In [1]:
```
import seaborn as sns
%matplotlib inline
```

In [38]:
```
import matplotlib.pyplot as plt
```

In [5]:
```
tips= sns.load_dataset("tips")
```

In [6]:
```
tips.head()
```

Out[6]:

	total_bill	tip	sex	smoker	day	time	size
0	16.99	1.01	Female	No	Sun	Dinner	2
1	10.34	1.66	Male	No	Sun	Dinner	3
2	21.01	3.50	Male	No	Sun	Dinner	3
3	23.68	3.31	Male	No	Sun	Dinner	2
4	24.59	3.61	Female	No	Sun	Dinner	4

In [9]:
```
flights=sns.load_dataset("flights")
```

In [10]:
```
flights.head()
```

Out[10]:

	year	month	passengers
0	1949	Jan	112
1	1949	Feb	118
2	1949	Mar	132
3	1949	Apr	129
4	1949	May	121

Heat Map

Data should be in Matrix form

Turn tips dataset in matrix form

In [11]:
```
tc = tips.corr()
```

```
C:\Users\ravie\AppData\Local\Temp\ipykernel_1608\1022518147.py:1: FutureWarning: The default value of numeric_only in DataFrame.corr is deprecated. In a future version, it will default to False. Select only valid columns or specify the value of numeric_only to silence this warning.
  tc = tips.corr()
```

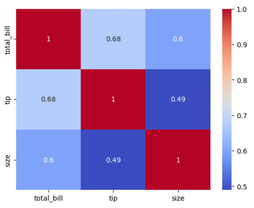
In [12]:
```
tc
```

Out[12]:

	total_bill	tip	size
total_bill	1.000000	0.675734	0.598315
tip	0.675734	1.000000	0.489299
size	0.598315	0.489299	1.000000

In [17]:
```
sns.heatmap(tc,annot=True, cmap='coolwarm')
```

Out[17]:
```
<Axes: >
```



Flights Data

In [19]:
```
flights
```

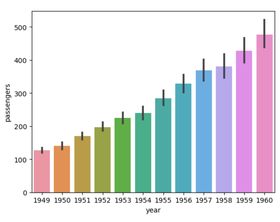
Out[19]:

	year	month	passengers
0	1949	Jan	112
1	1949	Feb	118
2	1949	Mar	132
3	1949	Apr	129
4	1949	May	121
...	...	...	...
139	1960	Aug	606
140	1960	Sep	508
141	1960	Oct	461
142	1960	Nov	390
143	1960	Dec	432

144 rows × 3 columns

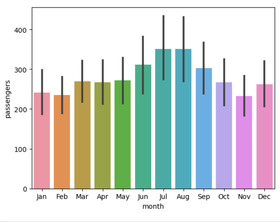
In [44]:
```
sns.barplot(x='year', y='passengers', data=flights)
```

Out[44]:
```
<Axes: xlabel='year', ylabel='passengers'>
```



In [45]:
```
sns.barplot(x='month', y='passengers', data=flights)
```

Out[45]:
```
<Axes: xlabel='month', ylabel='passengers'>
```



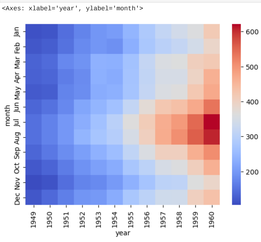
In [21]:
```
flt= flights.pivot_table(index='month',columns='year',values='passengers')
flt
```

Out[21]:

year	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
month												
Jan	112	115	145	171	196	204	242	284	315	340	360	417
Feb	118	126	150	180	196	188	233	277	301	318	342	391
Mar	132	141	178	193	236	235	267	317	356	362	406	419
Apr	129	135	163	181	235	227	269	313	348	348	396	461
May	121	125	172	183	229	234	270	318	355	363	420	472
Jun	135	149	178	218	243	264	315	374	422	435	472	535
Jul	148	170	199	230	264	302	364	413	465	491	548	622
Aug	148	170	199	242	272	293	347	405	467	505	559	606
Sep	136	158	184	209	237	259	312	355	404	404	463	508
Oct	119	133	162	191	211	229	274	306	347	359	407	461
Nov	104	114	146	172	180	203	237	271	305	310	362	390
Dec	118	140	166	194	201	229	278	306	336	337	405	432

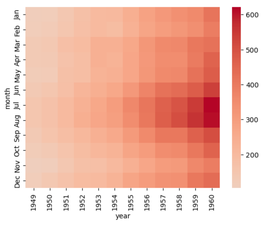
In [23]:
```
sns.heatmap(flt, cmap='coolwarm')
```

Out[23]:
```
<Axes: xlabel='year', ylabel='month'>
```



In [31]:
```
sns.heatmap(flt, cmap='coolwarm', center=1)
```

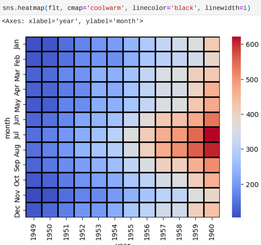
Out[31]:
```
<Axes: xlabel='year', ylabel='month'>
```



In [42]:
```
#plt.figure(figsize=(12,3))

sns.heatmap(flt, cmap='coolwarm', linecolor='black', linewidth=1)
```

Out[42]:
```
<Axes: xlabel='year', ylabel='month'>
```



Key Insights

1.The no of passengers has increased over the years

2.The number of flights are high in the months of july,aug as this is the time of summer vacation