In [1]:

```
!pip install seaborn
```

```
Collecting seaborn
  Downloading seaborn-0.11.2-py3-none-any.whl (292 kB)
Requirement already satisfied: pandas>=0.23 in d:\curso-data-science\venv\li
b\site-packages (from seaborn) (1.3.2)
Collecting scipy>=1.0
  Downloading scipy-1.7.1-cp39-cp39-win_amd64.whl (33.8 MB)
Requirement already satisfied: numpy>=1.15 in d:\curso-data-science\venv\lib
\site-packages (from seaborn) (1.21.2)

WARNING: You are using pip version 21.2.3; however, version 21.2.4 is availa
ble.
You should consider upgrading via the 'D:\curso-data-science\venv\Scripts\py
thon.exe -m pip install --upgrade pip' command.


Requirement already satisfied: matplotlib>=2.2 in d:\curso-data-science\venv
\lib\site-packages (from seaborn) (3.4.3)
Requirement already satisfied: pillow>=6.2.0 in d:\curso-data-science\venv\l
ib\site-packages (from matplotlib>=2.2->seaborn) (8.3.1)
Requirement already satisfied: kiwisolver>=1.0.1 in d:\curso-data-science\ve
nv\lib\site-packages (from matplotlib>=2.2->seaborn) (1.3.2)
Requirement already satisfied: pyparsing>=2.2.1 in d:\curso-data-science\ven
v\lib\site-packages (from matplotlib>=2.2->seaborn) (2.4.7)
Requirement already satisfied: python-dateutil>=2.7 in d:\curso-data-science
\venv\lib\site-packages (from matplotlib>=2.2->seaborn) (2.8.2)
Requirement already satisfied: cycler>=0.10 in d:\curso-data-science\venv\li
b\site-packages (from matplotlib>=2.2->seaborn) (0.10.0)
Requirement already satisfied: six in d:\curso-data-science\venv\lib\site-pa
ckages (from cycler>=0.10->matplotlib>=2.2->seaborn) (1.16.0)
Requirement already satisfied: pytz>=2017.3 in d:\curso-data-science\venv\li
b\site-packages (from pandas>=0.23->seaborn) (2021.1)
Installing collected packages: scipy, seaborn
Successfully installed scipy-1.7.1 seaborn-0.11.2
```

In [2]:

```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
%matplotlib inline
```

In [4]:

```
df = pd.read_csv("flights.csv",sep=",")
```

In [5]:

```
df.head()
```

Out[5]:

	year	month	passengers
0	1949	January	112
1	1949	February	118
2	1949	March	132
3	1949	April	129
4	1949	May	121

In [6]:

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 144 entries, 0 to 143
Data columns (total 3 columns):
 #   Column      Non-Null Count  Dtype 
---  ------      --------------  ----- 
 0   year        144 non-null    int64 
 1   month       144 non-null    object
 2   passengers  144 non-null    int64 
dtypes: int64(2), object(1)
memory usage: 3.5+ KB
```

In [7]:

```
df.describe()
```

Out[7]:

	year	passengers
count	144.000000	144.000000
mean	1954.500000	280.298611
std	3.464102	119.966317
min	1949.000000	104.000000
25%	1951.750000	180.000000
50%	1954.500000	265.500000
75%	1957.250000	360.500000
max	1960.000000	622.000000

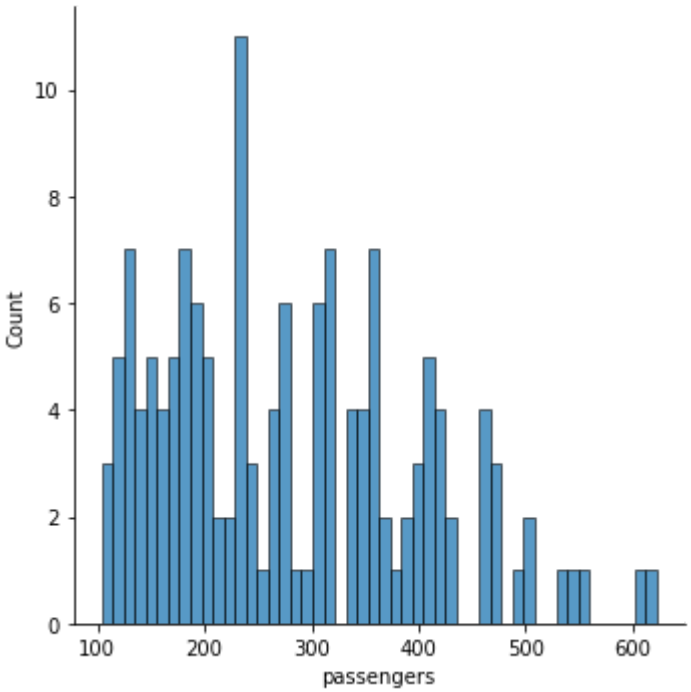
Inicializando com os plots

In [11]:

```
sns.displot(df['passengers'],bins=50)
```

Out[11]:

```
<seaborn.axisgrid.FacetGrid at 0x26a11773490>
```

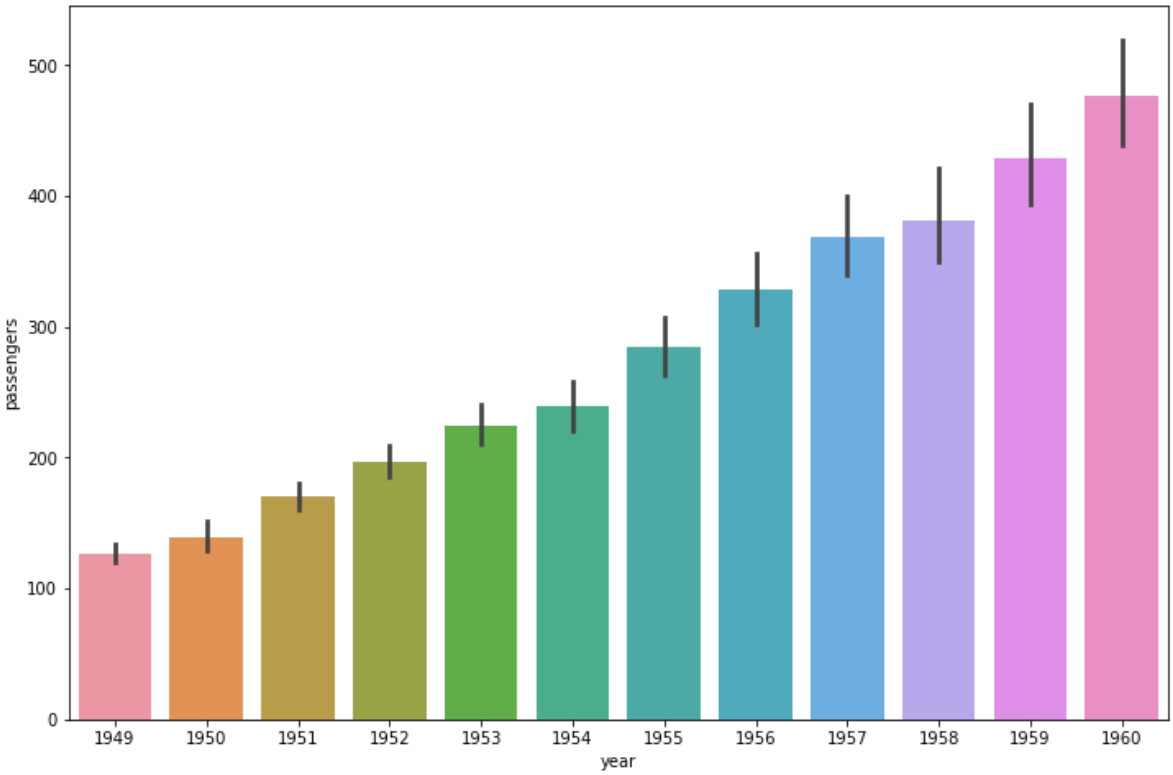


In [12]:

```
plt.figure(figsize=(12,8))
sns.barplot(x='year',y='passengers',data=df)
```

Out[12]:

```
<AxesSubplot:xlabel='year', ylabel='passengers'>
```

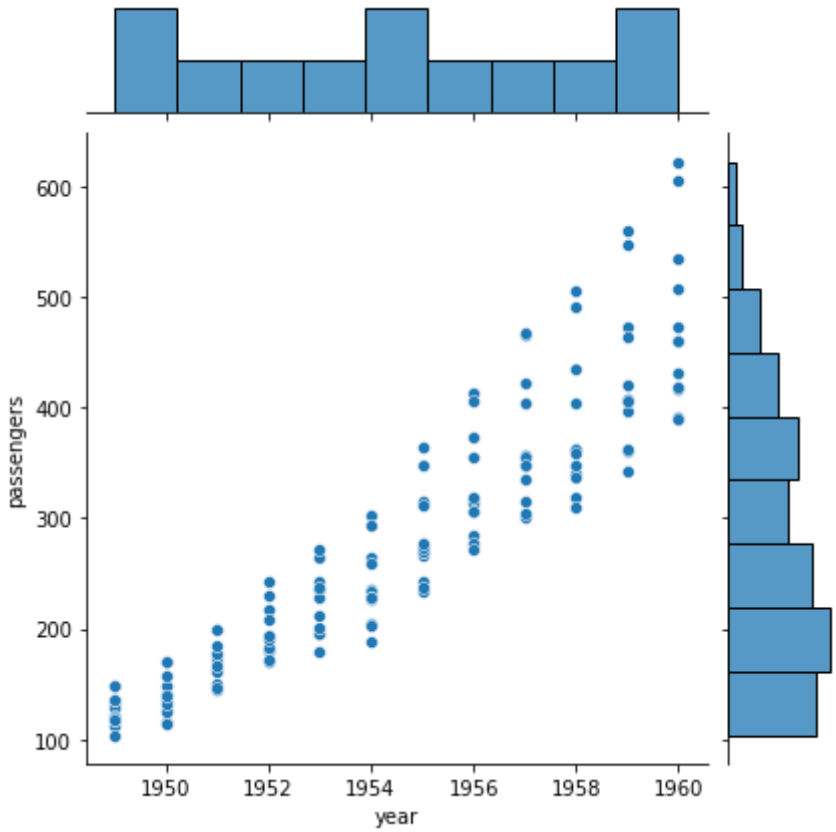


In [13]:

```
sns.jointplot(x='year',y='passengers',data=df)
```

Out[13]:

```
<seaborn.axisgrid.JointGrid at 0x26a0f51e160>
```

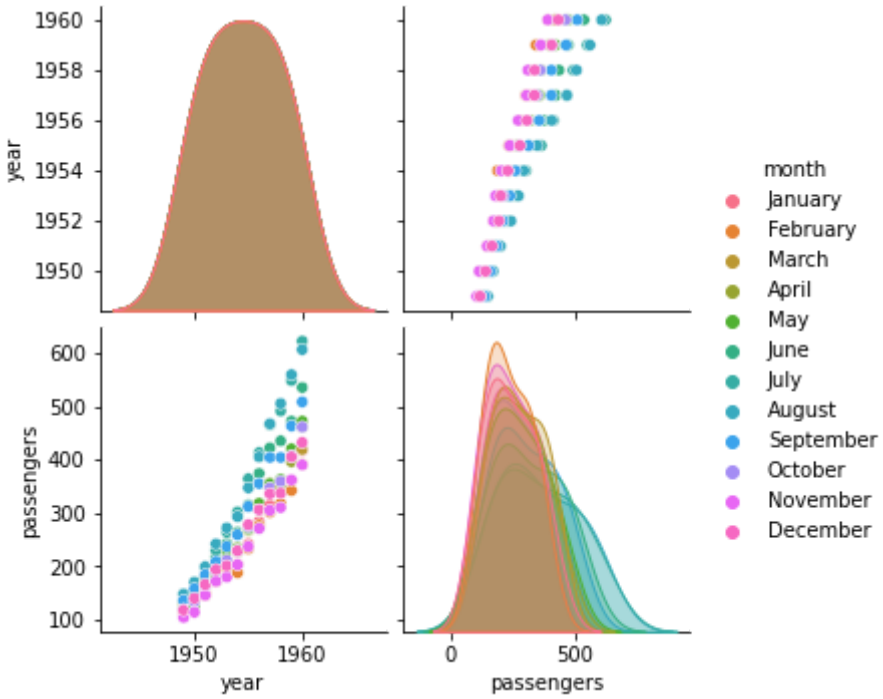


In [14]:

```
sns.pairplot(df,hue='month')
```

Out[14]:

```
<seaborn.axisgrid.PairGrid at 0x26a11988490>
```

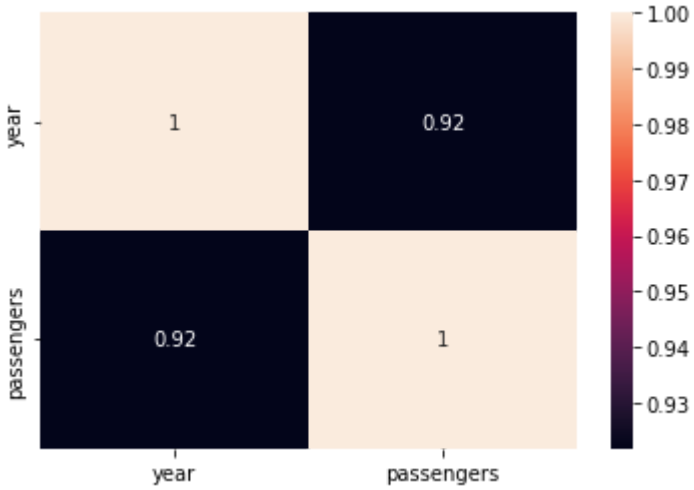


In [15]:

```
sns.heatmap(df.corr(),annot=True)
```

Out[15]:

```
<AxesSubplot:>
```



In [ ]: