In [1]:
```
import pandas as pd
import numpy as np
```

In [2]:
```
df=pd.read_csv('Desktop/Hotel Reservations.csv')
```

In [3]:
```
df
```

Out[3]:

	Booking_ID	no_of_adults	no_of_children	no_of_weekend_nights	no_of_week_nights	type_
0	INN00001	2	0	1	2	
1	INN00002	2	0	2	3	
2	INN00003	1	0	2	1	
3	INN00004	2	0	0	2	
4	INN00005	2	0	1	1	
...	...	...	...	...	...	...
36270	INN36271	3	0	2	6	
36271	INN36272	2	0	1	3	
36272	INN36273	2	0	2	6	
36273	INN36274	2	0	0	3	
36274	INN36275	2	0	1	2	

36275 rows × 19 columns

In [4]:
```
df['guest']= df['no_of_adults']+df['no_of_children']
```

In [5]:
```
df['tot_week']=df['no_of_weekend_nights']+df['no_of_week_nights']
```

In [6]:
```
df
```

Out[6]:

	Booking_ID	no_of_adults	no_of_children	no_of_weekend_nights	no_of_week_nights	type_
0	INN00001	2	0	1	2	
1	INN00002	2	0	2	3	
2	INN00003	1	0	2	1	
3	INN00004	2	0	0	2	
4	INN00005	2	0	1	1	
...	...	...	...	...	...	
36270	INN36271	3	0	2	6	
36271	INN36272	2	0	1	3	
36272	INN36273	2	0	2	6	
36273	INN36274	2	0	0	3	
36274	INN36275	2	0	1	2	

36275 rows × 21 columns

In [7]:
```
new_t= df[['guest','type_of_meal_plan','room_type_reserved','tot_week']]
```

In [8]:
```
new_t
```

Out[8]:

	guest	type_of_meal_plan	room_type_reserved	tot_week
0	2	Meal Plan 1	Room_Type 1	3
1	2	Not Selected	Room_Type 1	5
2	1	Meal Plan 1	Room_Type 1	3
3	2	Meal Plan 1	Room_Type 1	2
4	2	Not Selected	Room_Type 1	2
...	...	...	...	...
36270	3	Meal Plan 1	Room_Type 4	8
36271	2	Meal Plan 1	Room_Type 1	4
36272	2	Meal Plan 1	Room_Type 1	8
36273	2	Not Selected	Room_Type 1	3
36274	2	Meal Plan 1	Room_Type 1	3

36275 rows × 4 columns

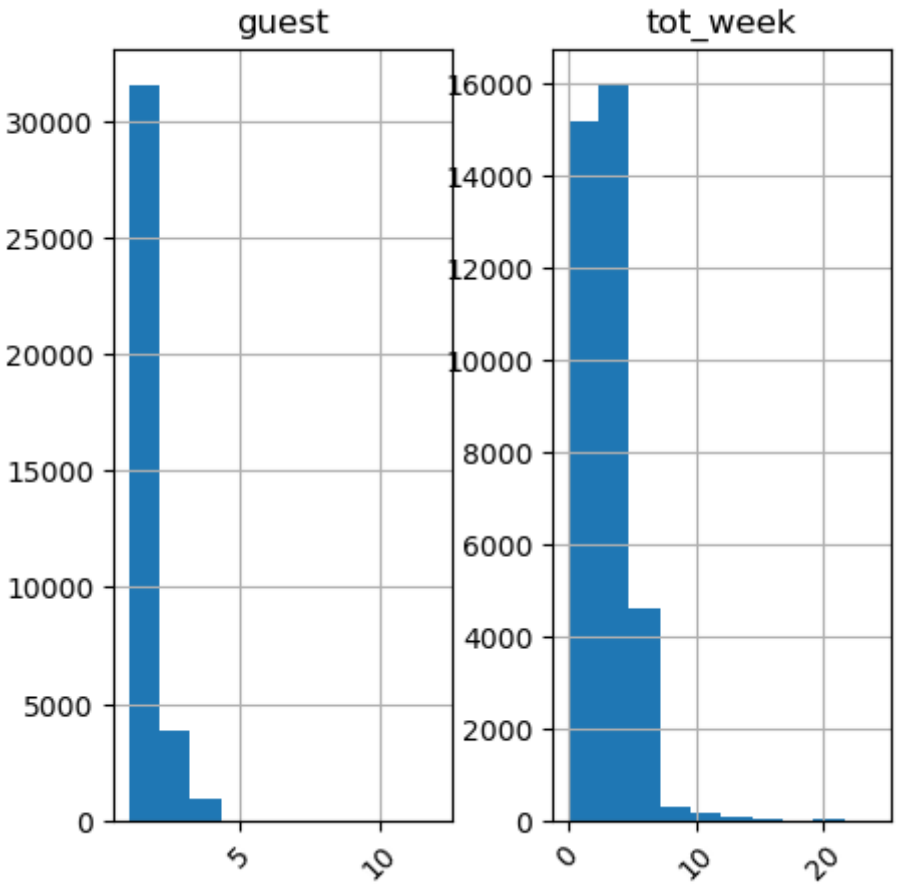
In [9]:
```
new_t['room_type_reserved'] = new_t['room_type_reserved'].str.replace('_',' ')
```

```
C:\Users\Sony Vaio\AppData\Local\Temp\ipykernel_11172\51577132.py:1: SettingWithCo
pyWarning:
A value is trying to be set on a copy of a slice from a DataFrame.
Try using .loc[row_indexer,col_indexer] = value instead

See the caveats in the documentation: https://pandas.pydata.org/pandas-docs/stabl
e/user_guide/indexing.html#returning-a-view-versus-a-copy
  new_t['room_type_reserved'] = new_t['room_type_reserved'].str.replace('_',' ')
```

In [10]:
```
new_t.hist(figsize=(5,5),xrot=45)
```

Out[10]:
```
array([[<Axes: title={'center': 'guest'}>,
        <Axes: title={'center': 'tot_week'}>]], dtype=object)
```



In [11]:
```
pd.pivot_table(new_t,index='guest')
```

```
C:\Users\Sony Vaio\AppData\Local\Temp\ipykernel_11172\3804914069.py:1: FutureWarni
ng: pivot_table dropped a column because it failed to aggregate. This behavior is
deprecated and will raise in a future version of pandas. Select only the columns t
hat can be aggregated.
  pd.pivot_table(new_t,index='guest')
```

Out[11]:

guest	tot_week
1	2.505694
2	3.117952
3	3.339133
4	3.167763
5	2.466667
10	3.000000
11	7.000000
12	2.000000

In [12]:
```
pd.pivot_table(new_t,columns='guest')
```

```
C:\Users\Sony Vaio\AppData\Local\Temp\ipykernel_11172\4015835572.py:1: FutureWarni
ng: pivot_table dropped a column because it failed to aggregate. This behavior is
deprecated and will raise in a future version of pandas. Select only the columns t
hat can be aggregated.
  pd.pivot_table(new_t,columns='guest')
```

Out[12]:

guest	1	2	3	4	5	10	11	12
tot_week	2.505694	3.117952	3.339133	3.167763	2.466667	3.0	7.0	2.0

In [13]:
```
pd.pivot_table(new_t,index='guest',values='tot_week',aggfunc='max')
```

Out[13]:

guest	tot_week
1	23
2	24
3	18
4	15
5	7
10	3
11	7
12	2

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [14]:
```
cc = pd.read_csv('Downloads/climate_precip.csv')
ct = pd.read_csv('Downloads/climate_temp.csv')
```

In [15]:
```
cc
```

Out[15]:

	STATION	STATION_NAME	DATE	DLY-PRCP-25PCTL	DLY-SNWD-25PCTL	DLY-SNOW-25PCTL	DLY-PRCP-50PCTL	D SNW 50P
0	GHCND:USC00049099	TWENTYNINE PALMS CA US	20100101	-6.66	-666	-66.6	-6.66	-
1	GHCND:USC00049099	TWENTYNINE PALMS CA US	20100102	-6.66	-666	-66.6	-6.66	-
2	GHCND:USC00049099	TWENTYNINE PALMS CA US	20100103	-6.66	-666	-66.6	-6.66	-
3	GHCND:USC00049099	TWENTYNINE PALMS CA US	20100104	-6.66	-9999	-9999.0	-6.66	-9
4	GHCND:USC00049099	TWENTYNINE PALMS CA US	20100105	-6.66	-9999	-9999.0	-6.66	-9
...	...	...	...	...	...	...	...	
151105	GHCND:USC00046006	MOUNT WILSON CBS CA US	20101227	0.12	-9999	-9999.0	0.41	-9
151106	GHCND:USC00046006	MOUNT WILSON CBS CA US	20101228	0.12	-9999	-9999.0	0.42	-9
151107	GHCND:USC00046006	MOUNT WILSON CBS CA US	20101229	0.12	-9999	-9999.0	0.43	-9
151108	GHCND:USC00046006	MOUNT WILSON CBS CA US	20101230	0.12	-9999	-9999.0	0.43	-9
151109	GHCND:USC00046006	MOUNT WILSON CBS CA US	20101231	0.12	-9999	-9999.0	0.44	-9

151110 rows × 29 columns

In [ ]:
```

```

In [16]:
```
room = new_t.groupby('room_type_reserved').mean()
```

```
C:\Users\Sony Vaio\AppData\Local\Temp\ipykernel_11172\75094201.py:1: FutureWarnin
g: The default value of numeric_only in DataFrameGroupBy.mean is deprecated. In a
future version, numeric_only will default to False. Either specify numeric_only or
select only columns which should be valid for the function.
  room = new_t.groupby('room_type_reserved').mean()
```

In [17]:
```
room
```

Out[17]:

room_type_reserved	guest	tot_week
Room Type 1	1.819694	2.904977
Room Type 2	2.167630	3.245665
Room Type 3	1.571429	2.571429
Room Type 4	2.230642	3.474492
Room Type 5	1.871698	2.954717
Room Type 6	3.683230	3.213251
Room Type 7	3.044304	2.892405

In [ ]: