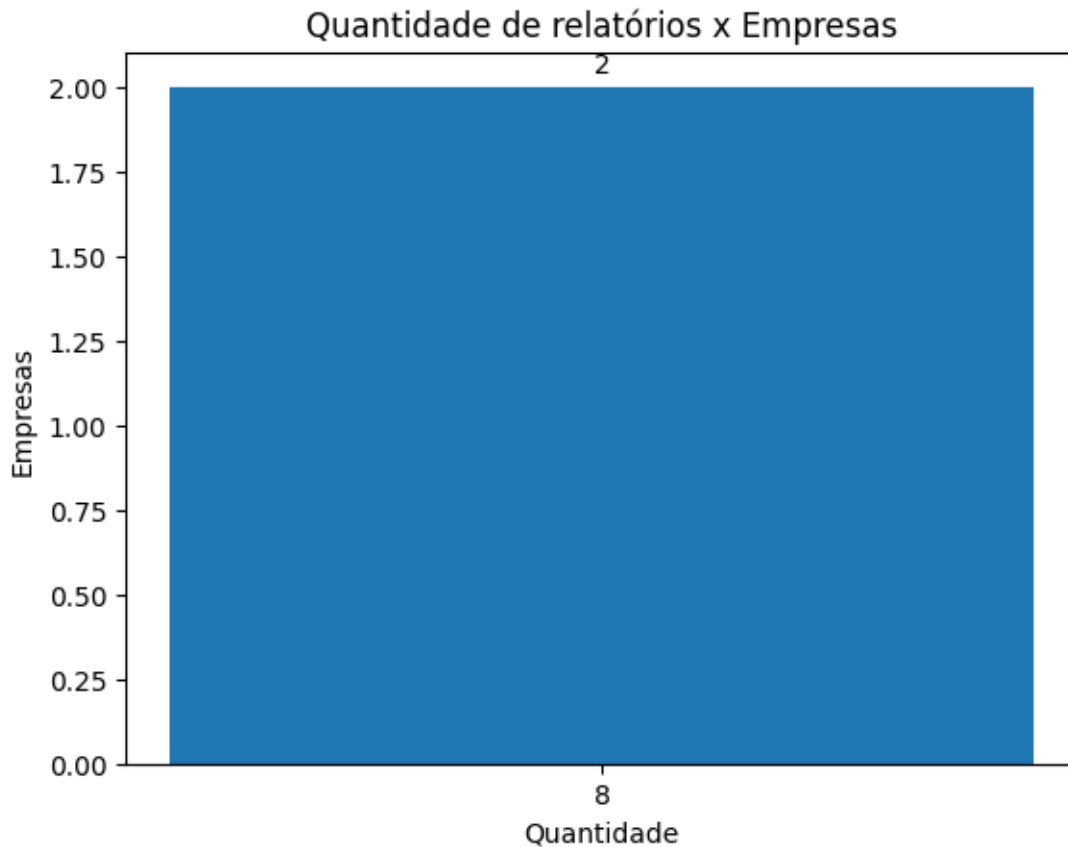
Empresas com 8 relatórios
['DMM03', 'LLIS3']
[2]
2

```

```

[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ['8']
rect1 = ax.bar(X, grafico)
ax.set_ylabel('Empresas')
ax.set_title("Quantidade de relatórios x Empresas")
ax.set_xlabel('Quantidade')
ax.bar_label(rect1, padding = 3)
plt.show()

```



```
[ ]: lista_de_empresas_2015 = []
for name in lista:
    c = name.split("_")
    c1 = c[1].split(".")
    if c1[0] == "2015":
        lista_de_empresas_2015.append(name)
print(lista_de_empresas_2015)
print(len(lista_de_empresas_2015))
```

```
['ABEV3_2015.pdf', 'AFLT3_2015.pdf', 'AGRO3_2015.pdf', 'AHEB3_2015.pdf',
'AHEB5_2015.pdf', 'AHEB6_2015.pdf', 'ALPA3_2015.pdf', 'ALPA4_2015.pdf',
'ALUP11_2015.pdf', 'ALUP3_2015.pdf', 'ALUP4_2015.pdf', 'AMAR3_2015.pdf',
'AMER3_2015.pdf', 'APTI3_2015.pdf', 'APTI4_2015.pdf', 'ARZZ3_2015.pdf',
'ATMP3_2015.pdf', 'ATOM3_2015.pdf', 'AZEV3_2015.pdf', 'AZEV4_2015.pdf',
'BAHI3_2015.pdf', 'BALM3_2015.pdf', 'BALM4_2015.pdf', 'BAUH3_2015.pdf',
'BAUH4_2015.pdf', 'BDLL3_2015.pdf', 'BDLL4_2015.pdf', 'BEEF3_2015.pdf',
'BETP3B_2015.pdf', 'BIOM3_2015.pdf', 'BLUT3_2015.pdf', 'BLUT4_2015.pdf',
'BMKS3_2015.pdf', 'BOBR3_2015.pdf', 'BOBR4_2015.pdf', 'BRAP3_2015.pdf',
'BRAP4_2015.pdf', 'BRAP99_2015.pdf', 'BRFS3_2015.pdf', 'BRKM3_2015.pdf',
'BRKM5_2015.pdf', 'BRKM6_2015.pdf', 'CABI3B_2015.pdf', 'CALI3_2015.pdf',
```

'CALI4_2015.pdf', 'CAMB3_2015.pdf', 'CAMB4_2015.pdf', 'CASN3_2015.pdf',
 'CASN4_2015.pdf', 'CATA3_2015.pdf', 'CATA4_2015.pdf', 'CBEE3_2015.pdf',
 'CCRO3_2015.pdf', 'CEBR3_2015.pdf', 'CEBR5_2015.pdf', 'CEBR6_2015.pdf',
 'CEDO3_2015.pdf', 'CEDO4_2015.pdf', 'CEEB3_2015.pdf', 'CEEB5_2015.pdf',
 'CEEB6_2015.pdf', 'CEED3_2015.pdf', 'CEED4_2015.pdf', 'CEGR3_2015.pdf',
 'CEPE3_2015.pdf', 'CEPE5_2015.pdf', 'CEPE6_2015.pdf', 'CGAS3_2015.pdf',
 'CGAS5_2015.pdf', 'CGRA3_2015.pdf', 'CGRA4_2015.pdf', 'CLSC3_2015.pdf',
 'CLSC4_2015.pdf', 'CMIG3_2015.pdf', 'CMIG4_2015.pdf', 'CMSA3_2015.pdf',
 'CMSA4_2015.pdf', 'COCE3_2015.pdf', 'COCE5_2015.pdf', 'COCE6_2015.pdf',
 'COGN3_2015.pdf', 'CPFE3_2015.pdf', 'CPLE11_2015.pdf', 'CPLE3_2015.pdf',
 'CPLE5_2015.pdf', 'CPLE6_2015.pdf', 'CPRE3_2015.pdf', 'CRDE3_2015.pdf',
 'CRPG3_2015.pdf', 'CRPG5_2015.pdf', 'CRPG6_2015.pdf', 'CRTE3B_2015.pdf',
 'CRTE5B_2015.pdf', 'CSAN3_2015.pdf', 'CSMG3_2015.pdf', 'CSNA3_2015.pdf',
 'CSRN3_2015.pdf', 'CSRN5_2015.pdf', 'CSRN6_2015.pdf', 'CTKA3_2015.pdf',
 'CTKA4_2015.pdf', 'CTNM3_2015.pdf', 'CTNM4_2015.pdf', 'CTSA3_2015.pdf',
 'CTSA4_2015.pdf', 'CTSA8_2015.pdf', 'CVCB3_2015.pdf', 'CYRE3_2015.pdf',
 'DASA3_2015.pdf', 'DEXP3_2015.pdf', 'DEXP4_2015.pdf', 'DIRR3_2015.pdf',
 'DMMO3_2015.pdf', 'DOHL3_2015.pdf', 'DOHL4_2015.pdf', 'DTCY3_2015.pdf',
 'DTCY4_2015.pdf', 'DXCO3_2015.pdf', 'EALT3_2015.pdf', 'EALT4_2015.pdf',
 'ECOR3_2015.pdf', 'EGIE3_2015.pdf', 'EKTR3_2015.pdf', 'EKTR4_2015.pdf',
 'ELET3_2015.pdf', 'ELET5_2015.pdf', 'ELET6_2015.pdf', 'EMAE3_2015.pdf',
 'EMAE4_2015.pdf', 'EMBR3_2015.pdf', 'ENAT3_2015.pdf', 'ENBR3_2015.pdf',
 'ENEV3_2015.pdf', 'ENGI11_2015.pdf', 'ENGI3_2015.pdf', 'ENGI4_2015.pdf',
 'ENMT3_2015.pdf', 'ENMT4_2015.pdf', 'EPAR3_2015.pdf', 'EPAR4_2015.pdf',
 'EQMA3B_2015.pdf', 'EQMA5B_2015.pdf', 'EQMA6B_2015.pdf', 'EQPA3_2015.pdf',
 'EQPA5_2015.pdf', 'EQPA6_2015.pdf', 'EQPA7_2015.pdf', 'EQTL11_2015.pdf',
 'EQTL3_2015.pdf', 'ESTR3_2015.pdf', 'ESTR4_2015.pdf', 'ETER3_2015.pdf',
 'EUCA3_2015.pdf', 'EUCA4_2015.pdf', 'EVEN3_2015.pdf', 'EZTC3_2015.pdf',
 'FESA3_2015.pdf', 'FESA4_2015.pdf', 'FHER3_2015.pdf', 'FIGE3_2015.pdf',
 'FIGE4_2015.pdf', 'FLRY3_2015.pdf', 'FRAS3_2015.pdf', 'FRAS4_2015.pdf',
 'FRIO3_2015.pdf', 'FRRN3B_2015.pdf', 'FRRN5B_2015.pdf', 'FRRN6B_2015.pdf',
 'FRTA3_2015.pdf', 'GEPA3_2015.pdf', 'GEPA4_2015.pdf', 'GFSA3_2015.pdf',
 'GGBR3_2015.pdf', 'GGBR4_2015.pdf', 'GOAU3_2015.pdf', 'GOAU4_2015.pdf',
 'GOLL3_2015.pdf', 'GOLL4_2015.pdf', 'GPAR3_2015.pdf', 'GRND3_2015.pdf',
 'GUAR3_2015.pdf', 'HAGA3_2015.pdf', 'HAGA4_2015.pdf', 'HBOR3_2015.pdf',
 'HBSA3_2015.pdf', 'HETA3_2015.pdf', 'HETA4_2015.pdf', 'HOOT3_2015.pdf',
 'HOOT4_2015.pdf', 'HYPE3_2015.pdf', 'IGSN3_2015.pdf', 'INEP3_2015.pdf',
 'INEP4_2015.pdf', 'IVPR3B_2015.pdf', 'IVPR4B_2015.pdf', 'JBSS3_2015.pdf',
 'JFEN3_2015.pdf', 'JHSF3_2015.pdf', 'JOPA3_2015.pdf', 'JOPA4_2015.pdf',
 'JSLG11_2015.pdf', 'JSLG3_2015.pdf', 'KEPL3_2015.pdf', 'KEPL4_2015.pdf',
 'KLBN11_2015.pdf', 'KLBN3_2015.pdf', 'KLBN4_2015.pdf', 'LEVE3_2015.pdf',
 'LIGT3_2015.pdf', 'LIPR3_2015.pdf', 'LLIS3_2015.pdf', 'LOGN3_2015.pdf',
 'LREN3_2015.pdf', 'LTE3B_2015.pdf', 'LTE3_2015.pdf', 'LUXM3_2015.pdf',
 'LUXM4_2015.pdf', 'MAPT3_2015.pdf', 'MAPT4_2015.pdf', 'MDNE3_2015.pdf',
 'MEAL3_2015.pdf', 'MGEL3_2015.pdf', 'MGEL4_2015.pdf', 'MGLU3_2015.pdf',
 'MILS3_2015.pdf', 'MMAQ3_2015.pdf', 'MMAQ4_2015.pdf', 'MMXM3_2015.pdf',
 'MNDL3_2015.pdf', 'MNPR3_2015.pdf', 'MRFG3_2015.pdf', 'MRSA3B_2015.pdf',
 'MRSA5B_2015.pdf', 'MRSA6B_2015.pdf', 'MRVE3_2015.pdf', 'MSPA3_2015.pdf',

'MSPA4_2015.pdf', 'MTSA3_2015.pdf', 'MTSA4_2015.pdf', 'MWET3_2015.pdf',
'MWET4_2015.pdf', 'MYPK3_2015.pdf', 'NEMO3_2015.pdf', 'NEMO5_2015.pdf',
'NEMO6_2015.pdf', 'NEOE3_2015.pdf', 'NORD3_2015.pdf', 'NRTQ3_2015.pdf',
'NRTQ4_2015.pdf', 'NUTR3_2015.pdf', 'ODER3_2015.pdf', 'ODER4_2015.pdf',
'ODPV3_2015.pdf', 'OFSA3_2015.pdf', 'OIBR3_2015.pdf', 'OIBR4_2015.pdf',
'OPGM3B_2015.pdf', 'OPSE3B_2015.pdf', 'OPTS3B_2015.pdf', 'OSXB3_2015.pdf',
'PATI3_2015.pdf', 'PATI4_2015.pdf', 'PCAR3_2015.pdf', 'PCAR99_2015.pdf',
'PDGR3_2015.pdf', 'PDTC3_2015.pdf', 'PETR3_2015.pdf', 'PETR4_2015.pdf',
'PFMR3_2015.pdf', 'PGMN3_2015.pdf', 'PLAS3_2015.pdf', 'PMAM3_2015.pdf',
'PNVL3_2015.pdf', 'POMO3_2015.pdf', 'POMO4_2015.pdf', 'POSI3_2015.pdf',
'PPAR3_2015.pdf', 'PPAR4_2015.pdf', 'PRI03_2015.pdf', 'PRMN3B_2015.pdf',
'PRPT3B_2015.pdf', 'PTBL3_2015.pdf', 'PTNT3_2015.pdf', 'PTNT4_2015.pdf',
'QUAL3_2015.pdf', 'QUSW3_2015.pdf', 'QVQP3B_2015.pdf', 'RADL3_2015.pdf',
'RAIL3_2015.pdf', 'RANI3_2015.pdf', 'RANI4_2015.pdf', 'RAPT3_2015.pdf',
'RAPT4_2015.pdf', 'RCSL3_2015.pdf', 'RCSL4_2015.pdf', 'RDNI3_2015.pdf',
'REDE3_2015.pdf', 'RENT3_2015.pdf', 'RNEW11_2015.pdf', 'RNEW3_2015.pdf',
'RNEW4_2015.pdf', 'ROMI3_2015.pdf', 'RPMG3_2015.pdf', 'RSID3_2015.pdf',
'RSUL3_2015.pdf', 'RSUL4_2015.pdf', 'SAPR11_2015.pdf', 'SAPR3_2015.pdf',
'SAPR4_2015.pdf', 'SBSP3_2015.pdf', 'SEER3_2015.pdf', 'SGPS3_2015.pdf',
'SHOW3_2015.pdf', 'SHUL3_2015.pdf', 'SHUL4_2015.pdf', 'SLCE3_2015.pdf',
'SLED3_2015.pdf', 'SLED4_2015.pdf', 'SMT03_2015.pdf', 'SNSY3_2015.pdf',
'SNSY5_2015.pdf', 'SNSY6_2015.pdf', 'SOND3_2015.pdf', 'SOND5_2015.pdf',
'SOND6_2015.pdf', 'SQIA3_2015.pdf', 'STBP3_2015.pdf', 'STKF3_2015.pdf',
'SUZB3_2015.pdf', 'SYNE3_2015.pdf', 'TAE11_2015.pdf', 'TAE3_2015.pdf',
'TAE4_2015.pdf', 'TASA3_2015.pdf', 'TASA4_2015.pdf', 'TCN03_2015.pdf',
'TCN04_2015.pdf', 'TCSA3_2015.pdf', 'TECN3_2015.pdf', 'TEKA3_2015.pdf',
'TEKA4_2015.pdf', 'TELB3_2015.pdf', 'TELB4_2015.pdf', 'TEND3_2015.pdf',
'TGMA3_2015.pdf', 'TKN03_2015.pdf', 'TKN04_2015.pdf', 'TOTS3_2015.pdf',
'TPIS3_2015.pdf', 'TRIS3_2015.pdf', 'TRPL3_2015.pdf', 'TRPL4_2015.pdf',
'TUPY3_2015.pdf', 'TXRX11_2015.pdf', 'TXRX3_2015.pdf', 'TXRX4_2015.pdf',
'UCAS3_2015.pdf', 'UGPA3_2015.pdf', 'UNIP3_2015.pdf', 'UNIP5_2015.pdf',
'UNIP6_2015.pdf', 'UPKP3B_2015.pdf', 'USIM3_2015.pdf', 'USIM5_2015.pdf',
'USIM6_2015.pdf', 'VALE3_2015.pdf', 'VIAA11_2015.pdf', 'VIAA3_2015.pdf',
'VIAA4_2015.pdf', 'VIVR3_2015.pdf', 'VIVT3_2015.pdf', 'VIVT4_2015.pdf',
'VLID3_2015.pdf', 'VSPT3_2015.pdf', 'VSPT4_2015.pdf', 'VULC3_2015.pdf',
'WEGE3_2015.pdf', 'WHRL3_2015.pdf', 'WHRL4_2015.pdf', 'WLMM3_2015.pdf',
'WLMM4_2015.pdf', 'YBRA3B_2015.pdf', 'YBRA4B_2015.pdf', 'YDUQ3_2015.pdf']

384

```
[ ]: names_empresas_2015 = []
print(names_empresas_2011)
print(names_empresas_2012)
print(names_empresas_2013)
print(names_empresas_2014)
for name in lista_de_empresas_2015:
    c = name.split("_")
    names_empresas_2015.append(c[0])
```



```

print(names_empresas_2015)
print(len(names_empresas_2015))

for name in names_empresas_2011:
    for name1 in names_empresas_2015:
        if name1 == name:
            names_empresas_2015.remove(name1)
for name in names_empresas_2012:
    for name1 in names_empresas_2015:
        if name1 == name:
            names_empresas_2015.remove(name1)
for name in names_empresas_2013:
    for name1 in names_empresas_2015:
        if name1 == name:
            names_empresas_2015.remove(name1)
for name in names_empresas_2014:
    for name1 in names_empresas_2015:
        if name1 == name:
            names_empresas_2015.remove(name1)

print("Após comparação")
print(names_empresas_2015)
print(len(names_empresas_2015))

```

```

['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',
'TOTS3', 'VALE3', 'VIVT3']
['AHEB3', 'AHEB5', 'AHEB6', 'ALUP11', 'ALUP3', 'ALUP4', 'AMER3', 'ARZZ3',
'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3',
'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3',
'BOBR4', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4',
'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA4', 'CBEE3', 'CCRO3', 'CEBR3', 'CEBR5',
'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',
'CEPE3', 'CEPE5', 'CEPE6', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',
'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',
'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSR3', 'CSR5', 'CSR6',
'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CYRE3', 'DEXP3',
'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXCO3', 'EALT3', 'EALT4',
'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4',
'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4',
'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6',
'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4',
'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3',

```

'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'GEP3A', 'GEP4A', 'GFSA3',
 'HAGA4', 'HBOR3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'INEP4',
 'IVPR3B', 'IVPR4B', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3',
 'KEPL3', 'KEPL4', 'KLB3N', 'LEVE3', 'LIGT3', 'LOGN3', 'LREN3', 'LTEL3B',
 'LUXM3', 'LUXM4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',
 'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',
 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO5', 'NEOE3', 'NORD3', 'NRTQ3',
 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3', 'OIBR4', 'OPGM3B',
 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',
 'PDC3', 'PFRM3', 'PLAS3', 'PMAM3', 'PNVL3', 'POMO3', 'POSI3', 'PPAR3', 'PPAR4',
 'PRI03', 'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QVQP3B', 'RADL3',
 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3',
 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',
 'SBSP3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03',
 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'SUZB3', 'SYNE3',
 'TAE11', 'TAE3', 'TAE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',
 'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4',
 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',
 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',
 'USIM6', 'VIA11', 'VIA3', 'VIA4', 'VIVR3', 'VIVT4', 'VLID3', 'VSPT3',
 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B',
 'YBRA4B', 'YDUQ3']
 ['ABEV3', 'ANIM3', 'CVCB3', 'IGSN3', 'INEP3', 'QUSW3', 'SEER3']
 ['DMMO3', 'LLIS3']
 ['ABEV3', 'AFLT3', 'AGRO3', 'AHEB3', 'AHEB5', 'AHEB6', 'ALPA3', 'ALPA4',
 'ALUP11', 'ALUP3', 'ALUP4', 'AMAR3', 'AMER3', 'APTI3', 'APTI4', 'ARZZ3',
 'ATMP3', 'ATOM3', 'AZE3V', 'AZE4V', 'BAHI3', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4',
 'BDLL3', 'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3',
 'BOBR3', 'BOBR4', 'BRAP3', 'BRAP4', 'BRAP99', 'BRFS3', 'BRKM3', 'BRKM5',
 'BRKM6', 'CABI3B', 'CALI3', 'CALI4', 'CAMB3', 'CAMB4', 'CASN3', 'CASN4',
 'CATA3', 'CATA4', 'CBEE3', 'CCRO3', 'CEBR3', 'CEBR5', 'CEBR6', 'CEDO3', 'CEDO4',
 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3', 'CEPE3', 'CEPE5', 'CEPE6',
 'CGAS3', 'CGAS5', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4', 'CMSA3',
 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11', 'CPLE3',
 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6', 'CRTE3B',
 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6', 'CTKA3',
 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CVCB3', 'CYRE3', 'DASA3',
 'DEXP3', 'DEXP4', 'DIRR3', 'DMMO3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXCO3',
 'EALT3', 'EALT4', 'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6',
 'EMAE3', 'EMAE4', 'EMBR3', 'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3',
 'ENGI4', 'ENMT3', 'ENMT4', 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B',
 'EQPA3', 'EQPA5', 'EQPA6', 'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4',
 'ETER3', 'EUCA3', 'EUCA4', 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3',
 'FIGE4', 'FLRY3', 'FRAS3', 'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B',
 'FRTA3', 'GEP3A', 'GEP4A', 'GFSA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3',
 'GOLL4', 'GP3AR', 'GRND3', 'GUAR3', 'HAGA3', 'HAGA4', 'HBOR3', 'HBSA3', 'HETA3',
 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'IGSN3', 'INEP3', 'INEP4', 'IVPR3B',
 'IVPR4B', 'JBSS3', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3',

```
'KEPL3', 'KEPL4', 'KLB11', 'KLB3', 'KLB4', 'LEVE3', 'LIGT3', 'LIPR3',
'LLIS3', 'LOGN3', 'LREN3', 'LTEL3B', 'LTEL5B', 'LUXM3', 'LUXM4', 'MAPT3',
'MAPT4', 'MDNE3', 'MEAL3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',
'MMXM3', 'MNDL3', 'MNPR3', 'MRF3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',
'MSPA3', 'MSPA4', 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO3', 'NEMO5',
'NEMO6', 'NEOE3', 'NORD3', 'NRTQ3', 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3',
'OFSA3', 'OIBR3', 'OIBR4', 'OPGM3B', 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3',
'PATI4', 'PCAR3', 'PCAR99', 'PDGR3', 'PDTC3', 'PETR3', 'PETR4', 'PFRM3',
'PGMN3', 'PLAS3', 'PMAM3', 'PNVL3', 'POM3', 'POM4', 'POSI3', 'PPAR3', 'PPAR4',
'PRIO3', 'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QUAL3', 'QUSW3',
'QVQP3B', 'RADL3', 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3',
'RCSL4', 'RDNI3', 'REDE3', 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'ROMI3',
'RPMG3', 'RSID3', 'RSUL3', 'RSUL4', 'SAPR11', 'SAPR3', 'SAPR4', 'SBSP3',
'SEER3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03',
'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'STBP3', 'STKF3',
'SUZB3', 'SYNE3', 'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3',
'TCNO4', 'TCSA3', 'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3',
'TKN03', 'TKN04', 'TOTS3', 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3',
'TXRX11', 'TXRX3', 'TXRX4', 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6',
'UPKP3B', 'USIM3', 'USIM5', 'USIM6', 'VALE3', 'VIAA11', 'VIAA3', 'VIAA4',
'VIVR3', 'VIVT3', 'VIVT4', 'VLID3', 'VSPT3', 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3',
'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B', 'YBRA4B', 'YDUQ3']
```

384

Após comparação

```
['MEAL3', 'OFSA3']
```

2

```
[ ]: #Quantidade de relatorios a partir de 2015
#realizar pesquisa nas empresas de 2015
lista_de_empresas_2015 = []

for name_emp in names_empresas_2015:
    for empresa in lista_caminho:
        if empresa == name_emp:
            path_caminho_pdf_2015 = 'C:
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa
            relatorio_pdf_2015 = os.listdir(path_caminho_pdf_2015)
            att = []
            for lista_pdf_2015 in relatorio_pdf_2015:
                #print(lista_pdf)
                att.append(lista_pdf_2015)
            lista_de_empresas_2015.append(att)
#quantidade total de relatorios baixados
print(lista_de_empresas_2015)
print(len(lista_de_empresas_2015))
```

```
[['MEAL3_2015.pdf', 'MEAL3_2017.pdf', 'MEAL3_2019.pdf', 'MEAL3_2020.pdf'],
['OFSA3_2015.pdf', 'OFSA3_2016.pdf', 'OFSA3_2017.pdf', 'OFSA3_2018.pdf',
```

```
'OFSA3_2019.pdf', 'OFSA3_2020.pdf', 'OFSA3_2021.pdf']]
```

2

```
[ ]: #quantidade de relatórios em cada empresa
tam_emp = np.zeros(3, dtype = int)
i = 0
empresas_15r = []
for pesquisa in lista_de_empresas_2015:
    #print(pesquisa)
    for k in pesquisa:
        #print(k)
        tam_emp[i] = tam_emp[i] + 1
    i = i + 1
print(tam_emp)
print("Empresa com menor quantidade de relatorios: ", min(tam_emp))
print(len(tam_emp))
```

```
[4 7 0]
```

```
Empresa com menor quantidade de relatorios: 0
```

3

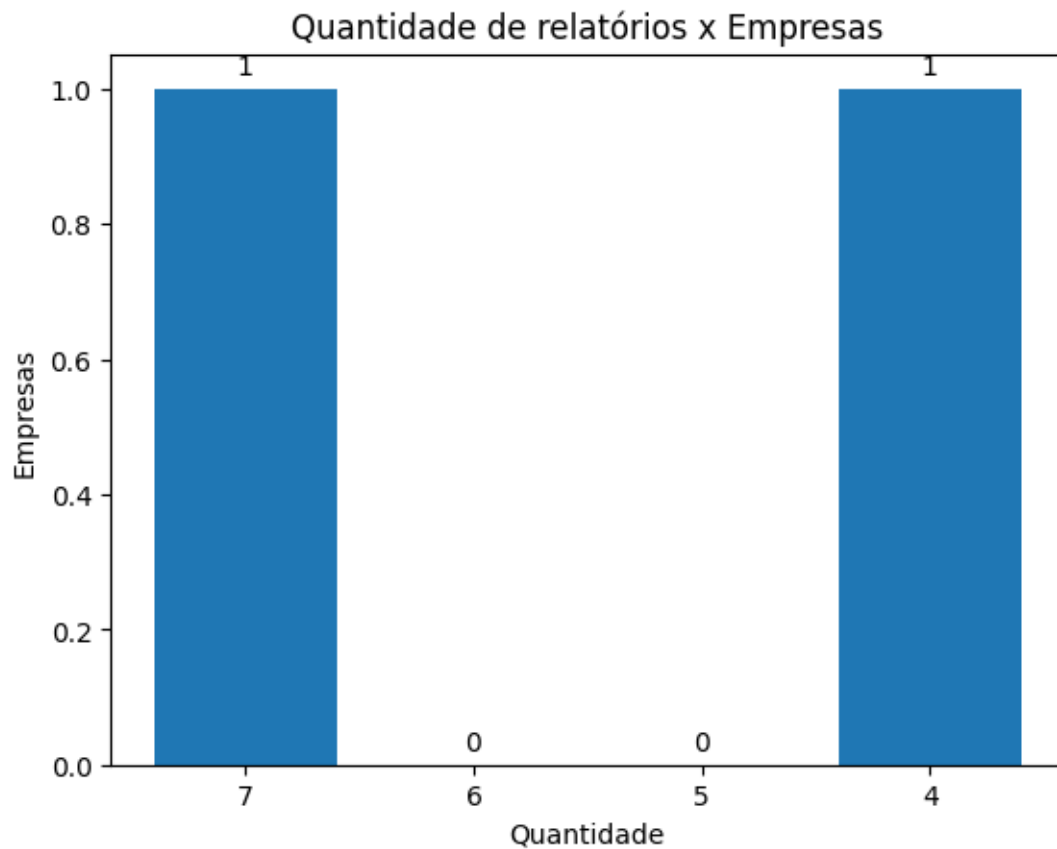
```
[ ]: #empresas com 8 relatorios
quantidade_relatorios = 7
empresas_2015r = []
for i in range(quantidade_relatorios, 3, -1):
    name = []
    #print(name)
    for pesquisa in lista_de_empresas_2015:
        #print(pesquisa)
        #print(len(pesquisa))
        if i == len(pesquisa):
            c = pesquisa[0].split("_")
            name.append(c[0])
    print("Empresas com ", i, "relatórios")
    print(name)
    empresas_2015r.append(name)
#print(empresas_2011r)

grafico = []
for i in empresas_2015r:
    #print(len(i))
    grafico.append(len(i))
print(grafico)
print(sum(grafico))
```

```
Empresas com 7 relatórios
```

```
['OFSA3']
Empresas com 6 relatórios
[]
Empresas com 5 relatórios
[]
Empresas com 4 relatórios
['MEAL3']
[1, 0, 0, 1]
2
```

```
[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ["7", "6", "5", "4"]
rect1 = ax.bar(X, grafico)
ax.set_ylabel('Empresas')
ax.set_title("Quantidade de relatórios x Empresas")
ax.set_xlabel('Quantidade')
ax.bar_label(rect1, padding = 3)
plt.show()
```



```
[ ]: lista_de_empresas_2016 = []
for name in lista:
    c = name.split("_")
    c1 = c[1].split(".")
    if c1[0] == "2016":
        lista_de_empresas_2016.append(name)
print(lista_de_empresas_2016)
print(len(lista_de_empresas_2016))
```

```
['AALR3_2016.pdf', 'ABEV3_2016.pdf', 'AFLT3_2016.pdf', 'AGRO3_2016.pdf',
'AHEB3_2016.pdf', 'AHEB5_2016.pdf', 'AHEB6_2016.pdf', 'ALPA3_2016.pdf',
'ALPA4_2016.pdf', 'ALUP11_2016.pdf', 'ALUP3_2016.pdf', 'ALUP4_2016.pdf',
'AMAR3_2016.pdf', 'AMER3_2016.pdf', 'ANIM3_2016.pdf', 'APTI3_2016.pdf',
'APTI4_2016.pdf', 'ARZZ3_2016.pdf', 'ATMP3_2016.pdf', 'ATOM3_2016.pdf',
'AZEV3_2016.pdf', 'AZEV4_2016.pdf', 'BAHI3_2016.pdf', 'BALM3_2016.pdf',
'BALM4_2016.pdf', 'BAUH3_2016.pdf', 'BAUH4_2016.pdf', 'BDLL3_2016.pdf',
'BDLL4_2016.pdf', 'BEEF3_2016.pdf', 'BETP3B_2016.pdf', 'BIOM3_2016.pdf',
'BLUT3_2016.pdf', 'BLUT4_2016.pdf', 'BMKS3_2016.pdf', 'BOBR3_2016.pdf',
'BOBR4_2016.pdf', 'BRAP3_2016.pdf', 'BRAP4_2016.pdf', 'BRAP99_2016.pdf',
'BRFS3_2016.pdf', 'BRKM3_2016.pdf', 'BRKM5_2016.pdf', 'BRKM6_2016.pdf',
'BRQB3_2016.pdf', 'CABI3B_2016.pdf', 'CALI3_2016.pdf', 'CALI4_2016.pdf',
'CAMB3_2016.pdf', 'CAMB4_2016.pdf', 'CASN3_2016.pdf', 'CASN4_2016.pdf',
'CATA3_2016.pdf', 'CATA4_2016.pdf', 'CBEE3_2016.pdf', 'CCRO3_2016.pdf',
'CEBR3_2016.pdf', 'CEBR5_2016.pdf', 'CEBR6_2016.pdf', 'CEDO3_2016.pdf',
'CEDO4_2016.pdf', 'CEEB3_2016.pdf', 'CEEB5_2016.pdf', 'CEEB6_2016.pdf',
'CEED3_2016.pdf', 'CEED4_2016.pdf', 'CEGR3_2016.pdf', 'CEPE3_2016.pdf',
'CEPE5_2016.pdf', 'CEPE6_2016.pdf', 'CGAS3_2016.pdf', 'CGAS5_2016.pdf',
'CGRA3_2016.pdf', 'CGRA4_2016.pdf', 'CLSC3_2016.pdf', 'CLSC4_2016.pdf',
'CMIG3_2016.pdf', 'CMIG4_2016.pdf', 'CMSA3_2016.pdf', 'CMSA4_2016.pdf',
'CNSY3_2016.pdf', 'COCE3_2016.pdf', 'COCE5_2016.pdf', 'COCE6_2016.pdf',
'COGN3_2016.pdf', 'CPFE3_2016.pdf', 'CPLE11_2016.pdf', 'CPLE3_2016.pdf',
'CPLE5_2016.pdf', 'CPLE6_2016.pdf', 'CPRE3_2016.pdf', 'CRDE3_2016.pdf',
'CRPG3_2016.pdf', 'CRPG5_2016.pdf', 'CRPG6_2016.pdf', 'CRTE3B_2016.pdf',
'CRTE5B_2016.pdf', 'CSAN3_2016.pdf', 'CSMG3_2016.pdf', 'CSNA3_2016.pdf',
'CSRN3_2016.pdf', 'CSRN5_2016.pdf', 'CSRN6_2016.pdf', 'CTCA3_2016.pdf',
'CTKA3_2016.pdf', 'CTKA4_2016.pdf', 'CTNM3_2016.pdf', 'CTNM4_2016.pdf',
'CTSA3_2016.pdf', 'CTSA4_2016.pdf', 'CTSA8_2016.pdf', 'CVCB3_2016.pdf',
'CYRE3_2016.pdf', 'DASA3_2016.pdf', 'DEXP3_2016.pdf', 'DEXP4_2016.pdf',
'DIRR3_2016.pdf', 'DMMO3_2016.pdf', 'DOHL3_2016.pdf', 'DOHL4_2016.pdf',
'DTCY3_2016.pdf', 'DTCY4_2016.pdf', 'DXCO3_2016.pdf', 'EALT3_2016.pdf',
'EALT4_2016.pdf', 'ECOR3_2016.pdf', 'EGIE3_2016.pdf', 'EKTR3_2016.pdf',
'EKTR4_2016.pdf', 'ELET3_2016.pdf', 'ELET5_2016.pdf', 'ELET6_2016.pdf',
'EMAE3_2016.pdf', 'EMAE4_2016.pdf', 'EMBR3_2016.pdf', 'ENAT3_2016.pdf',
'ENBR3_2016.pdf', 'ENEV3_2016.pdf', 'ENGI11_2016.pdf', 'ENGI3_2016.pdf',
'ENGI4_2016.pdf', 'ENMT3_2016.pdf', 'ENMT4_2016.pdf', 'EPAR3_2016.pdf',
'EPAR4_2016.pdf', 'EQMA3B_2016.pdf', 'EQMA5B_2016.pdf', 'EQMA6B_2016.pdf',
'EQPA3_2016.pdf', 'EQPA5_2016.pdf', 'EQPA6_2016.pdf', 'EQPA7_2016.pdf',
'EQTL11_2016.pdf', 'EQTL3_2016.pdf', 'ESTR3_2016.pdf', 'ESTR4_2016.pdf',
```

'ETER3_2016.pdf', 'EUCA3_2016.pdf', 'EUCA4_2016.pdf', 'EVEN3_2016.pdf',
 'EZTC3_2016.pdf', 'FESA3_2016.pdf', 'FESA4_2016.pdf', 'FHER3_2016.pdf',
 'FIGE3_2016.pdf', 'FIGE4_2016.pdf', 'FLRY3_2016.pdf', 'FRAS3_2016.pdf',
 'FRAS4_2016.pdf', 'FRI03_2016.pdf', 'FRRN3B_2016.pdf', 'FRRN5B_2016.pdf',
 'FRRN6B_2016.pdf', 'FRTA3_2016.pdf', 'GEPA3_2016.pdf', 'GEPA4_2016.pdf',
 'GFSA3_2016.pdf', 'GGBR3_2016.pdf', 'GGBR4_2016.pdf', 'GOAU3_2016.pdf',
 'GOAU4_2016.pdf', 'GOLL3_2016.pdf', 'GOLL4_2016.pdf', 'GPAR3_2016.pdf',
 'GRND3_2016.pdf', 'GUAR3_2016.pdf', 'HAGA3_2016.pdf', 'HAGA4_2016.pdf',
 'HBOR3_2016.pdf', 'HBSA3_2016.pdf', 'HETA3_2016.pdf', 'HETA4_2016.pdf',
 'HOOT3_2016.pdf', 'HOOT4_2016.pdf', 'HYPE3_2016.pdf', 'IGSN3_2016.pdf',
 'INEP3_2016.pdf', 'INEP4_2016.pdf', 'IVPR3B_2016.pdf', 'IVPR4B_2016.pdf',
 'JBSS3_2016.pdf', 'JFEN3_2016.pdf', 'JHSF3_2016.pdf', 'JOPA3_2016.pdf',
 'JOPA4_2016.pdf', 'JSLG11_2016.pdf', 'JSLG3_2016.pdf', 'KEPL3_2016.pdf',
 'KEPL4_2016.pdf', 'KLB11_2016.pdf', 'KLB3_2016.pdf', 'KLB4_2016.pdf',
 'LEVE3_2016.pdf', 'LIGT3_2016.pdf', 'LIPR3_2016.pdf', 'LLIS3_2016.pdf',
 'LOGN3_2016.pdf', 'LREN3_2016.pdf', 'LTEL3B_2016.pdf', 'LTEL5B_2016.pdf',
 'LUXM3_2016.pdf', 'LUXM4_2016.pdf', 'MAPT3_2016.pdf', 'MAPT4_2016.pdf',
 'MDNE3_2016.pdf', 'MGEL3_2016.pdf', 'MGEL4_2016.pdf', 'MGLU3_2016.pdf',
 'MILS3_2016.pdf', 'MMAQ3_2016.pdf', 'MMAQ4_2016.pdf', 'MMXM3_2016.pdf',
 'MNDL3_2016.pdf', 'MNPR3_2016.pdf', 'MOVI3_2016.pdf', 'MRFG3_2016.pdf',
 'MRSA3B_2016.pdf', 'MRSA5B_2016.pdf', 'MRSA6B_2016.pdf', 'MRVE3_2016.pdf',
 'MSPA3_2016.pdf', 'MSPA4_2016.pdf', 'MTSA3_2016.pdf', 'MTSA4_2016.pdf',
 'MWET3_2016.pdf', 'MWET4_2016.pdf', 'MYPK3_2016.pdf', 'NEMO3_2016.pdf',
 'NEMO5_2016.pdf', 'NEMO6_2016.pdf', 'NEOE3_2016.pdf', 'NORD3_2016.pdf',
 'NRTQ3_2016.pdf', 'NRTQ4_2016.pdf', 'NUTR3_2016.pdf', 'ODER3_2016.pdf',
 'ODER4_2016.pdf', 'ODPV3_2016.pdf', 'OFSA3_2016.pdf', 'OIBR3_2016.pdf',
 'OIBR4_2016.pdf', 'OPGM3B_2016.pdf', 'OPSE3B_2016.pdf', 'OPTS3B_2016.pdf',
 'OSXB3_2016.pdf', 'PATI3_2016.pdf', 'PATI4_2016.pdf', 'PCAR3_2016.pdf',
 'PCAR99_2016.pdf', 'PDGR3_2016.pdf', 'PDT3_2016.pdf', 'PETR3_2016.pdf',
 'PETR4_2016.pdf', 'PFRM3_2016.pdf', 'PGMN3_2016.pdf', 'PLAS3_2016.pdf',
 'PMAM3_2016.pdf', 'PNVL3_2016.pdf', 'POM03_2016.pdf', 'POM04_2016.pdf',
 'POSI3_2016.pdf', 'PPAR3_2016.pdf', 'PPAR4_2016.pdf', 'PRI03_2016.pdf',
 'PRMN3B_2016.pdf', 'PRPT3B_2016.pdf', 'PTBL3_2016.pdf', 'PTNT3_2016.pdf',
 'PTNT4_2016.pdf', 'QUAL3_2016.pdf', 'QUSW3_2016.pdf', 'QVQP3B_2016.pdf',
 'RADL3_2016.pdf', 'RAIL3_2016.pdf', 'RANI3_2016.pdf', 'RANI4_2016.pdf',
 'RAPT3_2016.pdf', 'RAPT4_2016.pdf', 'RCSL3_2016.pdf', 'RCSL4_2016.pdf',
 'RDNI3_2016.pdf', 'REDE3_2016.pdf', 'RENT3_2016.pdf', 'RNEW11_2016.pdf',
 'RNEW3_2016.pdf', 'RNEW4_2016.pdf', 'ROMI3_2016.pdf', 'RPMG3_2016.pdf',
 'RSID3_2016.pdf', 'RSUL3_2016.pdf', 'RSUL4_2016.pdf', 'SAPR11_2016.pdf',
 'SAPR3_2016.pdf', 'SAPR4_2016.pdf', 'SBSP3_2016.pdf', 'SEER3_2016.pdf',
 'SGPS3_2016.pdf', 'SHOW3_2016.pdf', 'SHUL3_2016.pdf', 'SHUL4_2016.pdf',
 'SLCE3_2016.pdf', 'SLED3_2016.pdf', 'SLED4_2016.pdf', 'SMT03_2016.pdf',
 'SNSY3_2016.pdf', 'SNSY5_2016.pdf', 'SNSY6_2016.pdf', 'SOND3_2016.pdf',
 'SOND5_2016.pdf', 'SOND6_2016.pdf', 'SQIA3_2016.pdf', 'STBP3_2016.pdf',
 'STKF3_2016.pdf', 'SUZB3_2016.pdf', 'SYNE3_2016.pdf', 'TAEE11_2016.pdf',
 'TAEE3_2016.pdf', 'TAEE4_2016.pdf', 'TASA3_2016.pdf', 'TASA4_2016.pdf',
 'TCNO3_2016.pdf', 'TCNO4_2016.pdf', 'TCSA3_2016.pdf', 'TECN3_2016.pdf',
 'TEKA3_2016.pdf', 'TEKA4_2016.pdf', 'TELB3_2016.pdf', 'TELB4_2016.pdf',

```
'TEND3_2016.pdf', 'TGMA3_2016.pdf', 'TKN03_2016.pdf', 'TKN04_2016.pdf',
'TOTS3_2016.pdf', 'TPIS3_2016.pdf', 'TRIS3_2016.pdf', 'TRPL3_2016.pdf',
'TRPL4_2016.pdf', 'TUPY3_2016.pdf', 'TXRX11_2016.pdf', 'TXRX3_2016.pdf',
'TXRX4_2016.pdf', 'UCAS3_2016.pdf', 'UGPA3_2016.pdf', 'UNIP3_2016.pdf',
'UNIP5_2016.pdf', 'UNIP6_2016.pdf', 'UPKP3B_2016.pdf', 'USIM3_2016.pdf',
'USIM5_2016.pdf', 'USIM6_2016.pdf', 'VALE3_2016.pdf', 'VIIA11_2016.pdf',
'VIIA3_2016.pdf', 'VIIA4_2016.pdf', 'VIVR3_2016.pdf', 'VIVT3_2016.pdf',
'VIVT4_2016.pdf', 'VLID3_2016.pdf', 'VSPT3_2016.pdf', 'VSPT4_2016.pdf',
'VULC3_2016.pdf', 'WEGE3_2016.pdf', 'WHRL3_2016.pdf', 'WHRL4_2016.pdf',
'WLMM3_2016.pdf', 'WLMM4_2016.pdf', 'YBRA3B_2016.pdf', 'YBRA4B_2016.pdf',
'YDUQ3_2016.pdf']
```

389

```
[ ]: names_empresas_2016 = []
print(names_empresas_2011)
print(names_empresas_2012)
print(names_empresas_2013)
print(names_empresas_2014)
print(names_empresas_2015)
for name in lista_de_empresas_2016:
    c = name.split("_")
    names_empresas_2016.append(c[0])
print(names_empresas_2016)
print(len(names_empresas_2016))

for name in names_empresas_2011:
    for name1 in names_empresas_2016:
        if name1 == name:
            names_empresas_2016.remove(name1)
for name in names_empresas_2012:
    for name1 in names_empresas_2016:
        if name1 == name:
            names_empresas_2016.remove(name1)
for name in names_empresas_2013:
    for name1 in names_empresas_2016:
        if name1 == name:
            names_empresas_2016.remove(name1)
for name in names_empresas_2014:
    for name1 in names_empresas_2016:
        if name1 == name:
            names_empresas_2016.remove(name1)
for name in names_empresas_2015:
    for name1 in names_empresas_2016:
        if name1 == name:
            names_empresas_2016.remove(name1)
print("Após comparação")
print(names_empresas_2016)
```



```
print(len(names_empresas_2016))
```

```
['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',  
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',  
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',  
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',  
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',  
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',  
'TOTS3', 'VALE3', 'VIVT3']  
['AHEB3', 'AHEB5', 'AHEB6', 'ALUP11', 'ALUP3', 'ALUP4', 'AMER3', 'ARZZ3',  
'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3',  
'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3',  
'BOBR4', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4',  
'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA4', 'CBEE3', 'CCR03', 'CEBR3', 'CEBR5',  
'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',  
'CEPE3', 'CEPE5', 'CEPE6', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',  
'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',  
'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',  
'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6',  
'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CYRE3', 'DEXP3',  
'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXC03', 'EALT3', 'EALT4',  
'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4',  
'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4',  
'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6',  
'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4',  
'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3',  
'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'GEPA3', 'GEPA4', 'GFSA3',  
'HAGA4', 'HBOR3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'INEP4',  
'IVPR3B', 'IVPR4B', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3',  
'KEPL3', 'KEPL4', 'KLBN3', 'LEVE3', 'LIGT3', 'LOGN3', 'LREN3', 'LTEL3B',  
'LUXM3', 'LUXM4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',  
'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',  
'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO5', 'NEOE3', 'NORD3', 'NRTQ3',  
'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3', 'OIBR4', 'OPGM3B',  
'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',  
'PDT3', 'PFRM3', 'PLAS3', 'PMAM3', 'PNVL3', 'POMO3', 'POS13', 'PPAR3', 'PPAR4',  
'PRI03', 'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QVQP3B', 'RADL3',  
'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3',  
'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',  
'SBSP3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03',  
'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'SUZB3', 'SYNE3',  
'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',  
'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4',  
'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',  
'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',  
'USIM6', 'VIAA11', 'VIAA3', 'VIAA4', 'VIVR3', 'VIVT4', 'VLID3', 'VSPT3',  
'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B',  
'YBRA4B', 'YDUQ3']
```

['ABEV3', 'ANIM3', 'CVCB3', 'IGSN3', 'INEP3', 'QUSW3', 'SEER3']
 ['DMMO3', 'LLIS3']
 ['MEAL3', 'OFSA3']
 ['AALR3', 'ABEV3', 'AFLT3', 'AGRO3', 'AHEB3', 'AHEB5', 'AHEB6', 'ALPA3',
 'ALPA4', 'ALUP11', 'ALUP3', 'ALUP4', 'AMAR3', 'AMER3', 'ANIM3', 'APT13',
 'APT14', 'ARZZ3', 'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'BAH13', 'BALM3', 'BALM4',
 'BAUH3', 'BAUH4', 'BDLL3', 'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3',
 'BLUT4', 'BMKS3', 'BOBR3', 'BOBR4', 'BRAP3', 'BRAP4', 'BRAP99', 'BRFS3',
 'BRKM3', 'BRKM5', 'BRKM6', 'BRQB3', 'CABI3B', 'CALI3', 'CALI4', 'CAMB3',
 'CAMB4', 'CASN3', 'CASN4', 'CATA3', 'CATA4', 'CBEE3', 'CCRO3', 'CEBR3', 'CEBR5',
 'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',
 'CEPE3', 'CEPE5', 'CEPE6', 'CGAS3', 'CGAS5', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4',
 'CMIG3', 'CMIG4', 'CMSA3', 'CMSA4', 'CNSY3', 'COCE3', 'COCE5', 'COCE6', 'COGN3',
 'CPFE3', 'CPLE11', 'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3',
 'CRPG5', 'CRPG6', 'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3',
 'CSRN5', 'CSRN6', 'CTCA3', 'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4',
 'CTSA8', 'CVCB3', 'CYRE3', 'DASA3', 'DEXP3', 'DEXP4', 'DIRR3', 'DMMO3', 'DOHL3',
 'DOHL4', 'DTCY3', 'DTCY4', 'DXCO3', 'EALT3', 'EALT4', 'ECOR3', 'EGIE3', 'EKTR3',
 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4', 'EMBR3', 'ENAT3', 'ENBR3',
 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4', 'EPAR3', 'EPAR4',
 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6', 'EQPA7', 'EQTL11',
 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4', 'EVEN3', 'EZTC3', 'FESA3',
 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3', 'FRAS4', 'FRIO3',
 'FRRN3B', 'FRRN5B', 'FRRN6B', 'FRTA3', 'GEPA3', 'GEPA4', 'GFS3', 'GGBR3',
 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3', 'GUAR3', 'HAGA3',
 'HAGA4', 'HBOR3', 'HBSA3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'IGSN3',
 'INEP3', 'INEP4', 'IVPR3B', 'IVPR4B', 'JBSS3', 'JFEN3', 'JHSF3', 'JOPA3',
 'JOPA4', 'JSLG11', 'JSLG3', 'KEPL3', 'KEPL4', 'KLBN11', 'KLBN3', 'KLBN4',
 'LEVE3', 'LIGT3', 'LIPR3', 'LLIS3', 'LOGN3', 'LREN3', 'LTEL3B', 'LTEL5B',
 'LUXM3', 'LUXM4', 'MAPT3', 'MAPT4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3',
 'MMAQ3', 'MMAQ4', 'MMXM3', 'MNDL3', 'MNPR3', 'MOVI3', 'MRFG3', 'MRSA3B',
 'MRSA5B', 'MRSA6B', 'MRVE3', 'MSPA3', 'MSPA4', 'MTSA3', 'MTSA4', 'MWET3',
 'MWET4', 'MYPK3', 'NEMO3', 'NEMO5', 'NEMO6', 'NEOE3', 'NORD3', 'NRTQ3', 'NRTQ4',
 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OFS3', 'OIBR3', 'OIBR4', 'OPGM3B',
 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',
 'PDT3', 'PETR3', 'PETR4', 'PFRM3', 'PGMN3', 'PLAS3', 'PMAM3', 'PNVL3', 'POMO3',
 'POMO4', 'POS13', 'PPAR3', 'PPAR4', 'PRIO3', 'PRMN3B', 'PRPT3B', 'PTBL3',
 'PTNT3', 'PTNT4', 'QUAL3', 'QUSW3', 'QVQP3B', 'RADL3', 'RAIL3', 'RANI3',
 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3', 'RENT3',
 'RNEW11', 'RNEW3', 'RNEW4', 'ROMI3', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',
 'SAPR11', 'SAPR3', 'SAPR4', 'SBSP3', 'SEER3', 'SGPS3', 'SHOW3', 'SHUL3',
 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMTO3', 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3',
 'SOND5', 'SOND6', 'SQIA3', 'STBP3', 'STKF3', 'SUZB3', 'SYNE3', 'TAAE11',
 'TAAE3', 'TAAE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3', 'TECN3', 'TEKA3',
 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4', 'TOTS3', 'TPIS3',
 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4', 'UCAS3',
 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5', 'USIM6',
 'VALE3', 'VIA11', 'VIA3', 'VIA4', 'VIVR3', 'VIVT3', 'VIVT4', 'VLID3',

```
'VSPT3', 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4',  
'YBRA3B', 'YBRA4B', 'YDUQ3']
```

389

Após comparação

```
['AALR3', 'BRQB3', 'CNSY3', 'CTCA3', 'MOVI3']
```

5

```
[ ]: #Quantidade de relatorios a partir de 2016  
#realizar pesquisa nas empresas de 2016  
lista_de_empresas_2016 = []  
  
for name_emp in names_empresas_2016:  
    for empresa in lista_caminho:  
        if empresa == name_emp:  
            path_caminho_pdf_2016 = 'C:  
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa  
            relatorio_pdf_2016 = os.listdir(path_caminho_pdf_2016)  
            att = []  
            for lista_pdf_2016 in relatorio_pdf_2016:  
                #print(lista_pdf)  
                att.append(lista_pdf_2016)  
            lista_de_empresas_2016.append(att)  
#quantidade total de relatorios baixados  
print(lista_de_empresas_2016)  
print(len(lista_de_empresas_2016))
```

```
['AALR3_2016.pdf', 'AALR3_2017.pdf', 'AALR3_2018.pdf', 'AALR3_2019.pdf',  
'AALR3_2020.pdf', 'AALR3_2021.pdf'], ['BRQB3_2016.pdf', 'BRQB3_2017.pdf',  
'BRQB3_2018.pdf', 'BRQB3_2019.pdf', 'BRQB3_2020.pdf', 'BRQB3_2021.pdf'],  
['CNSY3_2016.pdf', 'CNSY3_2017.pdf', 'CNSY3_2018.pdf', 'CNSY3_2019.pdf',  
'CNSY3_2020.pdf', 'CNSY3_2021.pdf'], ['CTCA3_2016.pdf', 'CTCA3_2017.pdf',  
'CTCA3_2018.pdf', 'CTCA3_2019.pdf', 'CTCA3_2020.pdf', 'CTCA3_2021.pdf'],  
['MOVI3_2016.pdf', 'MOVI3_2017.pdf', 'MOVI3_2018.pdf', 'MOVI3_2019.pdf',  
'MOVI3_2020.pdf']]
```

5

```
[ ]: #quantidade de relatórios em cada empresa  
tam_emp = np.zeros(5, dtype = int)  
i = 0  
empresas_16r = []  
for pesquisa in lista_de_empresas_2016:  
    #print(pesquisa)  
    for k in pesquisa:  
        #print(k)  
        tam_emp[i] = tam_emp[i] + 1  
    i = i + 1  
print(tam_emp)  
print("Empresa com menor quantidade de relatorios: ", min(tam_emp))
```

```
print(len(tam_emp))
```

```
[6 6 6 6 5]
```

```
Empresa com menor quantidade de relatorios: 5
```

```
5
```

```
[ ]: #empresas com 8 relatorios
quantidade_relatorios = 6
empresas_2016r = []
for i in range(quantidade_relatorios, 4, -1):
    name = []
    #print(name)
    for pesquisa in lista_de_empresas_2016:
        #print(pesquisa)
        #print(len(pesquisa))
        if i == len(pesquisa):
            c = pesquisa[0].split("_")
            name.append(c[0])
    print("Empresas com ", i, "relatórios")
    print(name)
    empresas_2016r.append(name)
#print(empresas_2011r)

grafico = []
for i in empresas_2016r:
    #print(len(i))
    grafico.append(len(i))
print(grafico)
print(sum(grafico))
```

```
Empresas com 6 relatórios
```

```
['AALR3', 'BRQB3', 'CNSY3', 'CTCA3']
```

```
Empresas com 5 relatórios
```

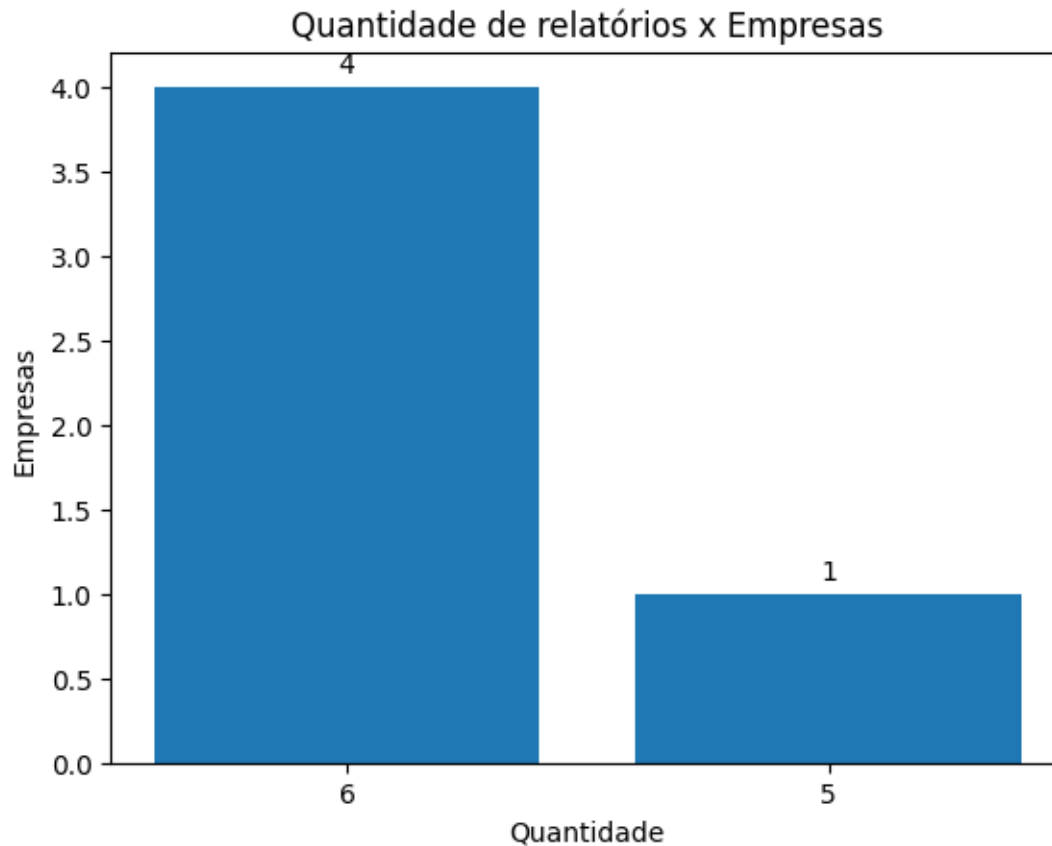
```
['MOVI3']
```

```
[4, 1]
```

```
5
```

```
[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ["6", "5"]
rect1 = ax.bar(X, grafico)
ax.set_ylabel('Empresas')
ax.set_title("Quantidade de relatórios x Empresas")
ax.set_xlabel('Quantidade')
ax.bar_label(rect1, padding = 3)
```

```
plt.show()
```



```
[ ]: lista_de_empresas_2017 = []
for name in lista:
    c = name.split("_")
    c1 = c[1].split(".")
    if c1[0] == "2017":
        lista_de_empresas_2017.append(name)
print(lista_de_empresas_2017)
print(len(lista_de_empresas_2017))
```

```
['AALR3_2017.pdf', 'AFLT3_2017.pdf', 'AGRO3_2017.pdf', 'AHEB3_2017.pdf',
'AHEB5_2017.pdf', 'AHEB6_2017.pdf', 'ALPA3_2017.pdf', 'ALPA4_2017.pdf',
'ALUP11_2017.pdf', 'ALUP3_2017.pdf', 'ALUP4_2017.pdf', 'AMAR3_2017.pdf',
'AMER3_2017.pdf', 'ANIM3_2017.pdf', 'APTI3_2017.pdf', 'APTI4_2017.pdf',
'ARZZ3_2017.pdf', 'ATMP3_2017.pdf', 'ATOM3_2017.pdf', 'AZE3_2017.pdf',
'AZE4_2017.pdf', 'AZUL3_2017.pdf', 'AZUL4_2017.pdf', 'BAHI3_2017.pdf',
'BALM3_2017.pdf', 'BALM4_2017.pdf', 'BAUH3_2017.pdf', 'BAUH4_2017.pdf',
'BDLL3_2017.pdf', 'BDLL4_2017.pdf', 'BEEF3_2017.pdf', 'BETP3B_2017.pdf',
'BIOM3_2017.pdf', 'BLUT3_2017.pdf', 'BLUT4_2017.pdf', 'BMKS3_2017.pdf',
```

'BOBR3_2017.pdf', 'BOBR4_2017.pdf', 'BRAP3_2017.pdf', 'BRAP4_2017.pdf',
 'BRAP99_2017.pdf', 'BRFS3_2017.pdf', 'BRKM3_2017.pdf', 'BRKM5_2017.pdf',
 'BRKM6_2017.pdf', 'BRQB3_2017.pdf', 'CABI3B_2017.pdf', 'CALI3_2017.pdf',
 'CALI4_2017.pdf', 'CAMB3_2017.pdf', 'CAMB4_2017.pdf', 'CAML3_2017.pdf',
 'CASN3_2017.pdf', 'CASN4_2017.pdf', 'CATA3_2017.pdf', 'CATA4_2017.pdf',
 'CBEE3_2017.pdf', 'CCR03_2017.pdf', 'CEBR3_2017.pdf', 'CEBR5_2017.pdf',
 'CEBR6_2017.pdf', 'CED03_2017.pdf', 'CED04_2017.pdf', 'CEEB3_2017.pdf',
 'CEEB5_2017.pdf', 'CEEB6_2017.pdf', 'CED03_2017.pdf', 'CEED3_2017.pdf',
 'CEED4_2017.pdf', 'CEGR3_2017.pdf', 'CEPE3_2017.pdf', 'CEPE5_2017.pdf',
 'CEPE6_2017.pdf', 'CGAS3_2017.pdf', 'CGAS5_2017.pdf', 'CGRA3_2017.pdf',
 'CGRA4_2017.pdf', 'CLSC3_2017.pdf', 'CLSC4_2017.pdf', 'CMIG3_2017.pdf',
 'CMIG4_2017.pdf', 'CMSA3_2017.pdf', 'CMSA4_2017.pdf', 'CNSY3_2017.pdf',
 'COCE3_2017.pdf', 'COCE5_2017.pdf', 'COCE6_2017.pdf', 'COGN3_2017.pdf',
 'CPFE3_2017.pdf', 'CPLE11_2017.pdf', 'CPLE3_2017.pdf', 'CPLE5_2017.pdf',
 'CPLE6_2017.pdf', 'CPRE3_2017.pdf', 'CRDE3_2017.pdf', 'CRFB3_2017.pdf',
 'CRPG3_2017.pdf', 'CRPG5_2017.pdf', 'CRPG6_2017.pdf', 'CRTE3B_2017.pdf',
 'CRTE5B_2017.pdf', 'CSAN3_2017.pdf', 'CSMG3_2017.pdf', 'CSNA3_2017.pdf',
 'CSRN3_2017.pdf', 'CSRN5_2017.pdf', 'CSRN6_2017.pdf', 'CTCA3_2017.pdf',
 'CTKA3_2017.pdf', 'CTKA4_2017.pdf', 'CTNM3_2017.pdf', 'CTNM4_2017.pdf',
 'CTSA3_2017.pdf', 'CTSA4_2017.pdf', 'CTSA8_2017.pdf', 'CVCB3_2017.pdf',
 'CYRE3_2017.pdf', 'DASA3_2017.pdf', 'DEXP3_2017.pdf', 'DEXP4_2017.pdf',
 'DIRR3_2017.pdf', 'DMM03_2017.pdf', 'DOHL3_2017.pdf', 'DOHL4_2017.pdf',
 'DTCY3_2017.pdf', 'DTCY4_2017.pdf', 'DXC03_2017.pdf', 'EALT3_2017.pdf',
 'EALT4_2017.pdf', 'ECOR3_2017.pdf', 'EGIE3_2017.pdf', 'EKTR3_2017.pdf',
 'EKTR4_2017.pdf', 'ELET3_2017.pdf', 'ELET5_2017.pdf', 'ELET6_2017.pdf',
 'EMAE3_2017.pdf', 'EMAE4_2017.pdf', 'EMBR3_2017.pdf', 'ENAT3_2017.pdf',
 'ENBR3_2017.pdf', 'ENEV3_2017.pdf', 'ENGI11_2017.pdf', 'ENGI3_2017.pdf',
 'ENGI4_2017.pdf', 'ENMT3_2017.pdf', 'ENMT4_2017.pdf', 'EPAR3_2017.pdf',
 'EPAR4_2017.pdf', 'EQMA3B_2017.pdf', 'EQMA5B_2017.pdf', 'EQMA6B_2017.pdf',
 'EQPA3_2017.pdf', 'EQPA5_2017.pdf', 'EQPA6_2017.pdf', 'EQPA7_2017.pdf',
 'EQTL11_2017.pdf', 'EQTL3_2017.pdf', 'ESTR3_2017.pdf', 'ESTR4_2017.pdf',
 'ETER3_2017.pdf', 'EUCA3_2017.pdf', 'EUCA4_2017.pdf', 'EVEN3_2017.pdf',
 'EZTC3_2017.pdf', 'FESA3_2017.pdf', 'FESA4_2017.pdf', 'FHER3_2017.pdf',
 'FIGE3_2017.pdf', 'FIGE4_2017.pdf', 'FLRY3_2017.pdf', 'FRAS3_2017.pdf',
 'FRAS4_2017.pdf', 'FRI03_2017.pdf', 'FRRN3B_2017.pdf', 'FRRN5B_2017.pdf',
 'FRRN6B_2017.pdf', 'FRTA3_2017.pdf', 'GEPA3_2017.pdf', 'GEPA4_2017.pdf',
 'GFS3_2017.pdf', 'GGBR3_2017.pdf', 'GGBR4_2017.pdf', 'GOAU3_2017.pdf',
 'GOAU4_2017.pdf', 'GOLL3_2017.pdf', 'GOLL4_2017.pdf', 'GPAR3_2017.pdf',
 'GRND3_2017.pdf', 'GUAR3_2017.pdf', 'HAGA3_2017.pdf', 'HAGA4_2017.pdf',
 'HBOR3_2017.pdf', 'HBSA3_2017.pdf', 'HETA3_2017.pdf', 'HETA4_2017.pdf',
 'HOOT3_2017.pdf', 'HOOT4_2017.pdf', 'HYPE3_2017.pdf', 'IGSN3_2017.pdf',
 'INNT3_2017.pdf', 'IVPR3B_2017.pdf', 'IVPR4B_2017.pdf', 'JBSS3_2017.pdf',
 'JFEN3_2017.pdf', 'JHSF3_2017.pdf', 'JOPA3_2017.pdf', 'JOPA4_2017.pdf',
 'JSLG11_2017.pdf', 'JSLG3_2017.pdf', 'KEPL3_2017.pdf', 'KEPL4_2017.pdf',
 'KLBN11_2017.pdf', 'KLBN3_2017.pdf', 'KLBN4_2017.pdf', 'LEVE3_2017.pdf',
 'LIGT3_2017.pdf', 'LIPR3_2017.pdf', 'LLIS3_2017.pdf', 'LOGN3_2017.pdf',
 'LREN3_2017.pdf', 'LTEL3B_2017.pdf', 'LTEL5B_2017.pdf', 'LUXM3_2017.pdf',
 'LUXM4_2017.pdf', 'MAPT3_2017.pdf', 'MAPT4_2017.pdf', 'MDNE3_2017.pdf',

'MEAL3_2017.pdf', 'MGEL3_2017.pdf', 'MGEL4_2017.pdf', 'MGLU3_2017.pdf',
'MILS3_2017.pdf', 'MMAQ3_2017.pdf', 'MMAQ4_2017.pdf', 'MMXM3_2017.pdf',
'MNDL3_2017.pdf', 'MNPR3_2017.pdf', 'MOVI3_2017.pdf', 'MRFG3_2017.pdf',
'MRSA3B_2017.pdf', 'MRSA5B_2017.pdf', 'MRSA6B_2017.pdf', 'MRVE3_2017.pdf',
'MSPA3_2017.pdf', 'MSPA4_2017.pdf', 'MTSA3_2017.pdf', 'MTSA4_2017.pdf',
'MWET3_2017.pdf', 'MWET4_2017.pdf', 'MYPK3_2017.pdf', 'NEM03_2017.pdf',
'NEM05_2017.pdf', 'NEM06_2017.pdf', 'NEOE3_2017.pdf', 'NORD3_2017.pdf',
'NRTQ3_2017.pdf', 'NRTQ4_2017.pdf', 'NUTR3_2017.pdf', 'ODER3_2017.pdf',
'ODER4_2017.pdf', 'ODPV3_2017.pdf', 'OFSA3_2017.pdf', 'OIBR3_2017.pdf',
'OIBR4_2017.pdf', 'OPGM3B_2017.pdf', 'OPSE3B_2017.pdf', 'OPTS3B_2017.pdf',
'OSXB3_2017.pdf', 'PAR3_2017.pdf', 'PATI3_2017.pdf', 'PATI4_2017.pdf',
'PCAR3_2017.pdf', 'PCAR99_2017.pdf', 'PDGR3_2017.pdf', 'PDT3_2017.pdf',
'PETR3_2017.pdf', 'PETR4_2017.pdf', 'PFRM3_2017.pdf', 'PGMN3_2017.pdf',
'PLAS3_2017.pdf', 'PMAM3_2017.pdf', 'PNVL3_2017.pdf', 'POM03_2017.pdf',
'POM04_2017.pdf', 'POSI3_2017.pdf', 'PPAR3_2017.pdf', 'PPAR4_2017.pdf',
'PRI03_2017.pdf', 'PRMN3B_2017.pdf', 'PRNR3_2017.pdf', 'PRPT3B_2017.pdf',
'PTBL3_2017.pdf', 'PTNT3_2017.pdf', 'PTNT4_2017.pdf', 'QUAL3_2017.pdf',
'QUSW3_2017.pdf', 'QVQP3B_2017.pdf', 'RADL3_2017.pdf', 'RAIL3_2017.pdf',
'RANI3_2017.pdf', 'RANI4_2017.pdf', 'RAPT3_2017.pdf', 'RAPT4_2017.pdf',
'RCSL3_2017.pdf', 'RCSL4_2017.pdf', 'RDNI3_2017.pdf', 'REDE3_2017.pdf',
'RENT3_2017.pdf', 'RNEW11_2017.pdf', 'RNEW3_2017.pdf', 'RNEW4_2017.pdf',
'ROMI3_2017.pdf', 'RPMG3_2017.pdf', 'RSID3_2017.pdf', 'RSUL3_2017.pdf',
'RSUL4_2017.pdf', 'SAPR11_2017.pdf', 'SAPR3_2017.pdf', 'SAPR4_2017.pdf',
'SBSP3_2017.pdf', 'SEER3_2017.pdf', 'SGPS3_2017.pdf', 'SHOW3_2017.pdf',
'SHUL3_2017.pdf', 'SHUL4_2017.pdf', 'SLCE3_2017.pdf', 'SLED3_2017.pdf',
'SLED4_2017.pdf', 'SMT03_2017.pdf', 'SNSY3_2017.pdf', 'SNSY5_2017.pdf',
'SNSY6_2017.pdf', 'SOND3_2017.pdf', 'SOND5_2017.pdf', 'SOND6_2017.pdf',
'SQIA3_2017.pdf', 'STBP3_2017.pdf', 'STKF3_2017.pdf', 'SUZB3_2017.pdf',
'SYNE3_2017.pdf', 'TAEE11_2017.pdf', 'TAEE3_2017.pdf', 'TAEE4_2017.pdf',
'TASA3_2017.pdf', 'TASA4_2017.pdf', 'TCNO3_2017.pdf', 'TCNO4_2017.pdf',
'TCSA3_2017.pdf', 'TECN3_2017.pdf', 'TEKA3_2017.pdf', 'TEKA4_2017.pdf',
'TELB3_2017.pdf', 'TELB4_2017.pdf', 'TEND3_2017.pdf', 'TGMA3_2017.pdf',
'TKN03_2017.pdf', 'TKN04_2017.pdf', 'TOTS3_2017.pdf', 'TPIS3_2017.pdf',
'TRIS3_2017.pdf', 'TRPL3_2017.pdf', 'TRPL4_2017.pdf', 'TUPY3_2017.pdf',
'TXRX11_2017.pdf', 'TXRX3_2017.pdf', 'TXRX4_2017.pdf', 'UCAS3_2017.pdf',
'UGPA3_2017.pdf', 'UNIP3_2017.pdf', 'UNIP5_2017.pdf', 'UNIP6_2017.pdf',
'UPKP3B_2017.pdf', 'USIM3_2017.pdf', 'USIM5_2017.pdf', 'USIM6_2017.pdf',
'VALE3_2017.pdf', 'VBBR3_2017.pdf', 'VIAA11_2017.pdf', 'VIAA3_2017.pdf',
'VIAA4_2017.pdf', 'VIVR3_2017.pdf', 'VIVT3_2017.pdf', 'VIVT4_2017.pdf',
'VLID3_2017.pdf', 'VSPT3_2017.pdf', 'VSPT4_2017.pdf', 'VULC3_2017.pdf',
'WEGE3_2017.pdf', 'WHRL3_2017.pdf', 'WHRL4_2017.pdf', 'WLMM3_2017.pdf',
'WLMM4_2017.pdf', 'YBRA3B_2017.pdf', 'YBRA4B_2017.pdf', 'YDUQ3_2017.pdf']

396

```
[ ]: names_empresas_2017 = []
      print(names_empresas_2011)
      print(names_empresas_2012)
```

```

print(names_empresas_2013)
print(names_empresas_2014)
print(names_empresas_2015)
print(names_empresas_2016)

for name in lista_de_empresas_2017:
    c = name.split("_")
    names_empresas_2017.append(c[0])
print(names_empresas_2017)
print(len(names_empresas_2017))

for name in names_empresas_2011:
    for name1 in names_empresas_2017:
        if name1 == name:
            names_empresas_2017.remove(name1)
for name in names_empresas_2012:
    for name1 in names_empresas_2017:
        if name1 == name:
            names_empresas_2017.remove(name1)
for name in names_empresas_2013:
    for name1 in names_empresas_2017:
        if name1 == name:
            names_empresas_2017.remove(name1)
for name in names_empresas_2014:
    for name1 in names_empresas_2017:
        if name1 == name:
            names_empresas_2017.remove(name1)
for name in names_empresas_2015:
    for name1 in names_empresas_2017:
        if name1 == name:
            names_empresas_2017.remove(name1)
for name in names_empresas_2016:
    for name1 in names_empresas_2017:
        if name1 == name:
            names_empresas_2017.remove(name1)

print("Após comparação")
print(names_empresas_2017)
print(len(names_empresas_2017))

```

```

['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',
'TOTS3', 'VALE3', 'VIVT3']
['AHEB3', 'AHEB5', 'AHEB6', 'ALUP11', 'ALUP3', 'ALUP4', 'AMER3', 'ARZZ3',

```


'ATMP3', 'ATOM3', 'AZE3V', 'AZE4V', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3',
 'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3',
 'BOBR4', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4',
 'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA4', 'CBEE3', 'CCRO3', 'CEBR3', 'CEBR5',
 'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',
 'CEPE3', 'CEPE5', 'CEPE6', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
 'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',
 'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',
 'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSR3N', 'CSR5N', 'CSR6N',
 'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CYRE3', 'DEXP3',
 'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXCO3', 'EALT3', 'EALT4',
 'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4',
 'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4',
 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6',
 'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4',
 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3',
 'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'GEP3A', 'GEP4A', 'GFSA3',
 'HAGA4', 'HBOR3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'INEP4',
 'IVPR3B', 'IVPR4B', 'JFEN3', 'JHSF3', 'JOP3A', 'JOP4A', 'JSLG11', 'JSLG3',
 'KEPL3', 'KEPL4', 'KLBN3', 'LEVE3', 'LIGT3', 'LOGN3', 'LREN3', 'LTEL3B',
 'LUXM3', 'LUXM4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',
 'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',
 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO5', 'NEOE3', 'NORD3', 'NRTQ3',
 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3', 'OIBR4', 'OPGM3B',
 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',
 'PDT3C', 'PFRM3', 'PLAS3', 'PMAM3', 'PNVL3', 'POMO3', 'POSI3', 'PPAR3', 'PPAR4',
 'PRI03', 'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QVQP3B', 'RADL3',
 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3',
 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',
 'SBSP3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03',
 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'SUZB3', 'SYNE3',
 'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',
 'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4',
 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',
 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',
 'USIM6', 'VIAA11', 'VIAA3', 'VIAA4', 'VIVR3', 'VIVT4', 'VLID3', 'VSPT3',
 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B',
 'YBRA4B', 'YDUQ3']
 ['ABEV3', 'ANIM3', 'CVCB3', 'IGSN3', 'INEP3', 'QUSW3', 'SEER3']
 ['DMMO3', 'LLIS3']
 ['MEAL3', 'OFSA3']
 ['AALR3', 'BRQB3', 'CNSY3', 'CTCA3', 'MOVI3']
 ['AALR3', 'AFLT3', 'AGRO3', 'AHEB3', 'AHEB5', 'AHEB6', 'ALPA3', 'ALPA4',
 'ALUP11', 'ALUP3', 'ALUP4', 'AMAR3', 'AMER3', 'ANIM3', 'APTI3', 'APTI4',
 'ARZZ3', 'ATMP3', 'ATOM3', 'AZE3V', 'AZE4V', 'AZUL3', 'AZUL4', 'BAHI3', 'BALM3',
 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3', 'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3',
 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3', 'BOBR4', 'BRAP3', 'BRAP4', 'BRAP99',
 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'BRQB3', 'CABI3B', 'CALI3', 'CALI4',

'CAMB3', 'CAMB4', 'CAML3', 'CASN3', 'CASN4', 'CATA3', 'CATA4', 'CBEE3', 'CCR03',
 'CEBR3', 'CEBR5', 'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEDO3',
 'CEED3', 'CEED4', 'CEGR3', 'CEPE3', 'CEPE5', 'CEPE6', 'CGAS3', 'CGAS5', 'CGRA3',
 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4', 'CMSA3', 'CMSA4', 'CNSY3', 'COCE3',
 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11', 'CPLE3', 'CPLE5', 'CPLE6',
 'CPRE3', 'CRDE3', 'CRFB3', 'CRPG3', 'CRPG5', 'CRPG6', 'CRTE3B', 'CRTE5B',
 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6', 'CTCA3', 'CTKA3', 'CTKA4',
 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CVCB3', 'CYRE3', 'DASA3', 'DEXP3',
 'DEXP4', 'DIRR3', 'DMM03', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXC03', 'EALT3',
 'EALT4', 'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3',
 'EMAE4', 'EMBR3', 'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4',
 'ENMT3', 'ENMT4', 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3',
 'EQPA5', 'EQPA6', 'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3',
 'EUCA3', 'EUCA4', 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4',
 'FLRY3', 'FRAS3', 'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'FRTA3',
 'GEP3', 'GEP4', 'GESA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4',
 'GPAR3', 'GRND3', 'GUAR3', 'HAGA3', 'HAGA4', 'HBOR3', 'HBSA3', 'HETA3', 'HETA4',
 'HOOT3', 'HOOT4', 'HYPE3', 'IGSN3', 'INNT3', 'IVPR3B', 'IVPR4B', 'JBSS3',
 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3', 'KEPL3', 'KEPL4',
 'KLBN11', 'KLBN3', 'KLBN4', 'LEVE3', 'LIGT3', 'LIPR3', 'LLIS3', 'LOGN3',
 'LREN3', 'LTEL3B', 'LTEL5B', 'LUXM3', 'LUXM4', 'MAPT3', 'MAPT4', 'MDNE3',
 'MEAL3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4', 'MMXM3', 'MNDL3',
 'MNPR3', 'MOVI3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3', 'MSPA3',
 'MSPA4', 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO3', 'NEMO5', 'NEMO6',
 'NEOE3', 'NORD3', 'NRTQ3', 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OFSA3',
 'OIBR3', 'OIBR4', 'OPGM3B', 'OPSE3B', 'OPTS3B', 'OSXB3', 'PARD3', 'PATI3',
 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3', 'PDTC3', 'PETR3', 'PETR4', 'PFRM3',
 'PGMN3', 'PLAS3', 'PMAM3', 'PNVL3', 'POM03', 'POM04', 'POSI3', 'PPAR3', 'PPAR4',
 'PRI03', 'PRMN3B', 'PRNR3', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QUAL3',
 'QUSW3', 'QVQP3B', 'RADL3', 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4',
 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3', 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4',
 'ROMI3', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4', 'SAPR11', 'SAPR3', 'SAPR4',
 'SBSP3', 'SEER3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4',
 'SMT03', 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'STBP3',
 'STKF3', 'SUZB3', 'SYNE3', 'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4',
 'TCNO3', 'TCNO4', 'TCSA3', 'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3',
 'TGMA3', 'TKNO3', 'TKNO4', 'TOTS3', 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3',
 'TXRX11', 'TXRX3', 'TXRX4', 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6',
 'UPKP3B', 'USIM3', 'USIM5', 'USIM6', 'VALE3', 'VBBR3', 'VIAA11', 'VIAA3',
 'VIAA4', 'VIVR3', 'VIVT3', 'VIVT4', 'VLID3', 'VSPT3', 'VSPT4', 'VULC3', 'WEGE3',
 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B', 'YBRA4B', 'YDUQ3']

396

Após comparação

['AZUL3', 'AZUL4', 'CAML3', 'CRFB3', 'INNT3', 'PARD3', 'PRNR3', 'VBBR3']

8

```
[ ]: #Quantidade de relatorios a partir de 2017
#realizar pesquisa nas empresas de 2017
lista_de_empresas_2017 = []

for name_emp in names_empresas_2017:
    for empresa in lista_caminho:
        if empresa == name_emp:
            path_caminho_pdf_2017 = 'C:
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa
            relatorio_pdf_2017 = os.listdir(path_caminho_pdf_2017)
            att = []
            for lista_pdf_2017 in relatorio_pdf_2017:
                #print(lista_pdf)
                att.append(lista_pdf_2017)
            lista_de_empresas_2017.append(att)
#quantidade total de relatorios baixados
print(lista_de_empresas_2017)
print(len(lista_de_empresas_2017))

[['AZUL3_2017.pdf', 'AZUL3_2018.pdf', 'AZUL3_2019.pdf', 'AZUL3_2020.pdf'],
['AZUL4_2017.pdf', 'AZUL4_2018.pdf', 'AZUL4_2019.pdf', 'AZUL4_2021.pdf'],
['CAML3_2017.pdf', 'CAML3_2018.pdf', 'CAML3_2019.pdf', 'CAML3_2020.pdf',
'CAML3_2021.pdf'], ['CRFB3_2017.pdf', 'CRFB3_2018.pdf', 'CRFB3_2019.pdf',
'CRFB3_2020.pdf', 'CRFB3_2021.pdf'], ['INNT3_2017.pdf', 'INNT3_2020.pdf',
'INNT3_2021.pdf'], ['PARD3_2017.pdf', 'PARD3_2018.pdf', 'PARD3_2021.pdf'],
['PRNR3_2017.pdf', 'PRNR3_2018.pdf', 'PRNR3_2020.pdf', 'PRNR3_2021.pdf'],
['VBBR3_2017.pdf', 'VBBR3_2018.pdf', 'VBBR3_2020.pdf', 'VBBR3_2021.pdf']]
8
```

```
[ ]: #quantidade de relatórios em cada empresa
tam_emp = np.zeros(8, dtype = int)
i = 0
empresas_14r = []
for pesquisa in lista_de_empresas_2017:
    #print(pesquisa)
    for k in pesquisa:
        #print(k)
        tam_emp[i] = tam_emp[i] + 1
    i = i + 1
print(tam_emp)
print("Empresa com menor quantidade de relatorios: ", min(tam_emp))
print(len(tam_emp))
```

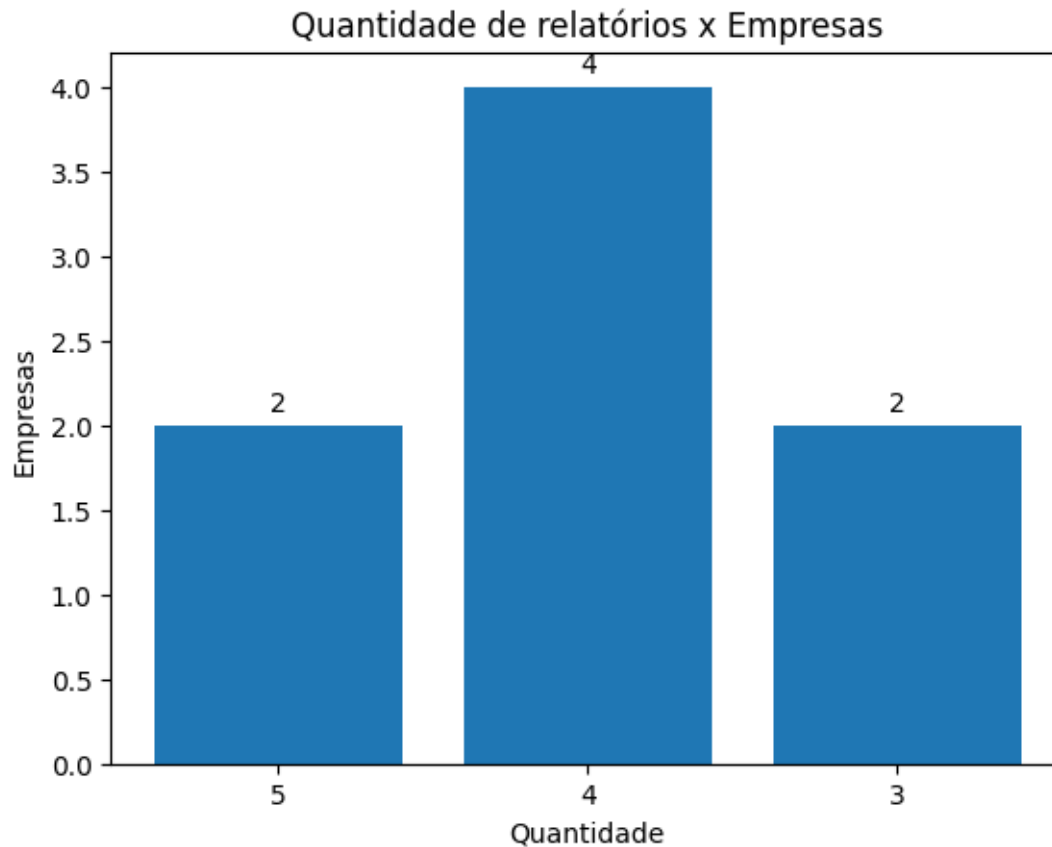
```
[4 4 5 5 3 3 4 4]
Empresa com menor quantidade de relatorios: 3
8
```

```
[ ]: #empresas com 8 relatorios
quantidade_relatorios = 5
empresas_2017r = []
for i in range(quantidade_relatorios, 2, -1):
    name = []
    #print(name)
    for pesquisa in lista_de_empresas_2017:
        #print(pesquisa)
        #print(len(pesquisa))
        if i == len(pesquisa):
            c = pesquisa[0].split("_")
            name.append(c[0])
    print("Empresas com ", i , "relatórios")
    print(name)
    empresas_2017r.append(name)
#print(empresas_2017r)

grafico = []
for i in empresas_2017r:
    #print(len(i))
    grafico.append(len(i))
print(grafico)
print(sum(grafico))
```

```
Empresas com 5 relatórios
['CAML3', 'CRFB3']
Empresas com 4 relatórios
['AZUL3', 'AZUL4', 'PRNR3', 'VBRR3']
Empresas com 3 relatórios
['INNT3', 'PARD3']
[2, 4, 2]
8
```

```
[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ['5', "4", "3"]
rect1 = ax.bar(X, grafico)
ax.set_ylabel('Empresas')
ax.set_title("Quantidade de relatórios x Empresas")
ax.set_xlabel('Quantidade')
ax.bar_label(rect1, padding = 3)
plt.show()
```



```
[ ]: lista_de_empresas_2018 = []
for name in lista:
    c = name.split("_")
    c1 = c[1].split(".")
    if c1[0] == "2018":
        lista_de_empresas_2018.append(name)
print(lista_de_empresas_2018)
print(len(lista_de_empresas_2018))
```

```
['AALR3_2018.pdf', 'AFLT3_2018.pdf', 'AGR03_2018.pdf', 'AHEB3_2018.pdf',
'AHEB5_2018.pdf', 'AHEB6_2018.pdf', 'ALPA3_2018.pdf', 'ALPA4_2018.pdf',
'ALUP11_2018.pdf', 'ALUP3_2018.pdf', 'ALUP4_2018.pdf', 'AMAR3_2018.pdf',
'AMER3_2018.pdf', 'ANIM3_2018.pdf', 'APTI3_2018.pdf', 'APTI4_2018.pdf',
'ARZZ3_2018.pdf', 'ATMP3_2018.pdf', 'ATOM3_2018.pdf', 'AZE3_2018.pdf',
'AZE4_2018.pdf', 'AZUL3_2018.pdf', 'AZUL4_2018.pdf', 'BAHI3_2018.pdf',
'BALM3_2018.pdf', 'BALM4_2018.pdf', 'BAUH3_2018.pdf', 'BAUH4_2018.pdf',
'BDLL3_2018.pdf', 'BDLL4_2018.pdf', 'BEEF3_2018.pdf', 'BETP3B_2018.pdf',
'BIOM3_2018.pdf', 'BLAU3_2018.pdf', 'BLUT3_2018.pdf', 'BLUT4_2018.pdf',
'BMKS3_2018.pdf', 'BOBR3_2018.pdf', 'BOBR4_2018.pdf', 'BRAP3_2018.pdf',
'BRAP4_2018.pdf', 'BRAP99_2018.pdf', 'BRFS3_2018.pdf', 'BRKM3_2018.pdf',
```

'BRKM5_2018.pdf', 'BRKM6_2018.pdf', 'BRQB3_2018.pdf', 'CABI3B_2018.pdf',
 'CALI3_2018.pdf', 'CALI4_2018.pdf', 'CAMB3_2018.pdf', 'CAMB4_2018.pdf',
 'CAML3_2018.pdf', 'CASN3_2018.pdf', 'CASN4_2018.pdf', 'CATA3_2018.pdf',
 'CATA4_2018.pdf', 'CBEE3_2018.pdf', 'CCR03_2018.pdf', 'CEBR3_2018.pdf',
 'CEBR5_2018.pdf', 'CEBR6_2018.pdf', 'CED03_2018.pdf', 'CED04_2018.pdf',
 'CEEB3_2018.pdf', 'CEEB5_2018.pdf', 'CEEB6_2018.pdf', 'CEED3_2018.pdf',
 'CEED4_2018.pdf', 'CEGR3_2018.pdf', 'CEPE3_2018.pdf', 'CEPE5_2018.pdf',
 'CEPE6_2018.pdf', 'CGAS3_2018.pdf', 'CGAS5_2018.pdf', 'CGRA3_2018.pdf',
 'CGRA4_2018.pdf', 'CLSC3_2018.pdf', 'CLSC4_2018.pdf', 'CMIG3_2018.pdf',
 'CMIG4_2018.pdf', 'CMSA3_2018.pdf', 'CMSA4_2018.pdf', 'CNSY3_2018.pdf',
 'COCE3_2018.pdf', 'COCE5_2018.pdf', 'COCE6_2018.pdf', 'COGN3_2018.pdf',
 'CPFE3_2018.pdf', 'CPLE11_2018.pdf', 'CPLE3_2018.pdf', 'CPLE5_2018.pdf',
 'CPLE6_2018.pdf', 'CPRE3_2018.pdf', 'CRDE3_2018.pdf', 'CRFB3_2018.pdf',
 'CRPG3_2018.pdf', 'CRPG5_2018.pdf', 'CRPG6_2018.pdf', 'CRTE3B_2018.pdf',
 'CRTE5B_2018.pdf', 'CSAN3_2018.pdf', 'CSMG3_2018.pdf', 'CSNA3_2018.pdf',
 'CSRN3_2018.pdf', 'CSRN5_2018.pdf', 'CSRN6_2018.pdf', 'CTCA3_2018.pdf',
 'CTKA3_2018.pdf', 'CTKA4_2018.pdf', 'CTNM3_2018.pdf', 'CTNM4_2018.pdf',
 'CTSA3_2018.pdf', 'CTSA4_2018.pdf', 'CTSA8_2018.pdf', 'CVCB3_2018.pdf',
 'CYRE3_2018.pdf', 'DASA3_2018.pdf', 'DEXP3_2018.pdf', 'DEXP4_2018.pdf',
 'DIRR3_2018.pdf', 'DMM03_2018.pdf', 'DOHL3_2018.pdf', 'DOHL4_2018.pdf',
 'DTCY3_2018.pdf', 'DTCY4_2018.pdf', 'DXC03_2018.pdf', 'EALT3_2018.pdf',
 'EALT4_2018.pdf', 'ECOR3_2018.pdf', 'EGIE3_2018.pdf', 'EKTR3_2018.pdf',
 'EKTR4_2018.pdf', 'ELET3_2018.pdf', 'ELET5_2018.pdf', 'ELET6_2018.pdf',
 'EMAE3_2018.pdf', 'EMAE4_2018.pdf', 'EMBR3_2018.pdf', 'ENAT3_2018.pdf',
 'ENBR3_2018.pdf', 'ENEV3_2018.pdf', 'ENGI11_2018.pdf', 'ENGI3_2018.pdf',
 'ENGI4_2018.pdf', 'ENMT3_2018.pdf', 'ENMT4_2018.pdf', 'EPAR3_2018.pdf',
 'EPAR4_2018.pdf', 'EQMA3B_2018.pdf', 'EQMA5B_2018.pdf', 'EQMA6B_2018.pdf',
 'EQPA3_2018.pdf', 'EQPA5_2018.pdf', 'EQPA6_2018.pdf', 'EQPA7_2018.pdf',
 'EQTL11_2018.pdf', 'EQTL3_2018.pdf', 'ESTR3_2018.pdf', 'ESTR4_2018.pdf',
 'ETER3_2018.pdf', 'EUCA3_2018.pdf', 'EUCA4_2018.pdf', 'EVEN3_2018.pdf',
 'EZTC3_2018.pdf', 'FESA3_2018.pdf', 'FESA4_2018.pdf', 'FHER3_2018.pdf',
 'FIGE3_2018.pdf', 'FIGE4_2018.pdf', 'FLEX3_2018.pdf', 'FLRY3_2018.pdf',
 'FRAS3_2018.pdf', 'FRAS4_2018.pdf', 'FRI03_2018.pdf', 'FRRN3B_2018.pdf',
 'FRRN5B_2018.pdf', 'FRRN6B_2018.pdf', 'FRTA3_2018.pdf', 'GEPA3_2018.pdf',
 'GEPA4_2018.pdf', 'GFSA3_2018.pdf', 'GGBR3_2018.pdf', 'GGBR4_2018.pdf',
 'GOAU3_2018.pdf', 'GOAU4_2018.pdf', 'GOLL3_2018.pdf', 'GOLL4_2018.pdf',
 'GPAR3_2018.pdf', 'GRND3_2018.pdf', 'GUAR3_2018.pdf', 'HAGA3_2018.pdf',
 'HAGA4_2018.pdf', 'HAPV3_2018.pdf', 'HAPV99_2018.pdf', 'HBOR3_2018.pdf',
 'HBSA3_2018.pdf', 'HETA3_2018.pdf', 'HETA4_2018.pdf', 'HOOT3_2018.pdf',
 'HOOT4_2018.pdf', 'HYPE3_2018.pdf', 'IGSN3_2018.pdf', 'INEP3_2018.pdf',
 'INEP4_2018.pdf', 'IVPR3B_2018.pdf', 'IVPR4B_2018.pdf', 'JBSS3_2018.pdf',
 'JFEN3_2018.pdf', 'JHSF3_2018.pdf', 'JOPA3_2018.pdf', 'JOPA4_2018.pdf',
 'JSLG11_2018.pdf', 'JSLG3_2018.pdf', 'KEPL3_2018.pdf', 'KEPL4_2018.pdf',
 'KLBN11_2018.pdf', 'KLBN3_2018.pdf', 'KLBN4_2018.pdf', 'LEVE3_2018.pdf',
 'LIGT3_2018.pdf', 'LIPR3_2018.pdf', 'LLIS3_2018.pdf', 'LOGN3_2018.pdf',
 'LREN3_2018.pdf', 'LTEL3B_2018.pdf', 'LTEL5B_2018.pdf', 'LUXM3_2018.pdf',
 'LUXM4_2018.pdf', 'MAPT3_2018.pdf', 'MAPT4_2018.pdf', 'MDNE3_2018.pdf',
 'MGEL3_2018.pdf', 'MGEL4_2018.pdf', 'MGLU3_2018.pdf', 'MILS3_2018.pdf',

'MMAQ3_2018.pdf', 'MMAQ4_2018.pdf', 'MMXM3_2018.pdf', 'MNDL3_2018.pdf',
 'MNPR3_2018.pdf', 'MOVI3_2018.pdf', 'MRFG3_2018.pdf', 'MRSA3B_2018.pdf',
 'MRSA5B_2018.pdf', 'MRSA6B_2018.pdf', 'MRVE3_2018.pdf', 'MSPA3_2018.pdf',
 'MSPA4_2018.pdf', 'MTSA3_2018.pdf', 'MTSA4_2018.pdf', 'MWET3_2018.pdf',
 'MWET4_2018.pdf', 'MYPK3_2018.pdf', 'NEMO3_2018.pdf', 'NEMO5_2018.pdf',
 'NEMO6_2018.pdf', 'NEOE3_2018.pdf', 'NORD3_2018.pdf', 'NRTQ3_2018.pdf',
 'NRTQ4_2018.pdf', 'NUTR3_2018.pdf', 'ODER3_2018.pdf', 'ODER4_2018.pdf',
 'ODPV3_2018.pdf', 'OFSA3_2018.pdf', 'OIBR3_2018.pdf', 'OIBR4_2018.pdf',
 'OPGM3B_2018.pdf', 'OPSE3B_2018.pdf', 'OPTS3B_2018.pdf', 'OSXB3_2018.pdf',
 'PAR3_2018.pdf', 'PATI3_2018.pdf', 'PATI4_2018.pdf', 'PCAR3_2018.pdf',
 'PCAR99_2018.pdf', 'PDGR3_2018.pdf', 'PDT3_2018.pdf', 'PETR3_2018.pdf',
 'PETR4_2018.pdf', 'PFRM3_2018.pdf', 'PGMN3_2018.pdf', 'PLAS3_2018.pdf',
 'PMAM3_2018.pdf', 'PNVL3_2018.pdf', 'POM3_2018.pdf', 'POM4_2018.pdf',
 'POSI3_2018.pdf', 'PPAR3_2018.pdf', 'PPAR4_2018.pdf', 'PRIO3_2018.pdf',
 'PRMN3B_2018.pdf', 'PRNR3_2018.pdf', 'PRPT3B_2018.pdf', 'PTBL3_2018.pdf',
 'PTCA11_2018.pdf', 'PTCA3_2018.pdf', 'PTNT3_2018.pdf', 'PTNT4_2018.pdf',
 'QUAL3_2018.pdf', 'QUSW3_2018.pdf', 'QVQP3B_2018.pdf', 'RADL3_2018.pdf',
 'RAIL3_2018.pdf', 'RANI3_2018.pdf', 'RANI4_2018.pdf', 'RAPT3_2018.pdf',
 'RAPT4_2018.pdf', 'RCSL3_2018.pdf', 'RCSL4_2018.pdf', 'RDNI3_2018.pdf',
 'REDE3_2018.pdf', 'RENT3_2018.pdf', 'RNEW11_2018.pdf', 'RNEW3_2018.pdf',
 'RNEW4_2018.pdf', 'ROMI3_2018.pdf', 'RPMG3_2018.pdf', 'RSID3_2018.pdf',
 'RSUL3_2018.pdf', 'RSUL4_2018.pdf', 'SAPR11_2018.pdf', 'SAPR3_2018.pdf',
 'SAPR4_2018.pdf', 'SBSP3_2018.pdf', 'SGPS3_2018.pdf', 'SHOW3_2018.pdf',
 'SHUL3_2018.pdf', 'SHUL4_2018.pdf', 'SLCE3_2018.pdf', 'SLED3_2018.pdf',
 'SLED4_2018.pdf', 'SMFT13_2018.pdf', 'SMT03_2018.pdf', 'SNSY3_2018.pdf',
 'SNSY5_2018.pdf', 'SNSY6_2018.pdf', 'SOND3_2018.pdf', 'SOND5_2018.pdf',
 'SOND6_2018.pdf', 'SQIA3_2018.pdf', 'STBP3_2018.pdf', 'STKF3_2018.pdf',
 'SUZB3_2018.pdf', 'SYNE3_2018.pdf', 'TAE11_2018.pdf', 'TAE3_2018.pdf',
 'TAE4_2018.pdf', 'TASA3_2018.pdf', 'TASA4_2018.pdf', 'TCN03_2018.pdf',
 'TCN04_2018.pdf', 'TCSA3_2018.pdf', 'TECN3_2018.pdf', 'TEKA3_2018.pdf',
 'TEKA4_2018.pdf', 'TELB3_2018.pdf', 'TELB4_2018.pdf', 'TEND3_2018.pdf',
 'TGMA3_2018.pdf', 'TKN03_2018.pdf', 'TKN04_2018.pdf', 'TOTS3_2018.pdf',
 'TPIS3_2018.pdf', 'TRIS3_2018.pdf', 'TRPL3_2018.pdf', 'TRPL4_2018.pdf',
 'TUPY3_2018.pdf', 'TXRX11_2018.pdf', 'TXRX3_2018.pdf', 'TXRX4_2018.pdf',
 'UCAS3_2018.pdf', 'UGPA3_2018.pdf', 'UNIP3_2018.pdf', 'UNIP5_2018.pdf',
 'UNIP6_2018.pdf', 'UPKP3B_2018.pdf', 'USIM3_2018.pdf', 'USIM5_2018.pdf',
 'USIM6_2018.pdf', 'VALE3_2018.pdf', 'VBBR3_2018.pdf', 'VIA11_2018.pdf',
 'VIA3_2018.pdf', 'VIA4_2018.pdf', 'VIVR3_2018.pdf', 'VIVT3_2018.pdf',
 'VIVT4_2018.pdf', 'VLID3_2018.pdf', 'VSPT3_2018.pdf', 'VSPT4_2018.pdf',
 'VULC3_2018.pdf', 'WEGE3_2018.pdf', 'WHRL3_2018.pdf', 'WHRL4_2018.pdf',
 'WLMM3_2018.pdf', 'WLMM4_2018.pdf', 'YBRA3B_2018.pdf', 'YBRA4B_2018.pdf',
 'YDUQ3_2018.pdf', 'ZAMP3_2018.pdf']

402

```
[ ]: names_empresas_2018 = []
      print(names_empresas_2011)
      print(names_empresas_2012)
```

```

print(names_empresas_2013)
print(names_empresas_2014)
print(names_empresas_2015)
print(names_empresas_2016)
print(names_empresas_2017)
for name in lista_de_empresas_2018:
    c = name.split("_")
    names_empresas_2018.append(c[0])
print(names_empresas_2018)
print(len(names_empresas_2018))

for name in names_empresas_2011:
    for name1 in names_empresas_2018:
        if name1 == name:
            names_empresas_2018.remove(name1)
for name in names_empresas_2012:
    for name1 in names_empresas_2018:
        if name1 == name:
            names_empresas_2018.remove(name1)
for name in names_empresas_2013:
    for name1 in names_empresas_2018:
        if name1 == name:
            names_empresas_2018.remove(name1)
for name in names_empresas_2014:
    for name1 in names_empresas_2018:
        if name1 == name:
            names_empresas_2018.remove(name1)
for name in names_empresas_2015:
    for name1 in names_empresas_2018:
        if name1 == name:
            names_empresas_2018.remove(name1)
for name in names_empresas_2016:
    for name1 in names_empresas_2018:
        if name1 == name:
            names_empresas_2018.remove(name1)
for name in names_empresas_2017:
    for name1 in names_empresas_2018:
        if name1 == name:
            names_empresas_2018.remove(name1)

print("Após comparação")
print(names_empresas_2018)
print(len(names_empresas_2018))

```

```

['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',

```


'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',
 'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',
 'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',
 'TOTS3', 'VALE3', 'VIVT3']
 ['AHEB3', 'AHEB5', 'AHEB6', 'ALUP11', 'ALUP3', 'ALUP4', 'AMER3', 'ARZZ3',
 'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3',
 'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3',
 'BOBR4', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4',
 'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA4', 'CBEE3', 'CCR03', 'CEBR3', 'CEBR5',
 'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',
 'CEPE3', 'CEPE5', 'CEPE6', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
 'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',
 'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',
 'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6',
 'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CYRE3', 'DEXP3',
 'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXC03', 'EALT3', 'EALT4',
 'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4',
 'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4',
 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6',
 'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4',
 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3',
 'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'GEPA3', 'GEPA4', 'GFSA3',
 'HAGA4', 'HBOR3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'INEP4',
 'IVPR3B', 'IVPR4B', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3',
 'KEPL3', 'KEPL4', 'KLBN3', 'LEVE3', 'LIGT3', 'LOGN3', 'LREN3', 'LTEL3B',
 'LUXM3', 'LUXM4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',
 'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',
 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO5', 'NEOE3', 'NORD3', 'NRTQ3',
 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3', 'OIBR4', 'OPGM3B',
 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',
 'PDTC3', 'PFRM3', 'PLAS3', 'PMAM3', 'PNVL3', 'POMO3', 'POS13', 'PPAR3', 'PPAR4',
 'PRI03', 'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QVQP3B', 'RADL3',
 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3',
 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',
 'SBSP3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03',
 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'SUZB3', 'SYNE3',
 'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',
 'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4',
 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',
 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',
 'USIM6', 'VIIA11', 'VIIA3', 'VIIA4', 'VIVR3', 'VIVT4', 'VLID3', 'VSPT3',
 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B',
 'YBRA4B', 'YDUQ3']
 ['ABEV3', 'ANIM3', 'CVCB3', 'IGSN3', 'INEP3', 'QUSW3', 'SEER3']
 ['DMMO3', 'LLIS3']
 ['MEAL3', 'OFSA3']
 ['AALR3', 'BRQB3', 'CNSY3', 'CTCA3', 'MOVI3']
 ['AZUL3', 'AZUL4', 'CAML3', 'CRFB3', 'INNT3', 'PARD3', 'PRNR3', 'VBBR3']

['AALR3', 'AFLT3', 'AGRO3', 'AHEB3', 'AHEB5', 'AHEB6', 'ALPA3', 'ALPA4',
 'ALUP11', 'ALUP3', 'ALUP4', 'AMAR3', 'AMER3', 'ANIM3', 'APTI3', 'APTI4',
 'ARZZ3', 'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'AZUL3', 'AZUL4', 'BAHI3', 'BALM3',
 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3', 'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3',
 'BLAU3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3', 'BOBR4', 'BRAP3', 'BRAP4',
 'BRAP99', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'BRQB3', 'CABI3B', 'CALI3',
 'CALI4', 'CAMB3', 'CAMB4', 'CAML3', 'CASN3', 'CASN4', 'CATA3', 'CATA4', 'CBEE3',
 'CCR03', 'CEBR3', 'CEBR5', 'CEBR6', 'CED03', 'CED04', 'CEEB3', 'CEEB5', 'CEEB6',
 'CEED3', 'CEED4', 'CEGR3', 'CEPE3', 'CEPE5', 'CEPE6', 'CGAS3', 'CGAS5', 'CGRA3',
 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4', 'CMSA3', 'CMSA4', 'CNSY3', 'COCE3',
 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11', 'CPLE3', 'CPLE5', 'CPLE6',
 'CPRE3', 'CRDE3', 'CRFB3', 'CRPG3', 'CRPG5', 'CRPG6', 'CRTE3B', 'CRTE5B',
 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6', 'CTCA3', 'CTKA3', 'CTKA4',
 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CVCB3', 'CYRE3', 'DASA3', 'DEXP3',
 'DEXP4', 'DIRR3', 'DMM03', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXC03', 'EALT3',
 'EALT4', 'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3',
 'EMAE4', 'EMBR3', 'ENAT3', 'ENBR3', 'ENE3', 'ENGI11', 'ENGI3', 'ENGI4',
 'ENMT3', 'ENMT4', 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3',
 'EQPA5', 'EQPA6', 'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3',
 'EUCA3', 'EUCA4', 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4',
 'FLEX3', 'FLRY3', 'FRAS3', 'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B',
 'FRTA3', 'GEP3', 'GEP4', 'GFSA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3',
 'GOLL4', 'GP3', 'GRND3', 'GUAR3', 'HAGA3', 'HAGA4', 'HAPV3', 'HAPV99',
 'HBOR3', 'HBSA3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'IGSN3', 'INEP3',
 'INEP4', 'IVPR3B', 'IVPR4B', 'JBSS3', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4',
 'JSLG11', 'JSLG3', 'KEPL3', 'KEPL4', 'KLB11', 'KLB3', 'KLB4', 'LEVE3',
 'LIGT3', 'LIPR3', 'LLIS3', 'LOGN3', 'LREN3', 'LTEL3B', 'LTEL5B', 'LUXM3',
 'LUXM4', 'MAPT3', 'MAPT4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MIL3', 'MMAQ3',
 'MMAQ4', 'MMXM3', 'MNDL3', 'MNPR3', 'MOVI3', 'MRFG3', 'MRSA3B', 'MRSA5B',
 'MRSA6B', 'MRVE3', 'MSPA3', 'MSPA4', 'MTSA3', 'MTSA4', 'MWET3', 'MWET4',
 'MYPK3', 'NEMO3', 'NEMO5', 'NEMO6', 'NEOE3', 'NORD3', 'NRTQ3', 'NRTQ4', 'NUTR3',
 'ODER3', 'ODER4', 'ODPV3', 'OFSA3', 'OIBR3', 'OIBR4', 'OPGM3B', 'OPSE3B',
 'OPTS3B', 'OSXB3', 'PARD3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',
 'PDTC3', 'PETR3', 'PETR4', 'PFRM3', 'PGMN3', 'PLAS3', 'PMAM3', 'PNVL3', 'POMO3',
 'POMO4', 'POS13', 'PPAR3', 'PPAR4', 'PRI03', 'PRMN3B', 'PRNR3', 'PRPT3B',
 'PTBL3', 'PTCA11', 'PTCA3', 'PTNT3', 'PTNT4', 'QUAL3', 'QUSW3', 'QVQP3B',
 'RADL3', 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3',
 'REDE3', 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'ROMI3', 'RPMG3', 'RSID3',
 'RSUL3', 'RSUL4', 'SAPR11', 'SAPR3', 'SAPR4', 'SBSP3', 'SGPS3', 'SHOW3',
 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMFT13', 'SMT03', 'SNSY3',
 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'STBP3', 'STKF3', 'SUZB3',
 'SYNE3', 'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4',
 'TCSA3', 'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3',
 'TKNO4', 'TOTS3', 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11',
 'TXRX3', 'TXRX4', 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B',
 'USIM3', 'USIM5', 'USIM6', 'VALE3', 'VBBR3', 'VIIA11', 'VIIA3', 'VIIA4',
 'VIVR3', 'VIVT3', 'VIVT4', 'VLID3', 'VSPT3', 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3',
 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B', 'YBRA4B', 'YDUQ3', 'ZAMP3']

402

Após comparação

```
['BLAU3', 'FLEX3', 'HAPV3', 'HAPV99', 'PTCA11', 'PTCA3', 'SMFT13', 'ZAMP3']
```

8

```
[ ]: #Quantidade de relatorios a partir de 2018
#realizar pesquisa nas empresas de 2018
lista_de_empresas_2018 = []

for name_emp in names_empresas_2018:
    for empresa in lista_caminho:
        if empresa == name_emp:
            path_caminho_pdf_2018 = 'C:
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa
            relatorio_pdf_2018 = os.listdir(path_caminho_pdf_2018)
            att = []
            for lista_pdf_2018 in relatorio_pdf_2018:
                #print(lista_pdf)
                att.append(lista_pdf_2018)
            lista_de_empresas_2018.append(att)
#quantidade total de relatorios baixados
print(lista_de_empresas_2018)
print(len(lista_de_empresas_2018))

[['BLAU3_2018.pdf', 'BLAU3_2019.pdf', 'BLAU3_2020.pdf', 'BLAU3_2021.pdf'],
['FLEX3_2018.pdf', 'FLEX3_2019.pdf', 'FLEX3_2020.pdf', 'FLEX3_2021.pdf'],
['HAPV3_2018.pdf', 'HAPV3_2019.pdf', 'HAPV3_2020.pdf', 'HAPV3_2021.pdf'],
['HAPV99_2018.pdf', 'HAPV99_2019.pdf', 'HAPV99_2020.pdf', 'HAPV99_2021.pdf'],
['PTCA11_2018.pdf', 'PTCA11_2019.pdf', 'PTCA11_2020.pdf', 'PTCA11_2021.pdf'],
['PTCA3_2018.pdf', 'PTCA3_2019.pdf', 'PTCA3_2020.pdf', 'PTCA3_2021.pdf'],
['SMFT13_2018.pdf', 'SMFT13_2019.pdf', 'SMFT13_2020.pdf', 'SMFT13_2021.pdf'],
['ZAMP3_2018.pdf', 'ZAMP3_2019.pdf', 'ZAMP3_2020.pdf', 'ZAMP3_2021.pdf']]
```

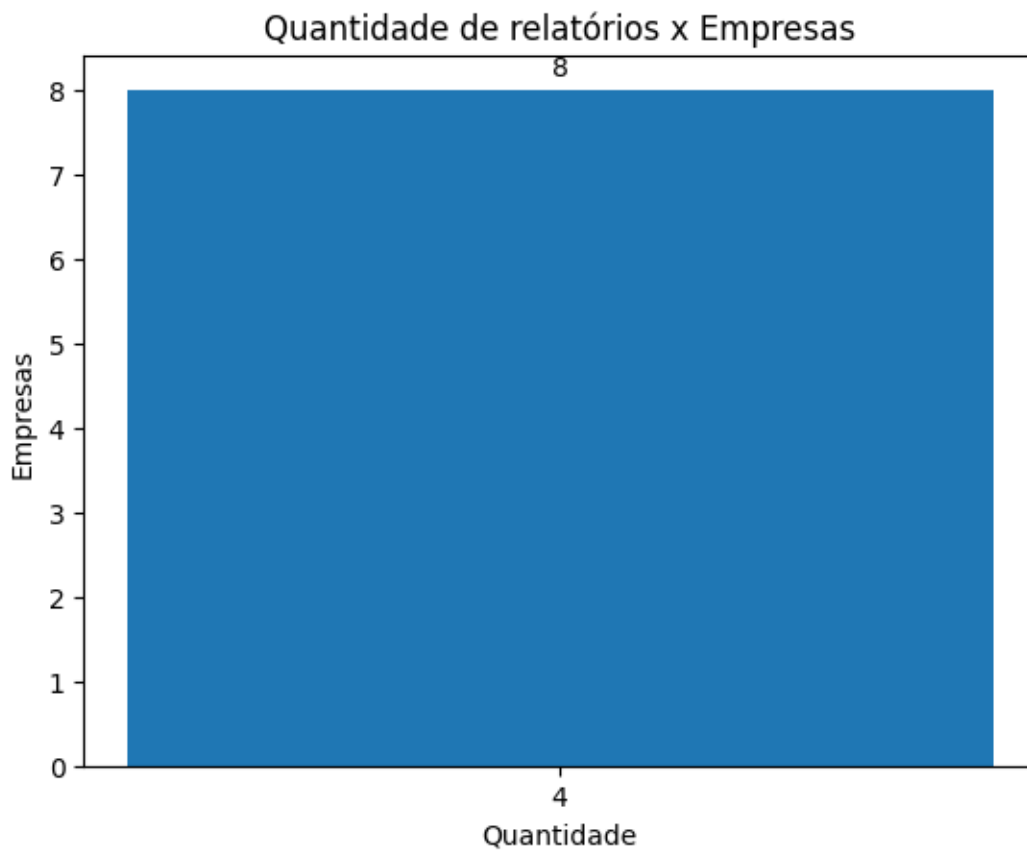
8

```
[ ]: #quantidade de relatórios em cada empresa
tam_emp = np.zeros(8, dtype = int)
i = 0
empresas_14r = []
for pesquisa in lista_de_empresas_2018:
    #print(pesquisa)
    for k in pesquisa:
        #print(k)
        tam_emp[i] = tam_emp[i] + 1
    i = i + 1
print(tam_emp)
print("Empresa com menor quantidade de relatorios: ", min(tam_emp))
print(len(tam_emp))
```

```
[4 4 4 4 4 4 4 4]
```

Empresa com menor quantidade de relatorios: 4
8

```
[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ['4']
rect1 = ax.bar(X, 8)
ax.set_ylabel('Empresas')
ax.set_title("Quantidade de relatórios x Empresas")
ax.set_xlabel('Quantidade')
ax.bar_label(rect1, padding = 3)
plt.show()
```



```
[ ]: lista_de_empresas_2019 = []
for name in lista:
    c = name.split("_")
    c1 = c[1].split(".")
    if c1[0] == "2019":
        lista_de_empresas_2019.append(name)
print(lista_de_empresas_2019)
```

```
print(len(lista_de_empresas_2019))
```

```
['AALR3_2019.pdf', 'ABEV3_2019.pdf', 'AFLT3_2019.pdf', 'AGRO3_2019.pdf',  
'AHEB3_2019.pdf', 'AHEB5_2019.pdf', 'AHEB6_2019.pdf', 'ALPA3_2019.pdf',  
'ALPA4_2019.pdf', 'ALUP11_2019.pdf', 'ALUP3_2019.pdf', 'ALUP4_2019.pdf',  
'AMAR3_2019.pdf', 'AMER3_2019.pdf', 'ANIM3_2019.pdf', 'APTI3_2019.pdf',  
'APTI4_2019.pdf', 'ARZZ3_2019.pdf', 'ATMP3_2019.pdf', 'ATOM3_2019.pdf',  
'AZE3_2019.pdf', 'AZE4_2019.pdf', 'AZUL3_2019.pdf', 'AZUL4_2019.pdf',  
'BAHI3_2019.pdf', 'BALM3_2019.pdf', 'BALM4_2019.pdf', 'BAUH3_2019.pdf',  
'BAUH4_2019.pdf', 'BBML3_2019.pdf', 'BDLL3_2019.pdf', 'BDLL4_2019.pdf',  
'BEEF3_2019.pdf', 'BETP3B_2019.pdf', 'BIOM3_2019.pdf', 'BLAU3_2019.pdf',  
'BLUT3_2019.pdf', 'BLUT4_2019.pdf', 'BMKS3_2019.pdf', 'BOBR3_2019.pdf',  
'BOBR4_2019.pdf', 'BRAP3_2019.pdf', 'BRAP4_2019.pdf', 'BRAP99_2019.pdf',  
'BRFS3_2019.pdf', 'BRKM3_2019.pdf', 'BRKM5_2019.pdf', 'BRKM6_2019.pdf',  
'BRQB3_2019.pdf', 'CABI3B_2019.pdf', 'CALI3_2019.pdf', 'CALI4_2019.pdf',  
'CAMB3_2019.pdf', 'CAMB4_2019.pdf', 'CAML3_2019.pdf', 'CASN3_2019.pdf',  
'CASN4_2019.pdf', 'CATA3_2019.pdf', 'CATA4_2019.pdf', 'CBEE3_2019.pdf',  
'CCR03_2019.pdf', 'CEAB3_2019.pdf', 'CEBR3_2019.pdf', 'CEBR5_2019.pdf',  
'CEBR6_2019.pdf', 'CED03_2019.pdf', 'CED04_2019.pdf', 'CEEB3_2019.pdf',  
'CEEB5_2019.pdf', 'CEEB6_2019.pdf', 'CEED3_2019.pdf', 'CEED4_2019.pdf',  
'CEGR3_2019.pdf', 'CEPE3_2019.pdf', 'CEPE5_2019.pdf', 'CEPE6_2019.pdf',  
'CGAS3_2019.pdf', 'CGAS5_2019.pdf', 'CGRA3_2019.pdf', 'CGRA4_2019.pdf',  
'CLSC3_2019.pdf', 'CLSC4_2019.pdf', 'CMIG3_2019.pdf', 'CMIG4_2019.pdf',  
'CMSA3_2019.pdf', 'CMSA4_2019.pdf', 'CNSY3_2019.pdf', 'COCE3_2019.pdf',  
'COCE5_2019.pdf', 'COCE6_2019.pdf', 'COGN3_2019.pdf', 'CPFE3_2019.pdf',  
'CPLE11_2019.pdf', 'CPLE3_2019.pdf', 'CPLE5_2019.pdf', 'CPLE6_2019.pdf',  
'CPRE3_2019.pdf', 'CRDE3_2019.pdf', 'CRFB3_2019.pdf', 'CRPG3_2019.pdf',  
'CRPG5_2019.pdf', 'CRPG6_2019.pdf', 'CRTE3B_2019.pdf', 'CRTE5B_2019.pdf',  
'CSAN3_2019.pdf', 'CSMG3_2019.pdf', 'CSNA3_2019.pdf', 'CSRN3_2019.pdf',  
'CSRN5_2019.pdf', 'CSRN6_2019.pdf', 'CTCA3_2019.pdf', 'CTKA3_2019.pdf',  
'CTKA4_2019.pdf', 'CTNM3_2019.pdf', 'CTNM4_2019.pdf', 'CTSA3_2019.pdf',  
'CTSA4_2019.pdf', 'CTSA8_2019.pdf', 'CVCB3_2019.pdf', 'CYRE3_2019.pdf',  
'DASA3_2019.pdf', 'DEXP3_2019.pdf', 'DEXP4_2019.pdf', 'DIRR3_2019.pdf',  
'DMMO3_2019.pdf', 'DOHL3_2019.pdf', 'DOHL4_2019.pdf', 'DTCY3_2019.pdf',  
'DTCY4_2019.pdf', 'DXCO3_2019.pdf', 'EALT3_2019.pdf', 'EALT4_2019.pdf',  
'ECOR3_2019.pdf', 'EGIE3_2019.pdf', 'EKTR3_2019.pdf', 'EKTR4_2019.pdf',  
'ELET3_2019.pdf', 'ELET5_2019.pdf', 'ELET6_2019.pdf', 'EMAE3_2019.pdf',  
'EMAE4_2019.pdf', 'EMBR3_2019.pdf', 'ENAT3_2019.pdf', 'ENBR3_2019.pdf',  
'ENEV3_2019.pdf', 'ENGI11_2019.pdf', 'ENGI3_2019.pdf', 'ENGI4_2019.pdf',  
'ENMT3_2019.pdf', 'ENMT4_2019.pdf', 'EPAR3_2019.pdf', 'EPAR4_2019.pdf',  
'EQMA3B_2019.pdf', 'EQMA5B_2019.pdf', 'EQMA6B_2019.pdf', 'EQPA3_2019.pdf',  
'EQPA5_2019.pdf', 'EQPA6_2019.pdf', 'EQPA7_2019.pdf', 'EQTL11_2019.pdf',  
'EQTL3_2019.pdf', 'ESTR3_2019.pdf', 'ESTR4_2019.pdf', 'ETER3_2019.pdf',  
'EUCA3_2019.pdf', 'EUCA4_2019.pdf', 'EVEN3_2019.pdf', 'EZTC3_2019.pdf',  
'FESA3_2019.pdf', 'FESA4_2019.pdf', 'FHER3_2019.pdf', 'FIGE3_2019.pdf',  
'FIGE4_2019.pdf', 'FLEX3_2019.pdf', 'FLRY3_2019.pdf', 'FRAS3_2019.pdf',  
'FRAS4_2019.pdf', 'FRI03_2019.pdf', 'FRRN3B_2019.pdf', 'FRRN5B_2019.pdf',  
'FRRN6B_2019.pdf', 'FRTA3_2019.pdf', 'GEPA3_2019.pdf', 'GEPA4_2019.pdf',
```

'GFSA3_2019.pdf', 'GGBR3_2019.pdf', 'GGBR4_2019.pdf', 'GOAU3_2019.pdf',
 'GOAU4_2019.pdf', 'GOLL3_2019.pdf', 'GOLL4_2019.pdf', 'GPAR3_2019.pdf',
 'GRND3_2019.pdf', 'GUAR3_2019.pdf', 'HAGA3_2019.pdf', 'HAGA4_2019.pdf',
 'HAPV3_2019.pdf', 'HAPV99_2019.pdf', 'HBOR3_2019.pdf', 'HBSA3_2019.pdf',
 'HETA3_2019.pdf', 'HETA4_2019.pdf', 'HOOT3_2019.pdf', 'HOOT4_2019.pdf',
 'HYPE3_2019.pdf', 'IGSN3_2019.pdf', 'INEP3_2019.pdf', 'IVPR3B_2019.pdf',
 'IVPR4B_2019.pdf', 'JBSS3_2019.pdf', 'JFEN3_2019.pdf', 'JHSF3_2019.pdf',
 'JOPA3_2019.pdf', 'JOPA4_2019.pdf', 'JSLG11_2019.pdf', 'JSLG3_2019.pdf',
 'KEPL3_2019.pdf', 'KEPL4_2019.pdf', 'KLBN11_2019.pdf', 'KLBN3_2019.pdf',
 'KLBN4_2019.pdf', 'LEVE3_2019.pdf', 'LIGT3_2019.pdf', 'LIPR3_2019.pdf',
 'LLIS3_2019.pdf', 'LOGN3_2019.pdf', 'LREN3_2019.pdf', 'LTEL3B_2019.pdf',
 'LTEL5B_2019.pdf', 'LTLA3B_2019.pdf', 'LUXM3_2019.pdf', 'LUXM4_2019.pdf',
 'MAPT3_2019.pdf', 'MAPT4_2019.pdf', 'MDNE3_2019.pdf', 'MEAL3_2019.pdf',
 'MGEL3_2019.pdf', 'MGEL4_2019.pdf', 'MGLU3_2019.pdf', 'MILS3_2019.pdf',
 'MMAQ3_2019.pdf', 'MMAQ4_2019.pdf', 'MMXM3_2019.pdf', 'MNDL3_2019.pdf',
 'MNPR3_2019.pdf', 'MOVI3_2019.pdf', 'MRFG3_2019.pdf', 'MRSA3B_2019.pdf',
 'MRSA5B_2019.pdf', 'MRSA6B_2019.pdf', 'MRVE3_2019.pdf', 'MSPA3_2019.pdf',
 'MSPA4_2019.pdf', 'MTSA3_2019.pdf', 'MTSA4_2019.pdf', 'MWET3_2019.pdf',
 'MWET4_2019.pdf', 'MYPK3_2019.pdf', 'NEMO3_2019.pdf', 'NEMO5_2019.pdf',
 'NEMO6_2019.pdf', 'NEOE3_2019.pdf', 'NORD3_2019.pdf', 'NRTQ3_2019.pdf',
 'NRTQ4_2019.pdf', 'NUTR3_2019.pdf', 'ODER3_2019.pdf', 'ODER4_2019.pdf',
 'ODPV3_2019.pdf', 'OFSA3_2019.pdf', 'OIBR3_2019.pdf', 'OIBR4_2019.pdf',
 'OPGM3B_2019.pdf', 'OPSE3B_2019.pdf', 'OPTS3B_2019.pdf', 'OSXB3_2019.pdf',
 'PATI3_2019.pdf', 'PATI4_2019.pdf', 'PCAR3_2019.pdf', 'PCAR99_2019.pdf',
 'PDGR3_2019.pdf', 'PDTC3_2019.pdf', 'PETR3_2019.pdf', 'PETR4_2019.pdf',
 'PFRM3_2019.pdf', 'PGMN3_2019.pdf', 'PLAS3_2019.pdf', 'PMAM3_2019.pdf',
 'PNVL3_2019.pdf', 'POMO3_2019.pdf', 'POMO4_2019.pdf', 'POSI3_2019.pdf',
 'PPAR3_2019.pdf', 'PPAR4_2019.pdf', 'PRIO3_2019.pdf', 'PRMN3B_2019.pdf',
 'PRPT3B_2019.pdf', 'PTBL3_2019.pdf', 'PTCA11_2019.pdf', 'PTCA3_2019.pdf',
 'PTNT3_2019.pdf', 'PTNT4_2019.pdf', 'QUAL3_2019.pdf', 'QUSW3_2019.pdf',
 'QVQP3B_2019.pdf', 'RADL3_2019.pdf', 'RAIL3_2019.pdf', 'RANI3_2019.pdf',
 'RANI4_2019.pdf', 'RAPT3_2019.pdf', 'RAPT4_2019.pdf', 'RCSL3_2019.pdf',
 'RCSL4_2019.pdf', 'RDNI3_2019.pdf', 'REDE3_2019.pdf', 'RENT3_2019.pdf',
 'RNEW11_2019.pdf', 'RNEW3_2019.pdf', 'RNEW4_2019.pdf', 'ROMI3_2019.pdf',
 'RPMG3_2019.pdf', 'RSID3_2019.pdf', 'RSUL3_2019.pdf', 'RSUL4_2019.pdf',
 'SAPR11_2019.pdf', 'SAPR3_2019.pdf', 'SAPR4_2019.pdf', 'SBFG3_2019.pdf',
 'SBSP3_2019.pdf', 'SEER3_2019.pdf', 'SGPS3_2019.pdf', 'SHOW3_2019.pdf',
 'SHUL3_2019.pdf', 'SHUL4_2019.pdf', 'SLCE3_2019.pdf', 'SLED3_2019.pdf',
 'SLED4_2019.pdf', 'SMFT13_2019.pdf', 'SMFT3_2019.pdf', 'SMT03_2019.pdf',
 'SNSY3_2019.pdf', 'SNSY5_2019.pdf', 'SNSY6_2019.pdf', 'SOND3_2019.pdf',
 'SOND5_2019.pdf', 'SOND6_2019.pdf', 'SQIA3_2019.pdf', 'STBP3_2019.pdf',
 'STKF3_2019.pdf', 'SUZB3_2019.pdf', 'SYNE3_2019.pdf', 'TAEE11_2019.pdf',
 'TAEE3_2019.pdf', 'TAEE4_2019.pdf', 'TASA3_2019.pdf', 'TASA4_2019.pdf',
 'TCNO3_2019.pdf', 'TCNO4_2019.pdf', 'TCSA3_2019.pdf', 'TECN3_2019.pdf',
 'TEKA3_2019.pdf', 'TEKA4_2019.pdf', 'TELB3_2019.pdf', 'TELB4_2019.pdf',
 'TEND3_2019.pdf', 'TGMA3_2019.pdf', 'TKNO3_2019.pdf', 'TKNO4_2019.pdf',
 'TOTS3_2019.pdf', 'TPIS3_2019.pdf', 'TRIS3_2019.pdf', 'TRPL3_2019.pdf',
 'TRPL4_2019.pdf', 'TUPY3_2019.pdf', 'TXRX11_2019.pdf', 'TXRX3_2019.pdf',

```
'TXRX4_2019.pdf', 'UCAS3_2019.pdf', 'UGPA3_2019.pdf', 'UNIP3_2019.pdf',
'UNIP5_2019.pdf', 'UNIP6_2019.pdf', 'UPKP3B_2019.pdf', 'USIM3_2019.pdf',
'USIM5_2019.pdf', 'USIM6_2019.pdf', 'VALE3_2019.pdf', 'VAM03_2019.pdf',
'VIIA11_2019.pdf', 'VIIA3_2019.pdf', 'VIIA4_2019.pdf', 'VIVR3_2019.pdf',
'VIVT3_2019.pdf', 'VIVT4_2019.pdf', 'VLID3_2019.pdf', 'VSPT3_2019.pdf',
'VSPT4_2019.pdf', 'VULC3_2019.pdf', 'WEGE3_2019.pdf', 'WHRL3_2019.pdf',
'WHRL4_2019.pdf', 'WLMM3_2019.pdf', 'WLMM4_2019.pdf', 'YBRA3B_2019.pdf',
'YBRA4B_2019.pdf', 'YDUQ3_2019.pdf', 'ZAMP3_2019.pdf']
```

407

```
[ ]: names_empresas_2019 = []
print(names_empresas_2011)
print(names_empresas_2012)
print(names_empresas_2013)
print(names_empresas_2014)
print(names_empresas_2015)
print(names_empresas_2016)
print(names_empresas_2017)
print(names_empresas_2018)
for name in lista_de_empresas_2019:
    c = name.split("_")
    names_empresas_2019.append(c[0])
print(names_empresas_2019)
print(len(names_empresas_2019))

for name in names_empresas_2011:
    for name1 in names_empresas_2019:
        if name1 == name:
            names_empresas_2019.remove(name1)
for name in names_empresas_2012:
    for name1 in names_empresas_2019:
        if name1 == name:
            names_empresas_2019.remove(name1)
for name in names_empresas_2013:
    for name1 in names_empresas_2019:
        if name1 == name:
            names_empresas_2019.remove(name1)
for name in names_empresas_2014:
    for name1 in names_empresas_2019:
        if name1 == name:
            names_empresas_2019.remove(name1)
for name in names_empresas_2015:
    for name1 in names_empresas_2019:
        if name1 == name:
            names_empresas_2019.remove(name1)
for name in names_empresas_2016:
    for name1 in names_empresas_2019:
```

```

        if name1 == name:
            names_empresas_2019.remove(name1)
for name in names_empresas_2017:
    for name1 in names_empresas_2019:
        if name1 == name:
            names_empresas_2019.remove(name1)
for name in names_empresas_2018:
    for name1 in names_empresas_2019:
        if name1 == name:
            names_empresas_2019.remove(name1)

print("Após comparação")
print(names_empresas_2019)
print(len(names_empresas_2019))

```

```

['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',
'TOTS3', 'VALE3', 'VIVT3']
['AHEB3', 'AHEB5', 'AHEB6', 'ALUP11', 'ALUP3', 'ALUP4', 'AMER3', 'ARZZ3',
'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3',
'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3',
'BOBR4', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4',
'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA4', 'CBEE3', 'CCRO3', 'CEBR3', 'CEBR5',
'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',
'CEPE3', 'CEPE5', 'CEPE6', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',
'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',
'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSR3', 'CSR5', 'CSR6',
'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CYRE3', 'DEXP3',
'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXCO3', 'EALT3', 'EALT4',
'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4',
'ENAT3', 'ENBR3', 'ENE3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4',
'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6',
'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4',
'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3',
'FRAS4', 'FRIO3', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'GEP3', 'GEP4', 'GFSA3',
'HAGA4', 'HBOR3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'INEP4',
'IVPR3B', 'IVPR4B', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3',
'KEPL3', 'KEPL4', 'KLBN3', 'LEVE3', 'LIGT3', 'LOGN3', 'LREN3', 'LTEL3B',
'LUXM3', 'LUXM4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',
'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',
'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO5', 'NEOE3', 'NORD3', 'NRTQ3',
'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3', 'OIBR4', 'OPGM3B',
'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',

```


'PDT3', 'PFRM3', 'PLAS3', 'PMAM3', 'PNVL3', 'POM03', 'POS13', 'PPAR3', 'PPAR4',
 'PRI03', 'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QVQP3B', 'RADL3',
 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3',
 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',
 'SBSP3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03',
 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'SUZB3', 'SYNE3',
 'TAE11', 'TAE3', 'TAE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',
 'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4',
 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',
 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',
 'USIM6', 'VIA11', 'VIA3', 'VIA4', 'VIVR3', 'VIVT4', 'VLID3', 'VSPT3',
 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B',
 'YBRA4B', 'YDUQ3']
 ['ABEV3', 'ANIM3', 'CVCB3', 'IGSN3', 'INEP3', 'QUSW3', 'SEER3']
 ['DMM03', 'LLIS3']
 ['MEAL3', 'OFS3']
 ['AALR3', 'BRQB3', 'CNSY3', 'CTCA3', 'MOVI3']
 ['AZUL3', 'AZUL4', 'CAML3', 'CRFB3', 'INNT3', 'PARD3', 'PRNR3', 'VBBR3']
 ['BLAU3', 'FLEX3', 'HAPV3', 'HAPV99', 'PTCA11', 'PTCA3', 'SMFT13', 'ZAMP3']
 ['AALR3', 'ABEV3', 'AFLT3', 'AGRO3', 'AHEB3', 'AHEB5', 'AHEB6', 'ALPA3',
 'ALPA4', 'ALUP11', 'ALUP3', 'ALUP4', 'AMAR3', 'AMER3', 'ANIM3', 'APT13',
 'APT14', 'ARZZ3', 'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'AZUL3', 'AZUL4', 'BAHI3',
 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BBML3', 'BDLL3', 'BDLL4', 'BEEF3',
 'BETP3B', 'BIOM3', 'BLAU3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3', 'BOBR4',
 'BRAP3', 'BRAP4', 'BRAP99', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'BRQB3',
 'CABI3B', 'CALI3', 'CALI4', 'CAMB3', 'CAMB4', 'CAML3', 'CASN3', 'CASN4',
 'CATA3', 'CATA4', 'CBEE3', 'CCRO3', 'CEAB3', 'CEBR3', 'CEBR5', 'CEBR6', 'CEDO3',
 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3', 'CEPE3', 'CEPE5',
 'CEPE6', 'CGAS3', 'CGAS5', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
 'CMSA3', 'CMSA4', 'CNSY3', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3',
 'CPLE11', 'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRFB3', 'CRPG3',
 'CRPG5', 'CRPG6', 'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3',
 'CSRN5', 'CSRN6', 'CTCA3', 'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4',
 'CTSA8', 'CVCB3', 'CYRE3', 'DASA3', 'DEXP3', 'DEXP4', 'DIRR3', 'DMM03', 'DOHL3',
 'DOHL4', 'DTCY3', 'DTCY4', 'DXCO3', 'EALT3', 'EALT4', 'ECOR3', 'EGIE3', 'EKTR3',
 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4', 'EMBR3', 'ENAT3', 'ENBR3',
 'ENE3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4', 'EPAR3', 'EPAR4',
 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6', 'EQPA7', 'EQTL11',
 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4', 'EVEN3', 'EZTC3', 'FESA3',
 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLEX3', 'FLRY3', 'FRAS3', 'FRAS4', 'FRI03',
 'FRRN3B', 'FRRN5B', 'FRRN6B', 'FRTA3', 'GEP3', 'GEP4', 'GFSA3', 'GGBR3',
 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3', 'GUAR3', 'HAGA3',
 'HAGA4', 'HAPV3', 'HAPV99', 'HBOR3', 'HBSA3', 'HETA3', 'HETA4', 'HOOT3',
 'HOOT4', 'HYPE3', 'IGSN3', 'INEP3', 'IVPR3B', 'IVPR4B', 'JBSS3', 'JFEN3',
 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3', 'KEPL3', 'KEPL4', 'KLBN11',
 'KLBN3', 'KLBN4', 'LEVE3', 'LIGT3', 'LIPR3', 'LLIS3', 'LOGN3', 'LREN3',
 'LTEL3B', 'LTEL5B', 'LTLA3B', 'LUXM3', 'LUXM4', 'MAPT3', 'MAPT4', 'MDNE3',
 'MEAL3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4', 'MMXM3', 'MNDL3',

```
'MNPR3', 'MOVI3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3', 'MSPA3',
'MSPA4', 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO3', 'NEMO5', 'NEMO6',
'NEOE3', 'NORD3', 'NRTQ3', 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OFSA3',
'OIBR3', 'OIBR4', 'OPGM3B', 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4',
'PCAR3', 'PCAR99', 'PDGR3', 'PDT3', 'PETR3', 'PETR4', 'PFRM3', 'PGMN3',
'PLAS3', 'PMAM3', 'PNVL3', 'POMO3', 'POMO4', 'POSI3', 'PPAR3', 'PPAR4', 'PRIO3',
'PRMN3B', 'PRPT3B', 'PTBL3', 'PTCA11', 'PTCA3', 'PTNT3', 'PTNT4', 'QUAL3',
'QUSW3', 'QVQP3B', 'RADL3', 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4',
'RCSL3', 'RCSL4', 'RDNI3', 'REDE3', 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4',
'ROMI3', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4', 'SAPR11', 'SAPR3', 'SAPR4',
'SBFG3', 'SBSP3', 'SEER3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3',
'SLED4', 'SMFT13', 'SMFT3', 'SMT03', 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3',
'SOND5', 'SOND6', 'SQIA3', 'STBP3', 'STKF3', 'SUZB3', 'SYNE3', 'TAE11',
'TAE3', 'TAE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3', 'TECN3', 'TEKA3',
'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4', 'TOTS3', 'TPIS3',
'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4', 'UCAS3',
'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5', 'USIM6',
'VALE3', 'VAMO3', 'VIAA11', 'VIAA3', 'VIAA4', 'VIVR3', 'VIVT3', 'VIVT4',
'VLID3', 'VSPT3', 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4',
'YBRA3B', 'YBRA4B', 'YDUQ3', 'ZAMP3']
```

407

Após comparação

```
['BBML3', 'CEAB3', 'LTLA3B', 'SBFG3', 'SMFT3', 'VAMO3']
```

6

```
[ ]: #Quantidade de relatorios a partir de 2019
#realizar pesquisa nas empresas de 2019
lista_de_empresas_2019 = []

for name_emp in names_empresas_2019:
    for empresa in lista_caminho:
        if empresa == name_emp:
            path_caminho_pdf_2019 = 'C:
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa
            relatorio_pdf_2019 = os.listdir(path_caminho_pdf_2019)
            att = []
            for lista_pdf_2019 in relatorio_pdf_2019:
                #print(lista_pdf)
                att.append(lista_pdf_2019)
            lista_de_empresas_2019.append(att)
#quantidade total de relatorios baixados
print(lista_de_empresas_2019)
print(len(lista_de_empresas_2019))
```

```
[['BBML3_2019.pdf', 'BBML3_2021.pdf'], ['CEAB3_2019.pdf', 'CEAB3_2020.pdf',
'CEAB3_2021.pdf'], ['LTLA3B_2019.pdf', 'LTLA3B_2020.pdf'], ['SBFG3_2019.pdf',
'SBFG3_2020.pdf', 'SBFG3_2021.pdf'], ['SMFT3_2019.pdf', 'SMFT3_2020.pdf',
'SMFT3_2021.pdf'], ['VAMO3_2019.pdf', 'VAMO3_2020.pdf', 'VAMO3_2021.pdf']]
```

```
[ ]: #quantidade de relatórios em cada empresa
tam_emp = np.zeros(6, dtype = int)
i = 0
empresas_19r = []
for pesquisa in lista_de_empresas_2019:
    #print(pesquisa)
    for k in pesquisa:
        #print(k)
        tam_emp[i] = tam_emp[i] + 1
    i = i + 1
print(tam_emp)
print("Empresa com menor quantidade de relatorios: ", min(tam_emp))
print(len(tam_emp))
```

```
[2 3 2 3 3 3]
```

```
Empresa com menor quantidade de relatorios: 2
```

```
6
```

```
[ ]: #empresas com 8 relatorios
quantidade_relatorios = 3
empresas_2019r = []
for i in range(quantidade_relatorios, 1, -1):
    name = []
    #print(name)
    for pesquisa in lista_de_empresas_2019:
        #print(pesquisa)
        #print(len(pesquisa))
        if i == len(pesquisa):
            c = pesquisa[0].split("_")
            name.append(c[0])
    print("Empresas com ", i, "relatórios")
    print(name)
    empresas_2019r.append(name)
#print(empresas_2011r)

grafico = []
for i in empresas_2019r:
    #print(len(i))
    grafico.append(len(i))
print(grafico)
print(sum(grafico))
```

```
Empresas com 3 relatórios
```

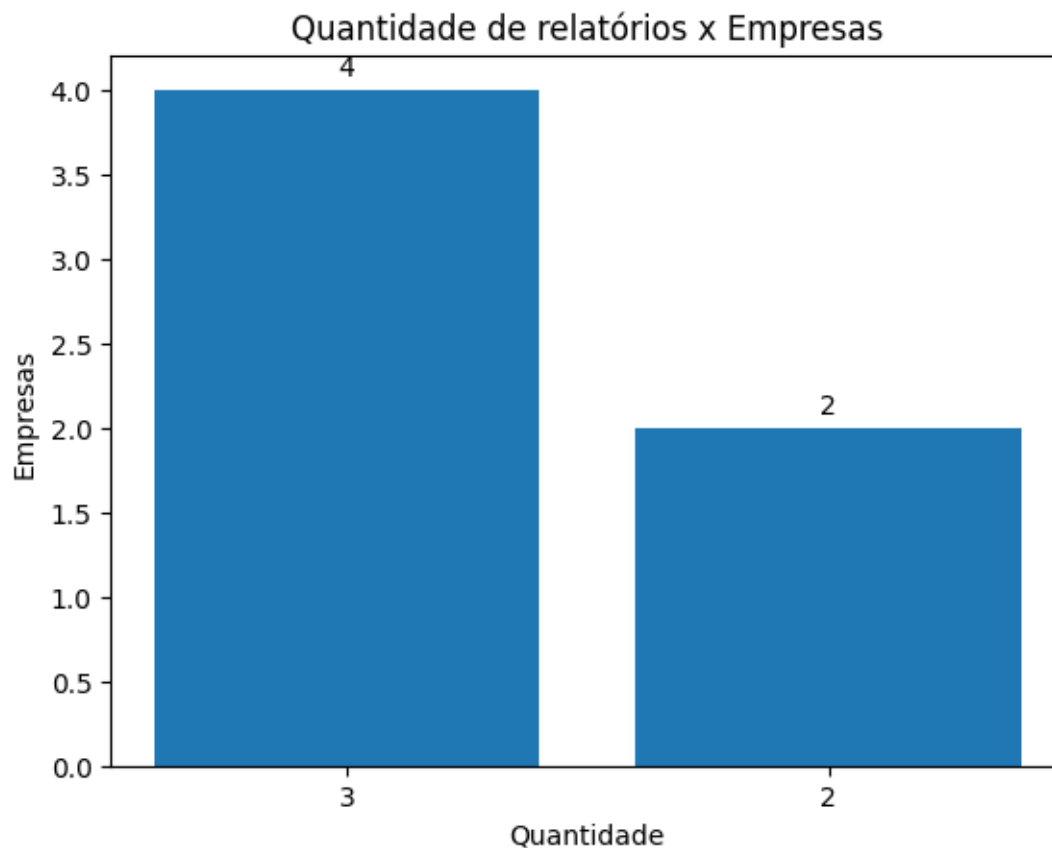
```
['CEAB3', 'SBFG3', 'SMFT3', 'VAMO3']
```

```
Empresas com 2 relatórios
```

```
['BBML3', 'LTLA3B']
```

```
[4, 2]
```

```
[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ['3', '2']
rect1 = ax.bar(X, grafico)
ax.set_ylabel('Empresas')
ax.set_title("Quantidade de relatórios x Empresas")
ax.set_xlabel('Quantidade')
ax.bar_label(rect1, padding = 3)
plt.show()
```



```
[ ]: lista_de_empresas_2020 = []
for name in lista:
    c = name.split("_")
    c1 = c[1].split(".")
    if c1[0] == "2020":
        lista_de_empresas_2020.append(name)
print(lista_de_empresas_2020)
print(len(lista_de_empresas_2020))
```

['AALR3_2020.pdf', 'ABEV3_2020.pdf', 'AERI3_2020.pdf', 'AFLT3_2020.pdf',
 'AGRO3_2020.pdf', 'AGXY3_2020.pdf', 'AHEB3_2020.pdf', 'AHEB5_2020.pdf',
 'AHEB6_2020.pdf', 'ALLD3_2020.pdf', 'ALPA3_2020.pdf', 'ALPA4_2020.pdf',
 'ALPK3_2020.pdf', 'ALUP11_2020.pdf', 'ALUP3_2020.pdf', 'ALUP4_2020.pdf',
 'AMAR3_2020.pdf', 'AMBP3_2020.pdf', 'AMER3_2020.pdf', 'APTI3_2020.pdf',
 'APTI4_2020.pdf', 'ARZZ3_2020.pdf', 'ATMP3_2020.pdf', 'ATOM3_2020.pdf',
 'AURA32_2020.pdf', 'AURA33_2020.pdf', 'AVLL3_2020.pdf', 'AZE3_2020.pdf',
 'AZE4_2020.pdf', 'AZUL3_2020.pdf', 'BAHI3_2020.pdf', 'BALM3_2020.pdf',
 'BALM4_2020.pdf', 'BAUH3_2020.pdf', 'BAUH4_2020.pdf', 'BDLL3_2020.pdf',
 'BDLL4_2020.pdf', 'BEEF3_2020.pdf', 'BETP3B_2020.pdf', 'BIOM3_2020.pdf',
 'BLAU3_2020.pdf', 'BLUT3_2020.pdf', 'BLUT4_2020.pdf', 'BMKS3_2020.pdf',
 'BOBR3_2020.pdf', 'BOBR4_2020.pdf', 'BRAP3_2020.pdf', 'BRAP4_2020.pdf',
 'BRAP99_2020.pdf', 'BRFS3_2020.pdf', 'BRKM3_2020.pdf', 'BRKM5_2020.pdf',
 'BRKM6_2020.pdf', 'BRQB3_2020.pdf', 'CABI3B_2020.pdf', 'CALI3_2020.pdf',
 'CALI4_2020.pdf', 'CAMB3_2020.pdf', 'CAMB4_2020.pdf', 'CAML3_2020.pdf',
 'CASH3_2020.pdf', 'CASN3_2020.pdf', 'CASN4_2020.pdf', 'CATA3_2020.pdf',
 'CATA4_2020.pdf', 'CBEE3_2020.pdf', 'CCR03_2020.pdf', 'CEAB3_2020.pdf',
 'CEBR3_2020.pdf', 'CEBR5_2020.pdf', 'CEBR6_2020.pdf', 'CED03_2020.pdf',
 'CED04_2020.pdf', 'CEEB3_2020.pdf', 'CEEB5_2020.pdf', 'CEEB6_2020.pdf',
 'CEED3_2020.pdf', 'CEED4_2020.pdf', 'CEGR3_2020.pdf', 'CEPE3_2020.pdf',
 'CEPE5_2020.pdf', 'CEPE6_2020.pdf', 'CGAS3_2020.pdf', 'CGAS5_2020.pdf',
 'CGRA3_2020.pdf', 'CGRA4_2020.pdf', 'CLSC3_2020.pdf', 'CLSC4_2020.pdf',
 'CMIG3_2020.pdf', 'CMIG4_2020.pdf', 'CMSA3_2020.pdf', 'CMSA4_2020.pdf',
 'CNSY3_2020.pdf', 'COCE3_2020.pdf', 'COCE5_2020.pdf', 'COCE6_2020.pdf',
 'COGN3_2020.pdf', 'CPFE3_2020.pdf', 'CPLE11_2020.pdf', 'CPLE3_2020.pdf',
 'CPLE5_2020.pdf', 'CPLE6_2020.pdf', 'CPRE3_2020.pdf', 'CRDE3_2020.pdf',
 'CRFB3_2020.pdf', 'CRPG3_2020.pdf', 'CRPG5_2020.pdf', 'CRPG6_2020.pdf',
 'CRTE3B_2020.pdf', 'CRTE5B_2020.pdf', 'CSAN3_2020.pdf', 'CSED3_2020.pdf',
 'CSMG3_2020.pdf', 'CSNA3_2020.pdf', 'CSR3_2020.pdf', 'CSR5_2020.pdf',
 'CSR6_2020.pdf', 'CTCA3_2020.pdf', 'CTKA3_2020.pdf', 'CTKA4_2020.pdf',
 'CTNM3_2020.pdf', 'CTNM4_2020.pdf', 'CTSA3_2020.pdf', 'CTSA4_2020.pdf',
 'CTSA8_2020.pdf', 'CURY3_2020.pdf', 'CVCB3_2020.pdf', 'CYRE3_2020.pdf',
 'DASA3_2020.pdf', 'DEXP3_2020.pdf', 'DEXP4_2020.pdf', 'DIRR3_2020.pdf',
 'DMM03_2020.pdf', 'DMVF3_2020.pdf', 'DOHL3_2020.pdf', 'DOHL4_2020.pdf',
 'DTCY3_2020.pdf', 'DTCY4_2020.pdf', 'DXC03_2020.pdf', 'EALT3_2020.pdf',
 'EALT4_2020.pdf', 'ECOR3_2020.pdf', 'EGIE3_2020.pdf', 'EKTR3_2020.pdf',
 'EKTR4_2020.pdf', 'ELET3_2020.pdf', 'ELET5_2020.pdf', 'ELET6_2020.pdf',
 'ELMD3_2020.pdf', 'EMAE3_2020.pdf', 'EMAE4_2020.pdf', 'EMBR3_2020.pdf',
 'ENAT3_2020.pdf', 'ENBR3_2020.pdf', 'ENEV3_2020.pdf', 'ENGI11_2020.pdf',
 'ENGI3_2020.pdf', 'ENGI4_2020.pdf', 'ENJU3_2020.pdf', 'ENMT3_2020.pdf',
 'ENMT4_2020.pdf', 'EPAR3_2020.pdf', 'EPAR4_2020.pdf', 'EQMA3B_2020.pdf',
 'EQMA5B_2020.pdf', 'EQMA6B_2020.pdf', 'EQPA3_2020.pdf', 'EQPA5_2020.pdf',
 'EQPA6_2020.pdf', 'EQPA7_2020.pdf', 'EQTL11_2020.pdf', 'EQTL3_2020.pdf',
 'ESPA3_2020.pdf', 'ESTR3_2020.pdf', 'ESTR4_2020.pdf', 'ETER3_2020.pdf',
 'EUCA3_2020.pdf', 'EUCA4_2020.pdf', 'EVEN3_2020.pdf', 'EZTC3_2020.pdf',
 'FESA3_2020.pdf', 'FESA4_2020.pdf', 'FHER3_2020.pdf', 'FIGE3_2020.pdf',
 'FIGE4_2020.pdf', 'FLEX3_2020.pdf', 'FLRY3_2020.pdf', 'FRAS3_2020.pdf',
 'FRAS4_2020.pdf', 'FRI03_2020.pdf', 'FRRN3B_2020.pdf', 'FRRN5B_2020.pdf',

'FRRN6B_2020.pdf', 'FRTA3_2020.pdf', 'GEPA3_2020.pdf', 'GEPA4_2020.pdf',
 'GFS3_2020.pdf', 'GGBR3_2020.pdf', 'GGBR4_2020.pdf', 'GMAT3_2020.pdf',
 'GOAU3_2020.pdf', 'GOAU4_2020.pdf', 'GOLL3_2020.pdf', 'GOLL4_2020.pdf',
 'GPAR3_2020.pdf', 'GRND3_2020.pdf', 'GUAR3_2020.pdf', 'HAGA3_2020.pdf',
 'HAGA4_2020.pdf', 'HAPV3_2020.pdf', 'HAPV99_2020.pdf', 'HBOR3_2020.pdf',
 'HBSA3_2020.pdf', 'HETA3_2020.pdf', 'HETA4_2020.pdf', 'HOOT3_2020.pdf',
 'HOOT4_2020.pdf', 'HYPE3_2020.pdf', 'IGSN3_2020.pdf', 'INEP4_2020.pdf',
 'INNT3_2020.pdf', 'INTB3_2020.pdf', 'IVPR3B_2020.pdf', 'IVPR4B_2020.pdf',
 'JBSS3_2020.pdf', 'JFEN3_2020.pdf', 'JHSF3_2020.pdf', 'JOPA3_2020.pdf',
 'JOPA4_2020.pdf', 'JSLG11_2020.pdf', 'JSLG3_2020.pdf', 'KEPL3_2020.pdf',
 'KEPL4_2020.pdf', 'KLBN11_2020.pdf', 'KLBN3_2020.pdf', 'KLBN4_2020.pdf',
 'LAVV3_2020.pdf', 'LEVE3_2020.pdf', 'LIGT3_2020.pdf', 'LIPR3_2020.pdf',
 'LLBI3_2020.pdf', 'LLIS3_2020.pdf', 'LMED3_2020.pdf', 'LOGN3_2020.pdf',
 'LREN3_2020.pdf', 'LTEL3B_2020.pdf', 'LTEL5B_2020.pdf', 'LTLA3B_2020.pdf',
 'LUXM3_2020.pdf', 'LUXM4_2020.pdf', 'LWSA3_2020.pdf', 'MAPT3_2020.pdf',
 'MAPT4_2020.pdf', 'MDNE3_2020.pdf', 'MEAL3_2020.pdf', 'MELK3_2020.pdf',
 'MGEL3_2020.pdf', 'MGEL4_2020.pdf', 'MGLU3_2020.pdf', 'MILS3_2020.pdf',
 'MMAQ3_2020.pdf', 'MMAQ4_2020.pdf', 'MMXM3_2020.pdf', 'MNDL3_2020.pdf',
 'MNPR3_2020.pdf', 'MOVI3_2020.pdf', 'MRFG3_2020.pdf', 'MRSA3B_2020.pdf',
 'MRSA5B_2020.pdf', 'MRSA6B_2020.pdf', 'MRVE3_2020.pdf', 'MSPA3_2020.pdf',
 'MSPA4_2020.pdf', 'MTRE3_2020.pdf', 'MTSA3_2020.pdf', 'MTSA4_2020.pdf',
 'MWET3_2020.pdf', 'MWET4_2020.pdf', 'MYPK3_2020.pdf', 'NEMO3_2020.pdf',
 'NEMO5_2020.pdf', 'NEMO6_2020.pdf', 'NEOE3_2020.pdf', 'NGRD3_2020.pdf',
 'NORD3_2020.pdf', 'NRTQ3_2020.pdf', 'NRTQ4_2020.pdf', 'NTC03_2020.pdf',
 'NUTR3_2020.pdf', 'ODER3_2020.pdf', 'ODER4_2020.pdf', 'ODPV3_2020.pdf',
 'OFS3_2020.pdf', 'OIBR3_2020.pdf', 'OIBR4_2020.pdf', 'OPGM3B_2020.pdf',
 'OPSE3B_2020.pdf', 'OPTS3B_2020.pdf', 'ORVR3_2020.pdf', 'OSXB3_2020.pdf',
 'PASS3_2020.pdf', 'PASS5_2020.pdf', 'PASS6_2020.pdf', 'PATI3_2020.pdf',
 'PATI4_2020.pdf', 'PCAR3_2020.pdf', 'PCAR99_2020.pdf', 'PDGR3_2020.pdf',
 'PDTC3_2020.pdf', 'PETR3_2020.pdf', 'PETR4_2020.pdf', 'PFRM3_2020.pdf',
 'PGMN3_2020.pdf', 'PLAS3_2020.pdf', 'PMAM3_2020.pdf', 'PNVL3_2020.pdf',
 'POMO3_2020.pdf', 'POMO4_2020.pdf', 'POSI3_2020.pdf', 'PPAR3_2020.pdf',
 'PPAR4_2020.pdf', 'PRI03_2020.pdf', 'PRMN3B_2020.pdf', 'PRNR3_2020.pdf',
 'PRPT3B_2020.pdf', 'PTBL3_2020.pdf', 'PTCA11_2020.pdf', 'PTCA3_2020.pdf',
 'PTNT3_2020.pdf', 'PTNT4_2020.pdf', 'QUAL3_2020.pdf', 'QUSW3_2020.pdf',
 'QVQP3B_2020.pdf', 'RADL3_2020.pdf', 'RAIL3_2020.pdf', 'RANI3_2020.pdf',
 'RANI4_2020.pdf', 'RAPT3_2020.pdf', 'RAPT4_2020.pdf', 'RCSL3_2020.pdf',
 'RCSL4_2020.pdf', 'RDNI3_2020.pdf', 'RDOR3_2020.pdf', 'REDE3_2020.pdf',
 'RENT3_2020.pdf', 'RNEW11_2020.pdf', 'RNEW3_2020.pdf', 'RNEW4_2020.pdf',
 'ROMI3_2020.pdf', 'RPMG3_2020.pdf', 'RRRP3_2020.pdf', 'RSID3_2020.pdf',
 'RSUL3_2020.pdf', 'RSUL4_2020.pdf', 'SAPR11_2020.pdf', 'SAPR3_2020.pdf',
 'SAPR4_2020.pdf', 'SBFG3_2020.pdf', 'SBSP3_2020.pdf', 'SEQL3_2020.pdf',
 'SGPS3_2020.pdf', 'SHOW3_2020.pdf', 'SHUL3_2020.pdf', 'SHUL4_2020.pdf',
 'SLCE3_2020.pdf', 'SLED3_2020.pdf', 'SLED4_2020.pdf', 'SMFT13_2020.pdf',
 'SMFT3_2020.pdf', 'SMT03_2020.pdf', 'SNSY3_2020.pdf', 'SNSY5_2020.pdf',
 'SNSY6_2020.pdf', 'SOJA3_2020.pdf', 'SOMA3_2020.pdf', 'SOND3_2020.pdf',
 'SOND5_2020.pdf', 'SOND6_2020.pdf', 'SQIA3_2020.pdf', 'STBP3_2020.pdf',
 'STKF3_2020.pdf', 'SUZB3_2020.pdf', 'SYNE3_2020.pdf', 'TAEE11_2020.pdf',

```
'TAE3_2020.pdf', 'TAE4_2020.pdf', 'TAS3_2020.pdf', 'TAS4_2020.pdf',
'TCN3_2020.pdf', 'TCN4_2020.pdf', 'TCS3_2020.pdf', 'TECN3_2020.pdf',
'TEK3_2020.pdf', 'TEK4_2020.pdf', 'TELB3_2020.pdf', 'TELB4_2020.pdf',
'TEND3_2020.pdf', 'TFC04_2020.pdf', 'TGMA3_2020.pdf', 'TIMS3_2020.pdf',
'TKN3_2020.pdf', 'TKN04_2020.pdf', 'TOTS3_2020.pdf', 'TPIS3_2020.pdf',
'TRIS3_2020.pdf', 'TRPL3_2020.pdf', 'TRPL4_2020.pdf', 'TUPY3_2020.pdf',
'TRX11_2020.pdf', 'TRX3_2020.pdf', 'TRX4_2020.pdf', 'UCAS3_2020.pdf',
'UGPA3_2020.pdf', 'UNIP3_2020.pdf', 'UNIP5_2020.pdf', 'UNIP6_2020.pdf',
'UPKP3B_2020.pdf', 'USIM3_2020.pdf', 'USIM5_2020.pdf', 'USIM6_2020.pdf',
'VALE3_2020.pdf', 'VAM03_2020.pdf', 'VBBR3_2020.pdf', 'VIIA11_2020.pdf',
'VIIA3_2020.pdf', 'VIIA4_2020.pdf', 'VITT3_2020.pdf', 'VIVA3_2020.pdf',
'VIVR3_2020.pdf', 'VIVT3_2020.pdf', 'VIVT4_2020.pdf', 'VLID3_2020.pdf',
'VSPT3_2020.pdf', 'VSPT4_2020.pdf', 'VULC3_2020.pdf', 'WEGE3_2020.pdf',
'WHRL3_2020.pdf', 'WHRL4_2020.pdf', 'WLMM3_2020.pdf', 'WLMM4_2020.pdf',
'YBRA3B_2020.pdf', 'YBRA4B_2020.pdf', 'YDUQ3_2020.pdf', 'ZAMP3_2020.pdf']
```

444

```
[ ]: names_empresas_2020 = []
print(names_empresas_2011)
print(names_empresas_2012)
print(names_empresas_2013)
print(names_empresas_2014)
print(names_empresas_2015)
print(names_empresas_2016)
print(names_empresas_2017)
print(names_empresas_2018)
print(names_empresas_2019)
for name in lista_de_empresas_2020:
    c = name.split("_")
    names_empresas_2020.append(c[0])
print(names_empresas_2020)
print(len(names_empresas_2020))

for name in names_empresas_2011:
    for name1 in names_empresas_2020:
        if name1 == name:
            names_empresas_2020.remove(name1)
for name in names_empresas_2012:
    for name1 in names_empresas_2020:
        if name1 == name:
            names_empresas_2020.remove(name1)
for name in names_empresas_2013:
    for name1 in names_empresas_2020:
        if name1 == name:
            names_empresas_2020.remove(name1)
for name in names_empresas_2014:
    for name1 in names_empresas_2020:
```

```

        if name1 == name:
            names_empresas_2020.remove(name1)
for name in names_empresas_2015:
    for name1 in names_empresas_2020:
        if name1 == name:
            names_empresas_2020.remove(name1)
for name in names_empresas_2016:
    for name1 in names_empresas_2020:
        if name1 == name:
            names_empresas_2020.remove(name1)
for name in names_empresas_2017:
    for name1 in names_empresas_2020:
        if name1 == name:
            names_empresas_2020.remove(name1)
for name in names_empresas_2018:
    for name1 in names_empresas_2020:
        if name1 == name:
            names_empresas_2020.remove(name1)
for name in names_empresas_2019:
    for name1 in names_empresas_2020:
        if name1 == name:
            names_empresas_2020.remove(name1)

print("Após comparação")
print(names_empresas_2020)
print(len(names_empresas_2020))

```

```

['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',
'TOTS3', 'VALE3', 'VIVT3']
['AHEB3', 'AHEB5', 'AHEB6', 'ALUP11', 'ALUP3', 'ALUP4', 'AMER3', 'ARZZ3',
'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3',
'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3',
'BOBR4', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4',
'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA4', 'CBEE3', 'CCRO3', 'CEBR3', 'CEBR5',
'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',
'CEPE3', 'CEPE5', 'CEPE6', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',
'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',
'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6',
'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CYRE3', 'DEXP3',
'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXCO3', 'EALT3', 'EALT4',
'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4',
'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4',

```


'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6',
 'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4',
 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3',
 'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'GEPA3', 'GEPA4', 'GFSA3',
 'HAGA4', 'HBOR3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'INEP4',
 'IVPR3B', 'IVPR4B', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3',
 'KEPL3', 'KEPL4', 'KLB3', 'LEVE3', 'LIGT3', 'LOGN3', 'LREN3', 'LTEL3B',
 'LUXM3', 'LUXM4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',
 'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',
 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO5', 'NEOE3', 'NORD3', 'NRTQ3',
 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3', 'OIBR4', 'OPGM3B',
 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',
 'PDT3', 'PFRM3', 'PLAS3', 'PMAM3', 'PNVL3', 'POMO3', 'POSI3', 'PPAR3', 'PPAR4',
 'PRI03', 'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QVQP3B', 'RADL3',
 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3',
 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',
 'SBSP3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03',
 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'SUZB3', 'SYNE3',
 'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',
 'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4',
 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',
 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',
 'USIM6', 'VIAA11', 'VIAA3', 'VIAA4', 'VIVR3', 'VIVT4', 'VLID3', 'VSPT3',
 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B',
 'YBRA4B', 'YDUQ3']
 ['ABEV3', 'ANIM3', 'CVCB3', 'IGSN3', 'INEP3', 'QUSW3', 'SEER3']
 ['DMMO3', 'LLIS3']
 ['MEAL3', 'OFSA3']
 ['AALR3', 'BRQB3', 'CNSY3', 'CTCA3', 'MOVI3']
 ['AZUL3', 'AZUL4', 'CAML3', 'CRFB3', 'INNT3', 'PARD3', 'PRNR3', 'VBBR3']
 ['BLAU3', 'FLEX3', 'HAPV3', 'HAPV99', 'PTCA11', 'PTCA3', 'SMFT13', 'ZAMP3']
 ['BBML3', 'CEAB3', 'LTLA3B', 'SBFG3', 'SMFT3', 'VAMO3']
 ['AALR3', 'ABEV3', 'AERI3', 'AFLT3', 'AGRO3', 'AGXY3', 'AHEB3', 'AHEB5',
 'AHEB6', 'ALLD3', 'ALPA3', 'ALPA4', 'ALPK3', 'ALUP11', 'ALUP3', 'ALUP4',
 'AMAR3', 'AMBP3', 'AMER3', 'APTI3', 'APTI4', 'ARZZ3', 'ATMP3', 'ATOM3',
 'AURA32', 'AURA33', 'AVLL3', 'AZE3', 'AZE4', 'AZUL3', 'BAHI3', 'BALM3',
 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3', 'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3',
 'BLAU3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3', 'BOBR4', 'BRAP3', 'BRAP4',
 'BRAP99', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'BRQB3', 'CABI3B', 'CALI3',
 'CALI4', 'CAMB3', 'CAMB4', 'CAML3', 'CASH3', 'CASN3', 'CASN4', 'CATA3', 'CATA4',
 'CBEE3', 'CCRO3', 'CEAB3', 'CEBR3', 'CEBR5', 'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3',
 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3', 'CEPE3', 'CEPE5', 'CEPE6', 'CGAS3',
 'CGAS5', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4', 'CMSA3', 'CMSA4',
 'CNSY3', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11', 'CPLE3',
 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRFB3', 'CRPG3', 'CRPG5', 'CRPG6',
 'CRTE3B', 'CRTE5B', 'CSAN3', 'CSED3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5',
 'CSRN6', 'CTCA3', 'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8',
 'CURY3', 'CVCB3', 'CYRE3', 'DASA3', 'DEXP3', 'DEXP4', 'DIRR3', 'DMMO3', 'DMVF3',

'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXC03', 'EALT3', 'EALT4', 'ECOR3', 'EGIE3',
 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'ELMD3', 'EMAE3', 'EMAE4', 'EMBR3',
 'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENJU3', 'ENMT3',
 'ENMT4', 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5',
 'EQPA6', 'EQPA7', 'EQTL11', 'EQTL3', 'ESPA3', 'ESTR3', 'ESTR4', 'ETER3',
 'EUCA3', 'EUCA4', 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4',
 'FLEX3', 'FLRY3', 'FRAS3', 'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B',
 'FRTA3', 'GEP3', 'GEP4', 'GFSA3', 'GGBR3', 'GGBR4', 'GMAT3', 'GOAU3', 'GOAU4',
 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3', 'GUAR3', 'HAGA3', 'HAGA4', 'HAPV3',
 'HAPV99', 'HBOR3', 'HBSA3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3',
 'IGSN3', 'INEP4', 'INNT3', 'INTB3', 'IVPR3B', 'IVPR4B', 'JBSS3', 'JFEN3',
 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3', 'KEPL3', 'KEPL4', 'KLBN11',
 'KLBN3', 'KLBN4', 'LAVV3', 'LEVE3', 'LIGT3', 'LIPR3', 'LLBI3', 'LLIS3', 'LMED3',
 'LOGN3', 'LREN3', 'LTEL3B', 'LTEL5B', 'LTLA3B', 'LUXM3', 'LUXM4', 'LWSA3',
 'MAPT3', 'MAPT4', 'MDNE3', 'MEAL3', 'MELK3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3',
 'MMAQ3', 'MMAQ4', 'MMXM3', 'MNDL3', 'MNPR3', 'MOVI3', 'MRFG3', 'MRSA3B',
 'MRSA5B', 'MRSA6B', 'MRVE3', 'MSPA3', 'MSPA4', 'MTRE3', 'MTSA3', 'MTSA4',
 'MWET3', 'MWET4', 'MYPK3', 'NEMO3', 'NEMO5', 'NEMO6', 'NEOE3', 'NGRD3', 'NORD3',
 'NRTQ3', 'NRTQ4', 'NTC03', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OFSA3', 'OIBR3',
 'OIBR4', 'OPGM3B', 'OPSE3B', 'OPTS3B', 'ORVR3', 'OSXB3', 'PASS3', 'PASS5',
 'PASS6', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3', 'PDTC3', 'PETR3',
 'PETR4', 'PFRM3', 'PGMN3', 'PLAS3', 'PMAM3', 'PNVL3', 'POM03', 'POM04', 'POSI3',
 'PPAR3', 'PPAR4', 'PRIO3', 'PRMN3B', 'PRNR3', 'PRPT3B', 'PTBL3', 'PTCA11',
 'PTCA3', 'PTNT3', 'PTNT4', 'QUAL3', 'QUSW3', 'QVQP3B', 'RADL3', 'RAIL3',
 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'RDOR3', 'REDE3',
 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'ROMI3', 'RPMG3', 'RRRP3', 'RSID3',
 'RSUL3', 'RSUL4', 'SAPR11', 'SAPR3', 'SAPR4', 'SBFG3', 'SBSP3', 'SEQL3',
 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMFT13',
 'SMFT3', 'SMT03', 'SNSY3', 'SNSY5', 'SNSY6', 'SOJA3', 'SOMA3', 'SOND3', 'SOND5',
 'SOND6', 'SQIA3', 'STBP3', 'STKF3', 'SUZB3', 'SYNE3', 'TAEE11', 'TAEE3',
 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3', 'TECN3', 'TEKA3', 'TEKA4',
 'TELB3', 'TELB4', 'TEND3', 'TFC04', 'TGMA3', 'TIMS3', 'TKNO3', 'TKNO4', 'TOTS3',
 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',
 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',
 'USIM6', 'VALE3', 'VAMO3', 'VBBR3', 'VIAA11', 'VIAA3', 'VIAA4', 'VITT3',
 'VIVA3', 'VIVR3', 'VIVT3', 'VIVT4', 'VLID3', 'VSPT3', 'VSPT4', 'VULC3', 'WEGE3',
 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B', 'YBRA4B', 'YDUQ3', 'ZAMP3']

444

Após comparação

['AERI3', 'AGXY3', 'ALLD3', 'ALPK3', 'AMBP3', 'AURA32', 'AURA33', 'AVLL3',
 'CASH3', 'CSED3', 'CURY3', 'DMVF3', 'ELMD3', 'ENJU3', 'ESPA3', 'GMAT3', 'INTB3',
 'LAVV3', 'LLBI3', 'LMED3', 'LWSA3', 'MELK3', 'MTRE3', 'NGRD3', 'NTC03', 'ORVR3',
 'PASS3', 'PASS5', 'PASS6', 'RDOR3', 'RRRP3', 'SEQL3', 'SOJA3', 'SOMA3', 'TFC04',
 'TIMS3', 'VITT3', 'VIVA3']

38

```
[ ]: #Quantidade de relatorios a partir de 2020
#realizar pesquisa nas empresas de 2020
lista_de_empresas_2020 = []

for name_emp in names_empresas_2020:
    for empresa in lista_caminho:
        if empresa == name_emp:
            path_caminho_pdf_2020 = 'C:
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa
            relatorio_pdf_2020 = os.listdir(path_caminho_pdf_2020)
            att = []
            for lista_pdf_2020 in relatorio_pdf_2020:
                #print(lista_pdf)
                att.append(lista_pdf_2020)
            lista_de_empresas_2020.append(att)
#quantidade total de relatorios baixados
print(lista_de_empresas_2020)
print(len(lista_de_empresas_2020))

[['AERI3_2020.pdf', 'AERI3_2021.pdf'], ['AGXY3_2020.pdf', 'AGXY3_2021.pdf'],
['ALLD3_2020.pdf', 'ALLD3_2021.pdf'], ['ALPK3_2020.pdf', 'ALPK3_2021.pdf'],
['AMBP3_2020.pdf', 'AMBP3_2021.pdf'], ['AURA32_2020.pdf', 'AURA32_2021.pdf'],
['AURA33_2020.pdf', 'AURA33_2021.pdf'], ['AVLL3_2020.pdf', 'AVLL3_2021.pdf'],
['CASH3_2020.pdf', 'CASH3_2021.pdf'], ['CSED3_2020.pdf', 'CSED3_2021.pdf'],
['CURY3_2020.pdf', 'CURY3_2021.pdf'], ['DMVF3_2020.pdf', 'DMVF3_2021.pdf'],
['ELMD3_2020.pdf', 'ELMD3_2021.pdf'], ['ENJU3_2020.pdf', 'ENJU3_2021.pdf'],
['ESPA3_2020.pdf', 'ESPA3_2021.pdf'], ['GMAT3_2020.pdf', 'GMAT3_2021.pdf'],
['INTB3_2020.pdf'], ['LAVV3_2020.pdf', 'LAVV3_2021.pdf'], ['LLBI3_2020.pdf'],
['LMED3_2020.pdf'], ['LWSA3_2020.pdf', 'LWSA3_2021.pdf'], ['MELK3_2020.pdf',
'MELK3_2021.pdf'], ['MTRE3_2020.pdf'], ['NGRD3_2020.pdf', 'NGRD3_2021.pdf'],
['NTCO3_2020.pdf', 'NTCO3_2021.pdf'], ['ORVR3_2020.pdf', 'ORVR3_2021.pdf'],
['PASS3_2020.pdf'], ['PASS5_2020.pdf', 'PASS5_2021.pdf'], ['PASS6_2020.pdf',
'PASS6_2021.pdf'], ['RDOR3_2020.pdf', 'RDOR3_2021.pdf'], ['RRRP3_2020.pdf',
'RRRP3_2021.pdf'], ['SEQL3_2020.pdf', 'SEQL3_2021.pdf'], ['SOJA3_2020.pdf',
'SOJA3_2021.pdf'], ['SOMA3_2020.pdf', 'SOMA3_2021.pdf'], ['TFCO4_2020.pdf',
'TFCO4_2021.pdf'], ['TIMS3_2020.pdf', 'TIMS3_2021.pdf'], ['VITT3_2020.pdf',
'VITT3_2021.pdf'], ['VIVA3_2020.pdf', 'VIVA3_2021.pdf']]
38
```

```
[ ]: #quantidade de relatórios em cada empresa
tam_emp = np.zeros(38, dtype = int)
i = 0
empresas_20r = []
for pesquisa in lista_de_empresas_2020:
    #print(pesquisa)
    for k in pesquisa:
        #print(k)
```

```

        tam_emp[i] = tam_emp[i] + 1
    i = i + 1
print(tam_emp)
print("Empresa com menor quantidade de relatorios: ", min(tam_emp))
print(len(tam_emp))

```

```

[2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 1 2 1 1 2 2 1 2 2 2 1 2 2 2 2 2 2 2 2 2
 2]

```

Empresa com menor quantidade de relatorios: 1

38

```

[ ]: #empresas com 8 relatorios
quantidade_relatorios = 2
empresas_2020r = []
for i in range(quantidade_relatorios, 0, -1):
    name = []
    #print(name)
    for pesquisa in lista_de_empresas_2020:
        #print(pesquisa)
        #print(len(pesquisa))
        if i == len(pesquisa):
            c = pesquisa[0].split("_")
            name.append(c[0])
    print("Empresas com ", i, "relatórios")
    print(name)
    empresas_2020r.append(name)
#print(empresas_2011r)

grafico = []
for i in empresas_2020r:
    #print(len(i))
    grafico.append(len(i))
print(grafico)
print(sum(grafico))

```

Empresas com 2 relatórios

```

['AERI3', 'AGXY3', 'ALLD3', 'ALPK3', 'AMBP3', 'AURA32', 'AURA33', 'AVLL3',
'CASH3', 'CSED3', 'CURY3', 'DMVF3', 'ELMD3', 'ENJU3', 'ESPA3', 'GMAT3', 'LAVV3',
'LSA3', 'MELK3', 'NGRD3', 'NTCO3', 'ORVR3', 'PASS5', 'PASS6', 'RDOR3', 'RRRP3',
'SEQL3', 'SOJA3', 'SOMA3', 'TFCO4', 'TIMS3', 'VITT3', 'VIVA3']

```

Empresas com 1 relatórios

```

['INTB3', 'LLBI3', 'LMED3', 'MTRE3', 'PASS3']

```

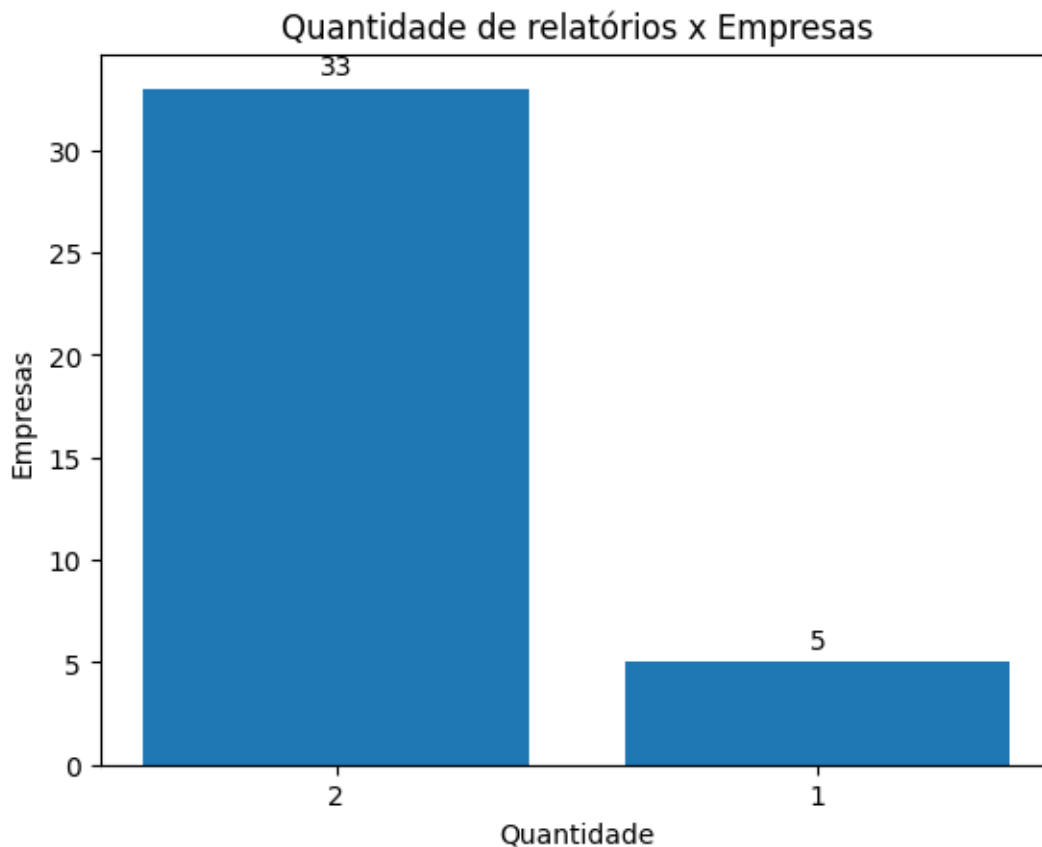
```

[33, 5]

```

38

```
[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ['2', '1']
rect1 = ax.bar(X, grafico)
ax.set_ylabel('Empresas')
ax.set_title("Quantidade de relatórios x Empresas")
ax.set_xlabel('Quantidade')
ax.bar_label(rect1, padding = 3)
plt.show()
```



```
[ ]: lista_de_empresas_2021 = []
for name in lista:
    c = name.split("_")
    c1 = c[1].split(".")
    if c1[0] == "2021":
        lista_de_empresas_2021.append(name)
print(lista_de_empresas_2021)
print(len(lista_de_empresas_2021))
```

```
['AALR3_2021.pdf', 'ABEV3_2021.pdf', 'AERI3_2021.pdf', 'AESB3_2021.pdf',
```

'AES03_2021.pdf', 'AFLT3_2021.pdf', 'AGRO3_2021.pdf', 'AGXY3_2021.pdf',
 'AHEB3_2021.pdf', 'AHEB5_2021.pdf', 'AHEB6_2021.pdf', 'ALLD3_2021.pdf',
 'ALPA3_2021.pdf', 'ALPA4_2021.pdf', 'ALPK3_2021.pdf', 'ALUP11_2021.pdf',
 'ALUP3_2021.pdf', 'ALUP4_2021.pdf', 'AMAR3_2021.pdf', 'AMBP3_2021.pdf',
 'AMER3_2021.pdf', 'ANIM3_2021.pdf', 'APTI3_2021.pdf', 'APTI4_2021.pdf',
 'ARML3_2021.pdf', 'ARZZ3_2021.pdf', 'ASAI3_2021.pdf', 'ATMP3_2021.pdf',
 'ATOM3_2021.pdf', 'AURA32_2021.pdf', 'AURA33_2021.pdf', 'AVLL3_2021.pdf',
 'AZE3_2021.pdf', 'AZE4_2021.pdf', 'AZUL4_2021.pdf', 'BAHI3_2021.pdf',
 'BALM3_2021.pdf', 'BALM4_2021.pdf', 'BAUH3_2021.pdf', 'BAUH4_2021.pdf',
 'BBML3_2021.pdf', 'BDLL3_2021.pdf', 'BDLL4_2021.pdf', 'BEEF3_2021.pdf',
 'BETP3B_2021.pdf', 'BIOM3_2021.pdf', 'BLAU3_2021.pdf', 'BLUT3_2021.pdf',
 'BLUT4_2021.pdf', 'BMKS3_2021.pdf', 'BMOB3_2021.pdf', 'BOBR3_2021.pdf',
 'BOBR4_2021.pdf', 'BRAP3_2021.pdf', 'BRAP4_2021.pdf', 'BRAP99_2021.pdf',
 'BRFS3_2021.pdf', 'BRIT3_2021.pdf', 'BRKM3_2021.pdf', 'BRKM5_2021.pdf',
 'BRKM6_2021.pdf', 'BRQB3_2021.pdf', 'CABI3B_2021.pdf', 'CALI3_2021.pdf',
 'CALI4_2021.pdf', 'CAMB3_2021.pdf', 'CAMB4_2021.pdf', 'CAML3_2021.pdf',
 'CASH3_2021.pdf', 'CASN3_2021.pdf', 'CASN4_2021.pdf', 'CATA3_2021.pdf',
 'CATA4_2021.pdf', 'CBAV3_2021.pdf', 'CBEE3_2021.pdf', 'CCRO3_2021.pdf',
 'CEAB3_2021.pdf', 'CEBR3_2021.pdf', 'CEBR5_2021.pdf', 'CEBR6_2021.pdf',
 'CED03_2021.pdf', 'CED04_2021.pdf', 'CEEB3_2021.pdf', 'CEEB5_2021.pdf',
 'CEEB6_2021.pdf', 'CEED3_2021.pdf', 'CEED4_2021.pdf', 'CEGR3_2021.pdf',
 'CEPE3_2021.pdf', 'CEPE5_2021.pdf', 'CEPE6_2021.pdf', 'CGAS3_2021.pdf',
 'CGAS5_2021.pdf', 'CGRA3_2021.pdf', 'CGRA4_2021.pdf', 'CLSC3_2021.pdf',
 'CLSC4_2021.pdf', 'CMIG3_2021.pdf', 'CMIG4_2021.pdf', 'CMIN3_2021.pdf',
 'CMSA3_2021.pdf', 'CMSA4_2021.pdf', 'CNSY3_2021.pdf', 'COCE3_2021.pdf',
 'COCE5_2021.pdf', 'COCE6_2021.pdf', 'COGN3_2021.pdf', 'COMR3_2021.pdf',
 'CPFE3_2021.pdf', 'CPLE11_2021.pdf', 'CPLE3_2021.pdf', 'CPLE5_2021.pdf',
 'CPLE6_2021.pdf', 'CPRE3_2021.pdf', 'CRDE3_2021.pdf', 'CRFB3_2021.pdf',
 'CRPG3_2021.pdf', 'CRPG5_2021.pdf', 'CRPG6_2021.pdf', 'CRTE3B_2021.pdf',
 'CRTE5B_2021.pdf', 'CSAN3_2021.pdf', 'CSED3_2021.pdf', 'CSMG3_2021.pdf',
 'CSNA3_2021.pdf', 'CSRN3_2021.pdf', 'CSRN5_2021.pdf', 'CSRN6_2021.pdf',
 'CTCA3_2021.pdf', 'CTKA3_2021.pdf', 'CTKA4_2021.pdf', 'CTNM3_2021.pdf',
 'CTNM4_2021.pdf', 'CTSA3_2021.pdf', 'CTSA4_2021.pdf', 'CTSA8_2021.pdf',
 'CURY3_2021.pdf', 'CVCB3_2021.pdf', 'CYRE3_2021.pdf', 'DASA3_2021.pdf',
 'DESK3_2021.pdf', 'DEXP3_2021.pdf', 'DEXP4_2021.pdf', 'DIRR3_2021.pdf',
 'DMMO3_2021.pdf', 'DMVF3_2021.pdf', 'DOHL3_2021.pdf', 'DOHL4_2021.pdf',
 'DOTZ3_2021.pdf', 'DTCY3_2021.pdf', 'DTCY4_2021.pdf', 'DXCO3_2021.pdf',
 'EALT3_2021.pdf', 'EALT4_2021.pdf', 'ECOR3_2021.pdf', 'EGIE3_2021.pdf',
 'EKTR3_2021.pdf', 'EKTR4_2021.pdf', 'ELET3_2021.pdf', 'ELET5_2021.pdf',
 'ELET6_2021.pdf', 'ELMD3_2021.pdf', 'EMAE3_2021.pdf', 'EMAE4_2021.pdf',
 'EMBR3_2021.pdf', 'ENAT3_2021.pdf', 'ENBR3_2021.pdf', 'ENEV3_2021.pdf',
 'ENGI11_2021.pdf', 'ENGI3_2021.pdf', 'ENGI4_2021.pdf', 'ENJU3_2021.pdf',
 'ENMT3_2021.pdf', 'ENMT4_2021.pdf', 'EPAR3_2021.pdf', 'EPAR4_2021.pdf',
 'EQMA3B_2021.pdf', 'EQMA5B_2021.pdf', 'EQMA6B_2021.pdf', 'EQPA3_2021.pdf',
 'EQPA5_2021.pdf', 'EQPA6_2021.pdf', 'EQPA7_2021.pdf', 'EQTL11_2021.pdf',
 'EQTL3_2021.pdf', 'ESPA3_2021.pdf', 'ESTR3_2021.pdf', 'ESTR4_2021.pdf',
 'ETER3_2021.pdf', 'EUCA3_2021.pdf', 'EUCA4_2021.pdf', 'EVEN3_2021.pdf',
 'EZTC3_2021.pdf', 'FESA3_2021.pdf', 'FESA4_2021.pdf', 'FHER3_2021.pdf',

'FIGE3_2021.pdf', 'FIGE4_2021.pdf', 'FIQE3_2021.pdf', 'FLEX3_2021.pdf',
 'FLRY3_2021.pdf', 'FRAS3_2021.pdf', 'FRAS4_2021.pdf', 'FRI03_2021.pdf',
 'FRRN3B_2021.pdf', 'FRRN5B_2021.pdf', 'FRRN6B_2021.pdf', 'FRTA3_2021.pdf',
 'GEPA3_2021.pdf', 'GEPA4_2021.pdf', 'GFSA3_2021.pdf', 'GGBR3_2021.pdf',
 'GGBR4_2021.pdf', 'GGPS3_2021.pdf', 'GMAT3_2021.pdf', 'GOAU3_2021.pdf',
 'GOAU4_2021.pdf', 'GOLL3_2021.pdf', 'GOLL4_2021.pdf', 'GPAR3_2021.pdf',
 'GRA03_2021.pdf', 'GRND3_2021.pdf', 'GUAR3_2021.pdf', 'HAGA3_2021.pdf',
 'HAGA4_2021.pdf', 'HAPV3_2021.pdf', 'HAPV99_2021.pdf', 'HBOR3_2021.pdf',
 'HBSA3_2021.pdf', 'HETA3_2021.pdf', 'HETA4_2021.pdf', 'HOOT3_2021.pdf',
 'HOOT4_2021.pdf', 'HYPE3_2021.pdf', 'IFCM3_2021.pdf', 'IGSN3_2021.pdf',
 'INNT3_2021.pdf', 'IVPR3B_2021.pdf', 'IVPR4B_2021.pdf', 'JALL3_2021.pdf',
 'JBSS3_2021.pdf', 'JFEN3_2021.pdf', 'JHSF3_2021.pdf', 'JOPA3_2021.pdf',
 'JOPA4_2021.pdf', 'JSLG11_2021.pdf', 'JSLG3_2021.pdf', 'KEPL3_2021.pdf',
 'KEPL4_2021.pdf', 'KLAS3_2021.pdf', 'KLBN11_2021.pdf', 'KLBN3_2021.pdf',
 'KLBN4_2021.pdf', 'KRSA3_2021.pdf', 'LAVV3_2021.pdf', 'LEVE3_2021.pdf',
 'LIGT3_2021.pdf', 'LIPR3_2021.pdf', 'LJQQ3_2021.pdf', 'LLBI4_2021.pdf',
 'LLIS3_2021.pdf', 'LOGN3_2021.pdf', 'LREN3_2021.pdf', 'LTEL3B_2021.pdf',
 'LTEL5B_2021.pdf', 'LUXM3_2021.pdf', 'LUXM4_2021.pdf', 'LVTC3_2021.pdf',
 'LWSA3_2021.pdf', 'MAPT3_2021.pdf', 'MAPT4_2021.pdf', 'MATD3_2021.pdf',
 'MBLY3_2021.pdf', 'MDNE3_2021.pdf', 'MELK3_2021.pdf', 'MGEL3_2021.pdf',
 'MGEL4_2021.pdf', 'MGLU3_2021.pdf', 'MILS3_2021.pdf', 'MLAS3_2021.pdf',
 'MMAQ3_2021.pdf', 'MMAQ4_2021.pdf', 'MMXM3_2021.pdf', 'MNDL3_2021.pdf',
 'MNPR3_2021.pdf', 'MRFG3_2021.pdf', 'MRSA3B_2021.pdf', 'MRSA5B_2021.pdf',
 'MRSA6B_2021.pdf', 'MRVE3_2021.pdf', 'MSPA3_2021.pdf', 'MSPA4_2021.pdf',
 'MTSA3_2021.pdf', 'MTSA4_2021.pdf', 'MWET3_2021.pdf', 'MWET4_2021.pdf',
 'MYPK3_2021.pdf', 'NEMO3_2021.pdf', 'NEMO5_2021.pdf', 'NEMO6_2021.pdf',
 'NEOE3_2021.pdf', 'NGRD3_2021.pdf', 'NORD3_2021.pdf', 'NRTQ3_2021.pdf',
 'NRTQ4_2021.pdf', 'NTC03_2021.pdf', 'NUTR3_2021.pdf', 'ODER3_2021.pdf',
 'ODER4_2021.pdf', 'ODPV3_2021.pdf', 'OFSA3_2021.pdf', 'OIBR3_2021.pdf',
 'OIBR4_2021.pdf', 'ONC03_2021.pdf', 'OPCT3_2021.pdf', 'OPGM3B_2021.pdf',
 'OPSE3B_2021.pdf', 'OPTS3B_2021.pdf', 'ORVR3_2021.pdf', 'OSXB3_2021.pdf',
 'PARD3_2021.pdf', 'PASS5_2021.pdf', 'PASS6_2021.pdf', 'PATI3_2021.pdf',
 'PATI4_2021.pdf', 'PCAR3_2021.pdf', 'PCAR99_2021.pdf', 'PDGR3_2021.pdf',
 'PDTC3_2021.pdf', 'PETR3_2021.pdf', 'PETR4_2021.pdf', 'PFRM3_2021.pdf',
 'PGMN3_2021.pdf', 'PLAS3_2021.pdf', 'PLPL3_2021.pdf', 'PMAM3_2021.pdf',
 'PNVL3_2021.pdf', 'POM03_2021.pdf', 'POM04_2021.pdf', 'PORT3_2021.pdf',
 'POSI3_2021.pdf', 'PPAR3_2021.pdf', 'PPAR4_2021.pdf', 'PRI03_2021.pdf',
 'PRMN3B_2021.pdf', 'PRNR3_2021.pdf', 'PRPT3B_2021.pdf', 'PTBL3_2021.pdf',
 'PTCA11_2021.pdf', 'PTCA3_2021.pdf', 'PTNT3_2021.pdf', 'PTNT4_2021.pdf',
 'QUAL3_2021.pdf', 'QUSW3_2021.pdf', 'QVQP3B_2021.pdf', 'RADL3_2021.pdf',
 'RAIL3_2021.pdf', 'RAIZ3_2021.pdf', 'RAIZ4_2021.pdf', 'RANI3_2021.pdf',
 'RANI4_2021.pdf', 'RAPT3_2021.pdf', 'RAPT4_2021.pdf', 'RBNS11_2021.pdf',
 'RBNS4_2021.pdf', 'RCSL3_2021.pdf', 'RCSL4_2021.pdf', 'RDNI3_2021.pdf',
 'RDOR3_2021.pdf', 'RECV3_2021.pdf', 'REDE3_2021.pdf', 'RENT3_2021.pdf',
 'RNEW11_2021.pdf', 'RNEW3_2021.pdf', 'RNEW4_2021.pdf', 'ROMI3_2021.pdf',
 'RPMG3_2021.pdf', 'RRRP3_2021.pdf', 'RSID3_2021.pdf', 'RSUL3_2021.pdf',
 'RSUL4_2021.pdf', 'SAPR11_2021.pdf', 'SAPR3_2021.pdf', 'SAPR4_2021.pdf',
 'SBFG3_2021.pdf', 'SBSP3_2021.pdf', 'SEER3_2021.pdf', 'SEQL3_2021.pdf',

```
'SGPS3_2021.pdf', 'SHOW3_2021.pdf', 'SHUL3_2021.pdf', 'SHUL4_2021.pdf',
'SLCE3_2021.pdf', 'SLED3_2021.pdf', 'SLED4_2021.pdf', 'SMFT13_2021.pdf',
'SMFT3_2021.pdf', 'SMT03_2021.pdf', 'SNSY3_2021.pdf', 'SNSY5_2021.pdf',
'SNSY6_2021.pdf', 'SOJA3_2021.pdf', 'SOMA3_2021.pdf', 'SOND3_2021.pdf',
'SOND5_2021.pdf', 'SOND6_2021.pdf', 'SQIA3_2021.pdf', 'STBP3_2021.pdf',
'STKF3_2021.pdf', 'SUZB3_2021.pdf', 'SYNE3_2021.pdf', 'TAE11_2021.pdf',
'TAEE3_2021.pdf', 'TAEE4_2021.pdf', 'TASA3_2021.pdf', 'TASA4_2021.pdf',
'TCNO3_2021.pdf', 'TCNO4_2021.pdf', 'TCSA3_2021.pdf', 'TECN3_2021.pdf',
'TEGA3_2021.pdf', 'TEKA3_2021.pdf', 'TEKA4_2021.pdf', 'TELB3_2021.pdf',
'TELB4_2021.pdf', 'TEND3_2021.pdf', 'TFC04_2021.pdf', 'TGMA3_2021.pdf',
'TIMS3_2021.pdf', 'TKN03_2021.pdf', 'TKN04_2021.pdf', 'TOTS3_2021.pdf',
'TPIS3_2021.pdf', 'TRIS3_2021.pdf', 'TRPL3_2021.pdf', 'TRPL4_2021.pdf',
'TTEN3_2021.pdf', 'TUPY3_2021.pdf', 'TXRX11_2021.pdf', 'TXRX3_2021.pdf',
'TRX4_2021.pdf', 'UCAS3_2021.pdf', 'UGPA3_2021.pdf', 'UNIP3_2021.pdf',
'UNIP5_2021.pdf', 'UNIP6_2021.pdf', 'UPKP3B_2021.pdf', 'USIM3_2021.pdf',
'USIM5_2021.pdf', 'USIM6_2021.pdf', 'VALE3_2021.pdf', 'VAM03_2021.pdf',
'VBBR3_2021.pdf', 'VIAA11_2021.pdf', 'VIAA3_2021.pdf', 'VIAA4_2021.pdf',
'VITT3_2021.pdf', 'VIVA3_2021.pdf', 'VIVR3_2021.pdf', 'VIVT3_2021.pdf',
'VIVT4_2021.pdf', 'VLID3_2021.pdf', 'VSPT3_2021.pdf', 'VSPT4_2021.pdf',
'VULC3_2021.pdf', 'VVE03_2021.pdf', 'WEGE3_2021.pdf', 'WEST3_2021.pdf',
'WHRL3_2021.pdf', 'WHRL4_2021.pdf', 'WLMM3_2021.pdf', 'WLMM4_2021.pdf',
'YBRA3B_2021.pdf', 'YBRA4B_2021.pdf', 'YDUQ3_2021.pdf', 'ZAMP3_2021.pdf']
```

476

```
[ ]: names_empresas_2021 = []
print(names_empresas_2011)
print(names_empresas_2012)
print(names_empresas_2013)
print(names_empresas_2014)
print(names_empresas_2015)
print(names_empresas_2016)
print(names_empresas_2017)
print(names_empresas_2018)
print(names_empresas_2019)
print(names_empresas_2020)
for name in lista_de_empresas_2021:
    c = name.split("_")
    names_empresas_2021.append(c[0])
print(names_empresas_2021)
print(len(names_empresas_2021))

for name in names_empresas_2011:
    for name1 in names_empresas_2021:
        if name1 == name:
            names_empresas_2021.remove(name1)
for name in names_empresas_2012:
    for name1 in names_empresas_2021:
```



```

        if name1 == name:
            names_empresas_2021.remove(name1)
for name in names_empresas_2013:
    for name1 in names_empresas_2021:
        if name1 == name:
            names_empresas_2021.remove(name1)
for name in names_empresas_2014:
    for name1 in names_empresas_2021:
        if name1 == name:
            names_empresas_2021.remove(name1)
for name in names_empresas_2015:
    for name1 in names_empresas_2021:
        if name1 == name:
            names_empresas_2021.remove(name1)
for name in names_empresas_2016:
    for name1 in names_empresas_2021:
        if name1 == name:
            names_empresas_2021.remove(name1)
for name in names_empresas_2017:
    for name1 in names_empresas_2021:
        if name1 == name:
            names_empresas_2021.remove(name1)
for name in names_empresas_2018:
    for name1 in names_empresas_2021:
        if name1 == name:
            names_empresas_2021.remove(name1)
for name in names_empresas_2019:
    for name1 in names_empresas_2021:
        if name1 == name:
            names_empresas_2021.remove(name1)
for name in names_empresas_2020:
    for name1 in names_empresas_2021:
        if name1 == name:
            names_empresas_2021.remove(name1)

print("Após comparação")
print(names_empresas_2021)
print(len(names_empresas_2021))

```

```

['AFLT3', 'AGRO3', 'ALPA3', 'ALPA4', 'AMAR3', 'APTI3', 'APTI4', 'BAHI3',
'BRAP3', 'BRAP4', 'BRAP99', 'CATA3', 'CGAS3', 'CGAS5', 'DASA3', 'EMBR3',
'FRTA3', 'GGBR3', 'GGBR4', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRND3',
'GUAR3', 'HAGA3', 'HBSA3', 'JBSS3', 'KLBN11', 'KLBN4', 'LIPR3', 'LTEL5B',
'MAPT3', 'MAPT4', 'MSPA3', 'MSPA4', 'NEMO3', 'NEMO6', 'PETR3', 'PETR4', 'PGMN3',
'POMO4', 'QUAL3', 'ROMI3', 'SAPR11', 'SAPR3', 'SAPR4', 'STBP3', 'STKF3',
'TOTS3', 'VALE3', 'VIVT3']
['AHEB3', 'AHEB5', 'AHEB6', 'ALUP11', 'ALUP3', 'ALUP4', 'AMER3', 'ARZZ3',
'ATMP3', 'ATOM3', 'AZE3', 'AZE4', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BDLL3',

```

'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLUT3', 'BLUT4', 'BMKS3', 'BOBR3',
 'BOBR4', 'BRFS3', 'BRKM3', 'BRKM5', 'BRKM6', 'CABI3B', 'CALI3', 'CALI4',
 'CAMB3', 'CAMB4', 'CASN3', 'CASN4', 'CATA4', 'CBEE3', 'CCRO3', 'CEBR3', 'CEBR5',
 'CEBR6', 'CEDO3', 'CEDO4', 'CEEB3', 'CEEB5', 'CEEB6', 'CEED3', 'CEED4', 'CEGR3',
 'CEPE3', 'CEPE5', 'CEPE6', 'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4',
 'CMSA3', 'CMSA4', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'CPFE3', 'CPLE11',
 'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRPG3', 'CRPG5', 'CRPG6',
 'CRTE3B', 'CRTE5B', 'CSAN3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5', 'CSRN6',
 'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8', 'CYRE3', 'DEXP3',
 'DEXP4', 'DIRR3', 'DOHL3', 'DOHL4', 'DTCY3', 'DTCY4', 'DXCO3', 'EALT3', 'EALT4',
 'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'EMAE3', 'EMAE4',
 'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4', 'ENMT3', 'ENMT4',
 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B', 'EQPA3', 'EQPA5', 'EQPA6',
 'EQPA7', 'EQTL11', 'EQTL3', 'ESTR3', 'ESTR4', 'ETER3', 'EUCA3', 'EUCA4',
 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3', 'FIGE3', 'FIGE4', 'FLRY3', 'FRAS3',
 'FRAS4', 'FRI03', 'FRRN3B', 'FRRN5B', 'FRRN6B', 'GEPA3', 'GEPA4', 'GFSA3',
 'HAGA4', 'HBOR3', 'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'INEP4',
 'IVPR3B', 'IVPR4B', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4', 'JSLG11', 'JSLG3',
 'KEPL3', 'KEPL4', 'KLBN3', 'LEVE3', 'LIGT3', 'LOGN3', 'LREN3', 'LTEL3B',
 'LUXM3', 'LUXM4', 'MDNE3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3', 'MMAQ3', 'MMAQ4',
 'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B', 'MRSA5B', 'MRSA6B', 'MRVE3',
 'MTSA3', 'MTSA4', 'MWET3', 'MWET4', 'MYPK3', 'NEMO5', 'NEOE3', 'NORD3', 'NRTQ3',
 'NRTQ4', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OIBR3', 'OIBR4', 'OPGM3B',
 'OPSE3B', 'OPTS3B', 'OSXB3', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3',
 'PDT3', 'PFRM3', 'PLAS3', 'PMAM3', 'PNVL3', 'POMO3', 'POSI3', 'PPAR3', 'PPAR4',
 'PRI03', 'PRMN3B', 'PRPT3B', 'PTBL3', 'PTNT3', 'PTNT4', 'QVQP3B', 'RADL3',
 'RAIL3', 'RANI3', 'RANI4', 'RAPT3', 'RAPT4', 'RCSL3', 'RCSL4', 'RDNI3', 'REDE3',
 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'RPMG3', 'RSID3', 'RSUL3', 'RSUL4',
 'SBSP3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4', 'SMT03',
 'SNSY3', 'SNSY5', 'SNSY6', 'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'SUZB3', 'SYNE3',
 'TAE11', 'TAE3', 'TAE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',
 'TECN3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TGMA3', 'TKNO3', 'TKNO4',
 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4',
 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5', 'UNIP6', 'UPKP3B', 'USIM3', 'USIM5',
 'USIM6', 'VIA11', 'VIA3', 'VIA4', 'VIVR3', 'VIVT4', 'VLID3', 'VSPT3',
 'VSPT4', 'VULC3', 'WEGE3', 'WHRL3', 'WHRL4', 'WLMM3', 'WLMM4', 'YBRA3B',
 'YBRA4B', 'YDUQ3']
 ['ABEV3', 'ANIM3', 'CVCB3', 'IGSN3', 'INEP3', 'QUSW3', 'SEER3']
 ['DMM03', 'LLIS3']
 ['MEAL3', 'OFSA3']
 ['AALR3', 'BRQB3', 'CNSY3', 'CTCA3', 'MOVI3']
 ['AZUL3', 'AZUL4', 'CAML3', 'CRFB3', 'INNT3', 'PARD3', 'PRNR3', 'VBBR3']
 ['BLAU3', 'FLEX3', 'HAPV3', 'HAPV99', 'PTCA11', 'PTCA3', 'SMFT13', 'ZAMP3']
 ['BBML3', 'CEAB3', 'LTLA3B', 'SBFG3', 'SMFT3', 'VAMO3']
 ['AERI3', 'AGXY3', 'ALLD3', 'ALPK3', 'AMBP3', 'AURA32', 'AURA33', 'AVLL3',
 'CASH3', 'CSED3', 'CURY3', 'DMVF3', 'ELMD3', 'ENJU3', 'ESPA3', 'GMAT3', 'INTB3',
 'LAVV3', 'LLBI3', 'LMED3', 'LWSA3', 'MELK3', 'MTRE3', 'NGRD3', 'NTCO3', 'ORVR3',
 'PASS3', 'PASS5', 'PASS6', 'RDOR3', 'RRRP3', 'SEQL3', 'SOJA3', 'SOMA3', 'TFCO4',

'TIMS3', 'VITT3', 'VIVA3']
['AALR3', 'ABEV3', 'AERI3', 'AESB3', 'AES03', 'AFLT3', 'AGRO3', 'AGXY3',
'AHEB3', 'AHEB5', 'AHEB6', 'ALLD3', 'ALPA3', 'ALPA4', 'ALPK3', 'ALUP11',
'ALUP3', 'ALUP4', 'AMAR3', 'AMBP3', 'AMER3', 'ANIM3', 'APT13', 'APT14', 'ARML3',
'ARZZ3', 'ASAI3', 'ATMP3', 'ATOM3', 'AURA32', 'AURA33', 'AVLL3', 'AZE3V3',
'AZE4V4', 'AZUL4', 'BAHI3', 'BALM3', 'BALM4', 'BAUH3', 'BAUH4', 'BBML3', 'BDLL3',
'BDLL4', 'BEEF3', 'BETP3B', 'BIOM3', 'BLAU3', 'BLUT3', 'BLUT4', 'BMKS3',
'BMOB3', 'BOBR3', 'BOBR4', 'BRAP3', 'BRAP4', 'BRAP99', 'BRFS3', 'BRIT3',
'BRKM3', 'BRKM5', 'BRKM6', 'BRQB3', 'CABI3B', 'CALI3', 'CALI4', 'CAMB3',
'CAMB4', 'CAML3', 'CASH3', 'CASN3', 'CASN4', 'CATA3', 'CATA4', 'CBAV3', 'CBEE3',
'CCR03', 'CEAB3', 'CEBR3', 'CEBR5', 'CEBR6', 'CED03', 'CED04', 'CEEB3', 'CEEB5',
'CEEB6', 'CEED3', 'CEED4', 'CEGR3', 'CEPE3', 'CEPE5', 'CEPE6', 'CGAS3', 'CGAS5',
'CGRA3', 'CGRA4', 'CLSC3', 'CLSC4', 'CMIG3', 'CMIG4', 'CMIN3', 'CMSA3', 'CMSA4',
'CNSY3', 'COCE3', 'COCE5', 'COCE6', 'COGN3', 'COMR3', 'CPFE3', 'CPLE11',
'CPLE3', 'CPLE5', 'CPLE6', 'CPRE3', 'CRDE3', 'CRFB3', 'CRPG3', 'CRPG5', 'CRPG6',
'CRTE3B', 'CRTE5B', 'CSAN3', 'CSED3', 'CSMG3', 'CSNA3', 'CSRN3', 'CSRN5',
'CSRN6', 'CTCA3', 'CTKA3', 'CTKA4', 'CTNM3', 'CTNM4', 'CTSA3', 'CTSA4', 'CTSA8',
'CURY3', 'CVCB3', 'CYRE3', 'DASA3', 'DESK3', 'DEXP3', 'DEXP4', 'DIRR3', 'DMM03',
'DMVF3', 'DOHL3', 'DOHL4', 'DOTZ3', 'DTCY3', 'DTCY4', 'DXC03', 'EALT3', 'EALT4',
'ECOR3', 'EGIE3', 'EKTR3', 'EKTR4', 'ELET3', 'ELET5', 'ELET6', 'ELMD3', 'EMAE3',
'EMAE4', 'EMBR3', 'ENAT3', 'ENBR3', 'ENEV3', 'ENGI11', 'ENGI3', 'ENGI4',
'ENJU3', 'ENMT3', 'ENMT4', 'EPAR3', 'EPAR4', 'EQMA3B', 'EQMA5B', 'EQMA6B',
'EQPA3', 'EQPA5', 'EQPA6', 'EQPA7', 'EQTL11', 'EQTL3', 'ESPA3', 'ESTR3',
'ESTR4', 'ETER3', 'EUCA3', 'EUCA4', 'EVEN3', 'EZTC3', 'FESA3', 'FESA4', 'FHER3',
'FIGE3', 'FIGE4', 'FIQE3', 'FLEX3', 'FLRY3', 'FRAS3', 'FRAS4', 'FRI03',
'FRRN3B', 'FRRN5B', 'FRRN6B', 'FRTA3', 'GEP3A3', 'GEP3A4', 'GFSA3', 'GGBR3',
'GGBR4', 'GGPS3', 'GMAT3', 'GOAU3', 'GOAU4', 'GOLL3', 'GOLL4', 'GPAR3', 'GRAO3',
'GRND3', 'GUAR3', 'HAGA3', 'HAGA4', 'HAPV3', 'HAPV99', 'HBOR3', 'HBSA3',
'HETA3', 'HETA4', 'HOOT3', 'HOOT4', 'HYPE3', 'IFCM3', 'IGSN3', 'INNT3',
'IVPR3B', 'IVPR4B', 'JALL3', 'JBSS3', 'JFEN3', 'JHSF3', 'JOPA3', 'JOPA4',
'JSLG11', 'JSLG3', 'KEPL3', 'KEPL4', 'KLAS3', 'KLBN11', 'KLBN3', 'KLBN4',
'KRSA3', 'LAVV3', 'LEVE3', 'LIGT3', 'LIPR3', 'LJQQ3', 'LLBI4', 'LLIS3', 'LOGN3',
'LREN3', 'LTEL3B', 'LTEL5B', 'LUXM3', 'LUXM4', 'LVTC3', 'LWSA3', 'MAPT3',
'MAPT4', 'MATD3', 'MBLY3', 'MDNE3', 'MELK3', 'MGEL3', 'MGEL4', 'MGLU3', 'MILS3',
'MLAS3', 'MMAQ3', 'MMAQ4', 'MMXM3', 'MNDL3', 'MNPR3', 'MRFG3', 'MRSA3B',
'MRSA5B', 'MRSA6B', 'MRVE3', 'MSPA3', 'MSPA4', 'MTSA3', 'MTSA4', 'MWET3',
'MWET4', 'MYPK3', 'NEMO3', 'NEMO5', 'NEMO6', 'NEOE3', 'NGRD3', 'NORD3', 'NRTQ3',
'NRTQ4', 'NTCO3', 'NUTR3', 'ODER3', 'ODER4', 'ODPV3', 'OFS3A3', 'OIBR3', 'OIBR4',
'ONCO3', 'OPCT3', 'OPGM3B', 'OPSE3B', 'OPTS3B', 'ORVR3', 'OSXB3', 'PARD3',
'PASS5', 'PASS6', 'PATI3', 'PATI4', 'PCAR3', 'PCAR99', 'PDGR3', 'PDTC3',
'PETR3', 'PETR4', 'PFRM3', 'PGMN3', 'PLAS3', 'PLPL3', 'PMAM3', 'PNVL3', 'POMO3',
'POMO4', 'PORT3', 'POSI3', 'PPAR3', 'PPAR4', 'PRIO3', 'PRMN3B', 'PRNR3',
'PRPT3B', 'PTBL3', 'PTCA11', 'PTCA3', 'PTNT3', 'PTNT4', 'QUAL3', 'QUSW3',
'QVQP3B', 'RADL3', 'RAIL3', 'RAIZ3', 'RAIZ4', 'RANI3', 'RANI4', 'RAPT3',
'RAPT4', 'RBNS11', 'RBNS4', 'RCSL3', 'RCSL4', 'RDNI3', 'RDOR3', 'RECV3',
'REDE3', 'RENT3', 'RNEW11', 'RNEW3', 'RNEW4', 'ROMI3', 'RPMG3', 'RRRP3',
'RSID3', 'RSUL3', 'RSUL4', 'SAPR11', 'SAPR3', 'SAPR4', 'SBFG3', 'SBSP3',
'SEER3', 'SEQL3', 'SGPS3', 'SHOW3', 'SHUL3', 'SHUL4', 'SLCE3', 'SLED3', 'SLED4',

```
'SMFT13', 'SMFT3', 'SMT03', 'SNSY3', 'SNSY5', 'SNSY6', 'SOJA3', 'SOMA3',
'SOND3', 'SOND5', 'SOND6', 'SQIA3', 'STBP3', 'STKF3', 'SUZB3', 'SYNE3',
'TAEE11', 'TAEE3', 'TAEE4', 'TASA3', 'TASA4', 'TCNO3', 'TCNO4', 'TCSA3',
'TECN3', 'TEGA3', 'TEKA3', 'TEKA4', 'TELB3', 'TELB4', 'TEND3', 'TFCO4', 'TGMA3',
'TIMS3', 'TKNO3', 'TKNO4', 'TOTS3', 'TPIS3', 'TRIS3', 'TRPL3', 'TRPL4', 'TTEN3',
'TUPY3', 'TXRX11', 'TXRX3', 'TXRX4', 'UCAS3', 'UGPA3', 'UNIP3', 'UNIP5',
'UNIP6', 'UPKP3B', 'USIM3', 'USIM5', 'USIM6', 'VALE3', 'VAMO3', 'VBBR3',
'VIIA11', 'VIIA3', 'VIIA4', 'VITT3', 'VIVA3', 'VIVR3', 'VIVT3', 'VIVT4',
'VLID3', 'VSPT3', 'VSPT4', 'VULC3', 'VVEO3', 'WEGE3', 'WEST3', 'WHRL3', 'WHRL4',
'WLMM3', 'WLMM4', 'YBRA3B', 'YBRA4B', 'YDUQ3', 'ZAMP3']
```

476

Após comparação

```
['AESB3', 'AES03', 'ARML3', 'ASAI3', 'BMOB3', 'BRIT3', 'CBAV3', 'CMIN3',
'COMR3', 'DESK3', 'DOTZ3', 'FIQE3', 'GGPS3', 'GRA03', 'IFCM3', 'JALL3', 'KLAS3',
'KRSA3', 'LJQQ3', 'LLBI4', 'LVTC3', 'MATD3', 'MBLY3', 'MLAS3', 'ONCO3', 'OPCT3',
'PLPL3', 'PORT3', 'RAIZ3', 'RAIZ4', 'RBNS11', 'RBNS4', 'RECV3', 'TEGA3',
'TTEN3', 'VVEO3', 'WEST3']
```

37

```
[ ]: #Quantidade de relatorios a partir de 2021
#realizar pesquisa nas empresas de 2021
lista_de_empresas_2021 = []

for name_emp in names_empresas_2021:
    for empresa in lista_caminho:
        if empresa == name_emp:
            path_caminho_pdf_2021 = 'C:
↪\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + empresa
            relatorio_pdf_2021 = os.listdir(path_caminho_pdf_2021)
            att = []
            for lista_pdf_2021 in relatorio_pdf_2021:
                #print(lista_pdf)
                att.append(lista_pdf_2021)
            lista_de_empresas_2021.append(att)
#quantidade total de relatorios baixados
print(lista_de_empresas_2021)
print(len(lista_de_empresas_2021))
```

```
[['AESB3_2021.pdf'], ['AES03_2021.pdf'], ['ARML3_2021.pdf'], ['ASAI3_2021.pdf'],
['BMOB3_2021.pdf'], ['BRIT3_2021.pdf'], ['CBAV3_2021.pdf'], ['CMIN3_2021.pdf'],
['COMR3_2021.pdf'], ['DESK3_2021.pdf'], ['DOTZ3_2021.pdf'], ['FIQE3_2021.pdf'],
['GGPS3_2021.pdf'], ['GRA03_2021.pdf'], ['IFCM3_2021.pdf'], ['JALL3_2021.pdf'],
['KLAS3_2021.pdf'], ['KRSA3_2021.pdf'], ['LJQQ3_2021.pdf'], ['LLBI4_2021.pdf'],
['LVTC3_2021.pdf'], ['MATD3_2021.pdf'], ['MBLY3_2021.pdf'], ['MLAS3_2021.pdf'],
['ONCO3_2021.pdf'], ['OPCT3_2021.pdf'], ['PLPL3_2021.pdf'], ['PORT3_2021.pdf'],
['RAIZ3_2021.pdf'], ['RAIZ4_2021.pdf'], ['RBNS11_2021.pdf'], ['RBNS4_2021.pdf'],
['RECV3_2021.pdf'], ['TEGA3_2021.pdf'], ['TTEN3_2021.pdf'], ['VVEO3_2021.pdf'],
['WEST3_2021.pdf']]
```

37

```
[ ]: #quantidade de relatórios em cada empresa
```

```
tam_emp = np.zeros(37, dtype = int)
```

```
i = 0
```

```
for pesquisa in lista_de_empresas_2021:
```

```
    #print(pesquisa)
```

```
    for k in pesquisa:
```

```
        #print(k)
```

```
        tam_emp[i] = tam_emp[i] + 1
```

```
    i = i + 1
```

```
print(tam_emp)
```

```
print("Empresa com menor quantidade de relatorios: ", min(tam_emp))
```

```
print(len(tam_emp))
```

```
[1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1]
```

```
Empresa com menor quantidade de relatorios: 1
```

37

```
[ ]: #Gráfico gerado após análise
```

```
fig, ax = plt.subplots()
```

```
X = ['1']
```

```
rect1 = ax.bar(X, 37)
```

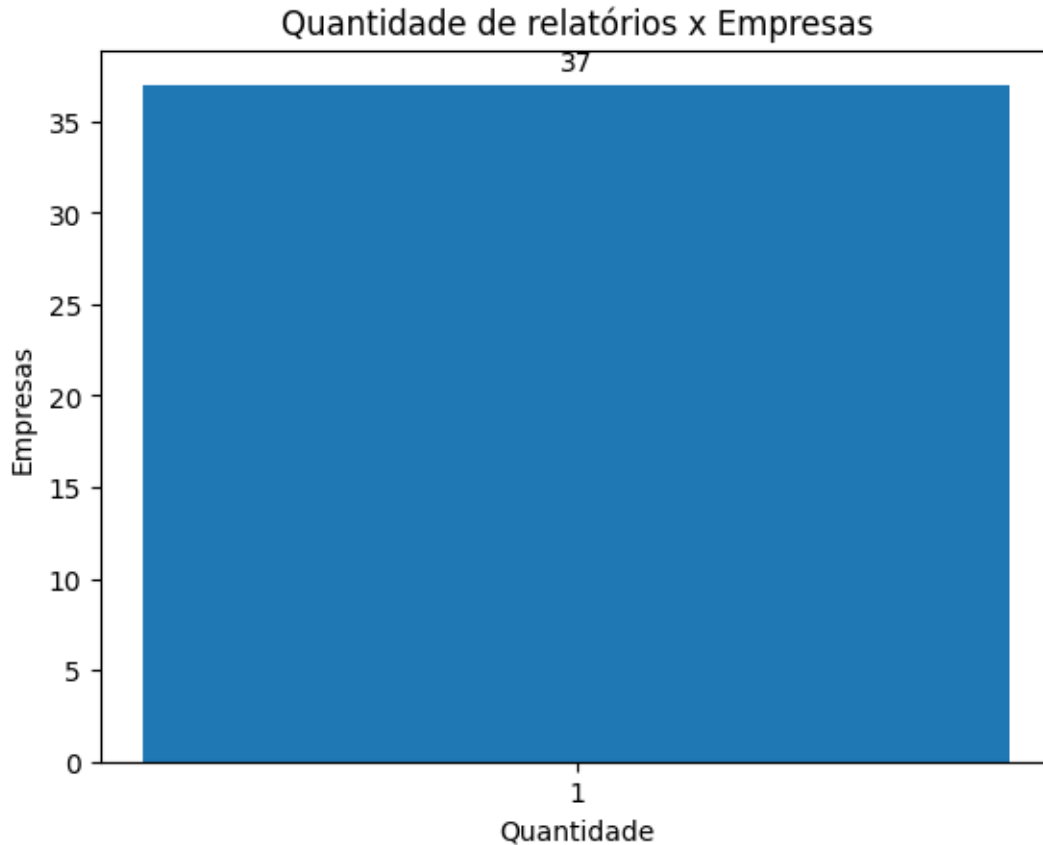
```
ax.set_ylabel('Empresas')
```

```
ax.set_title("Quantidade de relatórios x Empresas")
```

```
ax.set_xlabel('Quantidade')
```

```
ax.bar_label(rect1, padding = 3)
```

```
plt.show()
```



```
[ ]: #print(lista_caminho)
      #print(len(lista_caminho))
      name_total = []
      for name in lista_caminho:
          path_caminho_pdf = 'C:\\Users\\Riallen\\Documents\\Work_Text\\Data\\' + name
          caminho = os.listdir(path_caminho_pdf)
          tam = len(caminho)
          name_total.append(tam)
      print(name_total)
      print(len(name_total))
```

```
[6, 7, 2, 1, 1, 12, 12, 2, 11, 11, 11, 2, 0, 12, 12, 2, 11, 11, 11, 12, 2, 11,
7, 12, 12, 1, 11, 1, 11, 11, 2, 2, 0, 2, 11, 11, 4, 4, 12, 11, 11, 11, 11, 2,
11, 11, 11, 11, 11, 4, 11, 11, 11, 1, 0, 11, 11, 0, 12, 12, 12, 0, 11, 1, 11,
11, 11, 6, 0, 0, 11, 0, 0, 11, 11, 11, 11, 5, 2, 11, 11, 12, 11, 1, 11, 0, 11,
0, 3, 11, 11, 11, 11, 11, 11, 11, 11, 13, 11, 11, 0, 0, 0, 0, 11, 11, 11, 0, 0,
0, 12, 12, 11, 11, 11, 11, 11, 1, 11, 11, 6, 11, 11, 11, 11, 1, 11, 11, 11,
11, 11, 11, 0, 11, 5, 11, 11, 11, 11, 11, 11, 2, 11, 11, 11, 11, 6, 11, 11,
11, 11, 11, 11, 11, 2, 9, 11, 12, 1, 11, 11, 11, 8, 2, 11, 11, 1, 11, 11, 0, 11,
11, 11, 11, 0, 0, 11, 11, 11, 11, 11, 11, 2, 11, 11, 12, 11, 11, 11, 11, 11,
```

```

2, 0, 0, 0, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 2, 0, 11, 11,
11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 1, 4, 11, 11, 11, 11, 11, 11, 12,
11, 11, 11, 12, 12, 1, 2, 12, 12, 12, 12, 12, 0, 0, 1, 12, 12, 12, 11, 4, 4, 11,
12, 11, 11, 11, 11, 11, 0, 1, 9, 0, 6, 7, 3, 1, 11, 11, 1, 0, 0, 0, 0, 12, 11,
11, 11, 11, 11, 11, 11, 11, 1, 12, 11, 12, 1, 0, 2, 11, 11, 12, 1, 1, 1, 8, 1,
11, 11, 11, 12, 2, 0, 11, 11, 1, 2, 12, 12, 1, 1, 0, 11, 4, 0, 2, 0, 0, 0, 11,
11, 11, 11, 1, 11, 11, 10, 11, 11, 5, 11, 11, 11, 11, 11, 12, 12, 0, 1, 11, 11,
11, 11, 11, 12, 11, 12, 11, 0, 2, 0, 11, 11, 11, 2, 11, 11, 11, 11, 7, 11, 11,
1, 1, 11, 11, 11, 2, 11, 3, 1, 2, 2, 11, 11, 11, 11, 11, 11, 12, 12, 0, 11, 12,
0, 0, 11, 1, 11, 11, 11, 12, 1, 11, 11, 11, 11, 11, 4, 11, 11, 4, 4, 11, 11, 12,
9, 11, 11, 11, 1, 1, 11, 11, 11, 11, 1, 0, 1, 11, 11, 11, 2, 1, 11, 11, 11, 11,
11, 12, 11, 2, 11, 11, 11, 12, 12, 12, 3, 11, 7, 2, 11, 11, 11, 11, 11, 11, 11,
4, 3, 11, 11, 11, 11, 2, 2, 11, 11, 11, 11, 12, 12, 11, 11, 11, 11, 11, 11, 11,
11, 11, 11, 11, 1, 11, 11, 11, 11, 11, 0, 0, 0, 2, 11, 0, 0, 2, 11, 11, 12, 11,
0, 11, 11, 11, 1, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 11, 12, 3, 4,
11, 11, 11, 2, 2, 11, 12, 11, 11, 11, 11, 11, 1, 11, 1, 11, 11, 11, 11, 0, 0,
11, 11, 11, 4]

```

543

```

[ ]: quantidade_relatorios = 12
empresas = []
for i in range(quantidade_relatorios, -1, -1):
    j = 0
    for pesquisa in name_total:
        #print(pesquisa)
        #print(len(pesquisa))
        if i == pesquisa:
            j = j + 1
    empresas.append(j)
print(empresas)
print(len(empresas))

```

```
[53, 318, 1, 3, 2, 5, 5, 3, 13, 6, 35, 42, 56]
```

13

```

[ ]: #Gráfico gerado após análise
fig, ax = plt.subplots()
X = ['12', '11', '10', '9', '8', '7', '6', '5', '4', '3', '2', '1', '0']
rect1 = ax.bar(X, empresas)
ax.set_ylabel('Empresas')
ax.set_title("Quantidade de relatórios x Empresas")
ax.set_xlabel('Quantidade')
ax.bar_label(rect1, padding = 3)
plt.show()

```

