In [2]:
```
import numpy as np
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt
```

In [3]:
```
import os
```

In [5]:
```
os.getcwd()
```

Out[5]:
```
'C:\\Users\\hp'
```

In [7]:
```
os.chdir('E:\\DataScientist2023\\New folder\\Basic_LinkedInDataExport_02-27-2023')
```

In [8]:
```
os.getcwd()
```

Out[8]:
```
'E:\\DataScientist2023\\New folder\\Basic_LinkedInDataExport_02-27-2023'
```

In [10]:
```
lidata = pd.read_csv('Connections.csv')
```

In [12]:
```
lidata['Connected On']
```

Out[12]:
```
0      27-Feb-23
1      26-Feb-23
2      25-Feb-23
3      24-Feb-23
4      23-Feb-23
         ...
405    21-Jun-17
406    21-Jun-17
407    20-Jun-17
408    20-Jun-17
409    08-Jul-16
Name: Connected On, Length: 410, dtype: object
```

In [19]:
```
lidata['Connected On'] = pd.to_datetime(lidata['Connected On'])
```

In [24]:
```
type(lidata['Connected On'])
```

Out[24]:
```
pandas.core.series.Series
```

In [25]:
```
lidata.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 410 entries, 0 to 409
Data columns (total 5 columns):
 #   Column        Non-Null Count  Dtype 
---  ------        --------------  ----- 
```

```
 0   First Name    404 non-null    object
 1   Last Name     404 non-null    object
 2   Company       354 non-null    object
 3   Position      356 non-null    object
 4   Connected On  410 non-null    datetime64[ns]
dtypes: datetime64[ns](1), object(4)
memory usage: 16.1+ KB
```

In [32]:
```
print(lidata['Connected On'].dt.year,lidata['Connected On'].dt.month)
```

```
0      2023
1      2023
2      2023
3      2023
4      2023
       ...
405    2017
406    2017
407    2017
408    2017
409    2016
Name: Connected On, Length: 410, dtype: int64 0      2
1      2
2      2
3      2
4      2
      ..
405    6
406    6
407    6
408    6
409    7
Name: Connected On, Length: 410, dtype: int64
```

In [38]:
```
lidata['month'] = lidata['Connected On'].dt.month
lidata['year'] = lidata['Connected On'].dt.year
```

In [45]:
```
lidata['year'] = lidata['Connected On'].dt.year
```

In [46]:
```
lidata
```

Out[46]:

	First Name	Last Name	Company	Position	Connected On	month	year
0	Rohit	Kumar	Sanjay Ghodawat IIT & Medical Academy	Senior chemistry faculty	2023-02-27	2	2023
1	Nikhil	Mahabudhe	LetsUpgrade	Student	2023-02-26	2	2023
2	Shaikh	Ekbal	360DigiTMG	Project Intern	2023-02-25	2	2023
3	MD KAMRAN MD RAZIUDDIN	ANSARI	360DigiTMG	Data Science Intern	2023-02-24	2	2023
4	Nagesh	Dhonakonda	LetsUpgrade	Full stack web developer	2023-02-23	2	2023
...	...	...	...	...	...	...	...

	First Name	Last Name	Company	Position	Connected On	month	year
405	Aayush	Jhunjhunwala	Konverge Technologies	Principal Consultant	2017-06-21	6	2017
406	Manndarr	Waggh	Citrix	Escalation Engineer	2017-06-21	6	2017
407	Nair	Sreehari	HDFC Bank	Marketing Intern	2017-06-20	6	2017
408	Kunal	Rajguru	Visa	Staff Software Engineer	2017-06-20	6	2017
409	Prathamesh	Tugaonkar	Jukshio	R&D Engineer I	2016-07-08	7	2016

410 rows × 7 columns

In [50]:
```
plot_data = lidata.groupby(['year','month']).count()
```

In [59]:
```
plot_data.index
```

Out[59]:
```
MultiIndex([(2016,  7),
            (2017,  6),
            (2017,  7),
            (2018,  2),
            (2018,  6),
            (2018,  8),
            (2019,  6),
            (2019,  8),
            (2019,  9),
            (2020,  1),
            (2020,  4),
            (2020,  6),
            (2020,  8),
            (2020, 10),
            (2020, 11),
            (2020, 12),
            (2021,  1),
            (2021,  2),
            (2021,  3),
            (2021,  4),
            (2021,  5),
            (2021,  6),
            (2021,  7),
            (2021,  8),
            (2021,  9),
            (2021, 10),
            (2021, 11),
            (2021, 12),
            (2022,  1),
            (2022,  2),
            (2022,  3),
            (2022,  4),
            (2022,  5),
            (2022,  6),
            (2022,  7),
            (2022,  8),
            (2022,  9),
            (2022, 10),
```

```
           (2022, 11),
           (2022, 12),
           (2023,  1),
           (2023,  2)],
          names=['year', 'month'])
```

In [60]:

```
data_new = plot_data.copy()
data_new['index'] = plot_data.index
data_new
```

Out[60]:

year	month	First Name	Last Name	Company	Position	Connected On	index
2016	**7**	1	1	1	1	1	(2016, 7)
2017	**6**	16	16	16	16	16	(2017, 6)
	7	1	1	1	1	1	(2017, 7)
2018	**2**	2	2	2	2	2	(2018, 2)
	6	2	2	2	2	2	(2018, 6)
	8	1	1	1	1	1	(2018, 8)
2019	**6**	1	1	0	0	1	(2019, 6)
	8	1	1	0	0	1	(2019, 8)
	9	1	1	1	1	1	(2019, 9)
2020	**1**	1	1	1	1	1	(2020, 1)
	4	1	1	1	1	1	(2020, 4)
	6	1	1	1	1	1	(2020, 6)
	8	7	7	7	7	7	(2020, 8)
	10	8	8	7	7	8	(2020, 10)
	11	4	4	4	4	4	(2020, 11)
	12	1	1	1	1	1	(2020, 12)
2021	**1**	8	8	7	7	8	(2021, 1)
	2	3	3	1	2	3	(2021, 2)
	3	1	1	1	1	1	(2021, 3)
	4	5	5	5	5	5	(2021, 4)
	5	3	3	1	1	3	(2021, 5)
	6	3	3	3	3	3	(2021, 6)
	7	3	3	2	2	3	(2021, 7)
	8	4	4	2	2	4	(2021, 8)
	9	3	3	3	3	3	(2021, 9)
	10	6	6	3	3	6	(2021, 10)
	11	7	7	6	6	7	(2021, 11)

year	month	First Name	Last Name	Company	Position	Connected On	index
	12	2	2	2	2	3	(2021, 12)
2022	**1**	8	8	8	8	8	(2022, 1)
	2	1	1	1	1	2	(2022, 2)
	3	7	7	5	5	7	(2022, 3)
	4	7	7	7	7	7	(2022, 4)
	5	1	1	1	1	1	(2022, 5)
	6	2	2	2	2	2	(2022, 6)
	7	3	3	3	3	3	(2022, 7)
	8	9	9	8	8	9	(2022, 8)
	9	18	18	16	17	18	(2022, 9)
	10	32	32	32	32	32	(2022, 10)
	11	44	44	39	39	44	(2022, 11)
	12	54	54	43	43	58	(2022, 12)
2023	**1**	81	81	72	72	81	(2023, 1)
	2	40	40	35	35	40	(2023, 2)

In [73]:

```
data_new.reset_index(drop = True, inplace=True)
print(data_new)
```

```
    First Name  Last Name  Company  Position  Connected On       index
0            1          1        1         1             1   (2016, 7)
1           16         16       16        16            16   (2017, 6)
2            1          1        1         1             1   (2017, 7)
3            2          2        2         2             2   (2018, 2)
4            2          2        2         2             2   (2018, 6)
5            1          1        1         1             1   (2018, 8)
6            1          1        0         0             1   (2019, 6)
7            1          1        0         0             1   (2019, 8)
8            1          1        1         1             1   (2019, 9)
9            1          1        1         1             1   (2020, 1)
10           1          1        1         1             1   (2020, 4)
11           1          1        1         1             1   (2020, 6)
12           7          7        7         7             7   (2020, 8)
13           8          8        7         7             8  (2020, 10)
14           4          4        4         4             4  (2020, 11)
15           1          1        1         1             1  (2020, 12)
16           8          8        7         7             8   (2021, 1)
17           3          3        1         2             3   (2021, 2)
18           1          1        1         1             1   (2021, 3)
19           5          5        5         5             5   (2021, 4)
20           3          3        1         1             3   (2021, 5)
21           3          3        3         3             3   (2021, 6)
22           3          3        2         2             3   (2021, 7)
23           4          4        2         2             4   (2021, 8)
24           3          3        3         3             3   (2021, 9)
25           6          6        3         3             6  (2021, 10)
26           7          7        6         6             7  (2021, 11)
```

```
27          2          2          2          2          3  (2021, 12)
28          8          8          8          8          8   (2022, 1)
29          1          1          1          1          2   (2022, 2)
30          7          7          5          5          7   (2022, 3)
31          7          7          7          7          7   (2022, 4)
32          1          1          1          1          1   (2022, 5)
33          2          2          2          2          2   (2022, 6)
34          3          3          3          3          3   (2022, 7)
35          9          9          8          8          9   (2022, 8)
36         18         18         16         17         18   (2022, 9)
37         32         32         32         32         32  (2022, 10)
38         44         44         39         39         44  (2022, 11)
39         54         54         43         43         58  (2022, 12)
40         81         81         72         72         81   (2023, 1)
41         40         40         35         35         40   (2023, 2)
```

In [97]:

```
x = data_new['First Name']
print(x)
type(x)
```

```
0      1
1     16
2      1
3      2
4      2
5      1
6      1
7      1
8      1
9      1
10     1
11     1
12     7
13     8
14     4
15     1
16     8
17     3
18     1
19     5
20     3
21     3
22     3
23     4
24     3
25     6
26     7
27     2
28     8
29     1
30     7
31     7
32     1
33     2
34     3
35     9
36    18
37    32
38    44
39    54
40    81
41    40
Name: First Name, dtype: int64
```

Out[97]: pandas.core.series.Series

In [99]:
```
y = data_new.index
print(y)
```

```
RangeIndex(start=0, stop=42, step=1)
```

In [102…
```
plt.plot(y,x)
plt.scatter(y,x)
plt.ylabel('Number of connections')
plt.xlabel('Months/Year')
plt.grid()
plt.show()
```