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```
In [1]:
         import math
         import sqlalchemy
         import psycopg2
         from sqlalchemy import create_engine
         import re
          import pandas as pd
          import numpy as np
         import matplotlib.pyplot as plt
         from sqlalchemy.types import String, Integer
 In [2]:
         engine = create_engine('postgresql://admin:secret@as7_db:5432/Names')
 In [3]: df = pd.read_sql_table("Full",engine)
         totals = df.groupby(["Sex","Name"]).sum()
 In [4]:
         male, female = totals.loc["M"], totals.loc["F"]
 In [5]:
         ratio = (male / female).dropna()
 In [6]:
 In [7]:
         unisex = ratio[(ratio > 0.5) & (ratio < 2.0)].dropna().index</pre>
 In [8]: top = (male.loc[unisex] + female.loc[unisex]).sort values(by = ["Count"], ascending =
         df_indexed = df.set_index(["Sex","Name", "Year"]).sort_index()
In [10]:
         df_indexed
Out[10]:
                           Count
               Name
                      Year
          Sex
                               7
              Aabha
                     2011
                     2012
                     2014
                               9
                               7
                     2015
                               7
                     2016
           M Zyvion 2009
                               5
               Zyvon 2015
                               7
               Zyyon 2014
                               6
               Zzyzx 2010
                               5
                     2018
                               5
```

1957046 rows × 1 columns

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```
plt.figure(figsize = (10,10))
In [11]:
           for i, name in enumerate(top.index):
                 plt.subplot(5,2,i+1)
                 plt.plot(df_indexed.loc["M",name], label = "M")
                 plt.plot(df_indexed.loc["F",name], label = "F")
                 plt.legend()
                 plt.title(name)
           plt.tight_layout()
                                     Jessie
                                                                                          Casey
                                                                 4000
            3000
            2000
                                                                 2000
            1000
                 1880
                             1920
                                   1940
                                         1960
                                               1980
                                                     2000
                                                                          1900
                                                                                1920
                                                                                       1940
                                                                                             1960
                                                                                                    1980
                                                                                                          2000
                                                                                                                2020
                                     Jackie
                                                                                          Peyton
            4000
                                                                 4000
            2000
                                                                 2000
                 1900
                        1920
                               1940
                                      1960
                                             1980
                                                    2000
                                                           2020
                                                                     1880
                                                                           1900
                                                                                 1920
                                                                                       1940
                                                                                              1960
                                                                                                    1980
                                                                                                          2000
                                                                                                                2020
                                     Jaime
                                                                                           Kerry
            7500
                                                                 2000
                                                            Μ
                                                                                                                 М
            5000
                                                                 1000
            2500
                  1920
                           1940
                                   1960
                                           1980
                                                   2000
                                                           2020
                                                                      1920
                                                                               1940
                                                                                                1980
                                                                                                        2000
                                                                                                                 2020
                                    Kendall
                                                                                           Jody
                                                                 2000
                                                                                                                 М
            2000
                                                                 1000
            1000
               0
                      1920
                              1940
                                     1960
                                            1980
                                                    2000
                                                           2020
                                                                          1920
                                                                                  1940
                                                                                         1960
                                                                                                 1980
                                                                                                         2000
                                                                                                                 2020
                                    Frankie
                                                                                            Pat
                                                                                                                 М
             750
             500
                                                                 1000
             250
                             1920
                                   1940
                                         1960
                                               1980
                                                     2000
                                                                      1880
                                                                            1900
                                                                                   1920
                                                                                         1940
                                                                                               1960
                                                                                                     1980
                                                                                                            2000
                 1880
```