```
import pandas as pd
df=pd.read csv(r"C:\Users\Admin\dataset 1 202508051858.csv")
df
            destination
                         passanger weather temperature
                                                         time \
        No Urgent Place
0
                             Alone
                                     Sunny
                                                     55
                                                          2PM
1
        No Urgent Place Friend(s)
                                     Sunny
                                                     80
                                                         10AM
2
        No Urgent Place Friend(s)
                                                     80
                                     Sunny
                                                         10AM
3
        No Urgent Place Friend(s)
                                                     80
                                                          2PM
                                     Sunny
4
        No Urgent Place Friend(s)
                                                     80
                                                          2PM
                                     Sunny
                                                     . . .
3111721
                   Home
                                     Sunny
                                                          6PM
                             Alone
                                                     80
                   Home
                                                          6PM
3111722
                             Alone
                                     Sunny
                                                     80
                                     Sunny
3111723
                   Home
                             Alone
                                                     80
                                                          6PM
3111724
                   Home
                             Alone
                                                     80
                                                         10PM
                                     Sunny
3111725
                   Home
                             Alone
                                     Sunny
                                                     80
                                                         10PM
                      coupon expiration gender age
maritalStatus ...
              Restaurant(<20)
                                      1d
                                          Female 21 Unmarried
partner
                 Coffee House
                                      2h
                                          Female 21 Unmarried
partner
         Carry out & Take away
                                      2h Female 21 Unmarried
2
partner
                  Coffee House
                                          Female 21
                                      2h
                                                      Unmarried
partner
                 Coffee House
                                          Female 21 Unmarried
                                      1d
partner
                 Coffee House
                                      1d Female 26
                                                        Married
3111721
partner
3111722
              Restaurant(<20)
                                      2h
                                          Female 26
                                                        Married
partner
3111723
                 Coffee House
                                      2h
                                          Female 26
                                                        Married
partner
3111724
              Restaurant(<20)
                                      2h
                                          Female 26
                                                        Married
partner
3111725
         Carry out & Take away
                                      1d
                                          Female 26
                                                        Married
partner
         CarryAway RestaurantLessThan20 Restaurant20To50
toCoupon GEQ5min \
              NaN
                                   4~8
                                                    1~3
1
1
                                   4~8
                                                    1~3
              NaN
1
```

2	NaN	4~8	1~3
1 3 1	NaN	4~8	1~3
1	IVAIV		
4	NaN	4~8	1~3
1			
3111721 1	4~8	gt8	1~3
3111722	4~8	gt8	1~3
1 3111723	4~8	gt8	1~3
1	4~0	gto	
3111724 1	4~8	gt8	1~3
3111725	4~8	gt8	1~3
1			
toCoup	on_GEQ15min toC	oupon_GEQ25min direct	tion_same
direction_opp	Υ \		
) L 1	0	0	0
L	0	0	0
1 0 2	1	0	0
2 1 1			
3 1 0	1	0	0
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3111721 L 1	0	0	0
3111722	0	0	1
) 1	1	1	0
3111723 L 1	1	1	0
3111724	0	0	1
9 1 3111725	0	0	1
1	•	· ·	_
row_co	unt		
0 1 2 3	1 2 3 4		
3	4		

```
4
                5
3111721
             4142
3111722
             4143
3111723
             4144
3111724
             4145
3111725
             4146
[3111726 rows x 27 columns]
df[['weather','temperature']]
        weather
                 temperature
0
          Sunny
1
          Sunny
                           80
2
          Sunny
                           80
3
                           80
          Sunny
4
                           80
          Sunny
            . . .
          Sunny
3111721
                          80
3111722
          Sunny
                           80
3111723
                           80
          Sunny
3111724
                           80
          Sunny
3111725
                          80
          Sunny
[3111726 rows x 2 columns]
df.head(10)
       destination
                    passanger weather
                                        temperature
                                                     time \
   No Urgent Place
                        Alone
                                 Sunny
                                                      2PM
1
  No Urgent Place Friend(s)
                                 Sunny
                                                 80
                                                     10AM
2
  No Urgent Place Friend(s)
                                                 80
                                                     10AM
                                 Sunny
3
  No Urgent Place Friend(s)
                                                 80
                                                      2PM
                                 Sunny
4
  No Urgent Place Friend(s)
                                 Sunny
                                                 80
                                                      2PM
5
  No Urgent Place Friend(s)
                                 Sunny
                                                 80
                                                      6PM
  No Urgent Place Friend(s)
                                                 55
                                                      2PM
                                 Sunny
7
   No Urgent Place
                       Kid(s)
                                 Sunny
                                                 80
                                                     10AM
8
   No Urgent Place
                       Kid(s)
                                                 80
                                                     10AM
                                 Sunny
  No Urgent Place
                                                 80
                                                     10AM
                       Kid(s)
                                 Sunny
                  coupon expiration gender age
maritalStatus
         Restaurant(<20)
                                  1d
                                      Female 21
                                                 Unmarried
partner
            Coffee House
                                  2h Female 21
                                                 Unmarried
partner
  Carry out & Take away
                                  2h
                                      Female 21
                                                  Unmarried
partner
            Coffee House
                                  2h
                                      Female 21 Unmarried
```

partner	Coffee	laves	1 പ	Famal a	21	المسم سمة مط		
4 partner	Coffee H	louse	1d	Female	21	Unmarried		
5	Restaurant(	(<20)	2h	Female	21	Unmarried		
partner 6 Carry	out & Take	away	1d	Female	21	Unmarried		
partner 7	 Restaurant(	(~20)	2h	Female	21	Unmarried		
partner								
8 Carry partner	out & Take	away	2h	Female	21	Unmarried		
9		Bar	1d	Female	21	Unmarried		
partner								
Carry 0	Away Restaur NaN	rantLessTha	n20 Re 4~8	staurant	20To5 ~1	0 toCoupon_GE	Q5min 1	
1	NaN		4~8		1~	.3	1	
2 3	NaN NaN		4~8 4~8		1~ 1~		1 1	
4	NaN		4~8		1~	.3	1	
5 6	NaN NaN		4~8 4~8		1~ 1~		1 1	
7	NaN		4~8		1~	.3	1	
8 9	NaN NaN		4~8 4~8		1~ 1~		1 1	
		toCoupon G	E025mi	n direct		ame direction	onn	Υ
\	_	tocoupon_e			1011_5		_	
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1	0			9		0	1	0
2	1			9		0	1	1
3	1			9		0	1	0
4	1			9		0	1	0
5	1			9		0	1	1
6	1			9		Θ	1	1
7	1			9		Θ	1	1
8	1			9		Θ	1	1
9	1			9		0	1	0
	•					· ·	_	
row_cou	unt							

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0
          1
          2
1
2
          3
3
          4
4
          5
5
          6
6
          7
7
          8
8
          9
9
         10
[10 rows x 27 columns]
df['passanger'].unique()
array(['Alone', 'Friend(s)', 'Kid(s)', 'Partner'], dtype=object)
df[df['destination']=='Home']
        destination passanger weather
                                          temperature
                                                        time \
13
                          Alone
                Home
                                  Sunny
                                                         6PM
                Home
14
                          Alone
                                  Sunny
                                                   55
                                                         6PM
15
                Home
                          Alone
                                  Sunny
                                                   80
                                                         6PM
35
                Home
                          Alone
                                  Sunny
                                                   55
                                                         6PM
36
                Home
                          Alone
                                  Sunny
                                                   55
                                                         6PM
                 . . .
                            . . .
                                    . . .
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                                                         6PM
3111721
                Home
                          Alone
                                  Sunny
                                                   80
3111722
                Home
                          Alone
                                  Sunny
                                                   80
                                                         6PM
3111723
                Home
                          Alone
                                                   80
                                                         6PM
                                  Sunny
3111724
                Home
                          Alone
                                  Sunny
                                                   80
                                                        10PM
3111725
                Home
                          Alone
                                  Sunny
                                                   80
                                                       10PM
                          coupon expiration gender age
maritalStatus
13
                             Bar
                                          1d
                                              Female 21 Unmarried
partner
              Restaurant (20-50)
                                              Female 21 Unmarried
14
                                          1d
partner
          . . .
                   Coffee House
                                              Female 21
15
                                          2h
                                                           Unmarried
partner
35
                             Bar
                                          1d
                                                Male 21
Single
36
              Restaurant (20-50)
                                          1d
                                                Male 21
Single
. . .
                   Coffee House
3111721
                                          1d
                                              Female
                                                       26
                                                             Married
partner
                Restaurant(<20)
                                          2h
                                              Female 26
                                                             Married
3111722
partner
```

3111723 partner		Coffee House		2h	Female	26	Married
3111724		Restaurant(<20)		2h	Female	26	Married
partner 3111725	 Carry	out & Take away		1d	Female	26	Married
partner							
		Away RestaurantLe	ssThan2	0 Re	staurant	20To50	
toCoupon_	GEQ5m:		1	0		1 2	
13 1		NaN	4~	·O		1~3	
14		NaN	4~	·8		1~3	
1		NoN	4	0		1 2	
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35		4~8	4~	·8		less1	
1		4.0	4	0		1 1	
36 1		4~8	4~	<b>΄</b> δ		less1	
 3111721		4~8	at	.0		1~3	
1		4~0	gt	.0		1~3	
3111722		4~8	gt	8		1~3	
1 3111723		4~8	gt	8		1~3	
1 3111724		4~8	gt	·Q		1~3	
1		4~0	gı	.0		1~5	
3111725 1		4~8	gt	8		1~3	
1							
		on_GEQ15min toCou	ipon_GEQ	25mi	n direct	ion_sa	me
direction 13	_opp	γ \			Θ		1
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14		1			0		0
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35		0			0		1
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36 1 0		1			U		U
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1 1		U			O .		U
3111722		0			Θ		1

0 1 3111723		1		1		0
1 1		_	-	_		· ·
3111724		6	)	0		1
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0 1						_
	row count					
13	row_count 14					
14	15					
15	16					
35 36	36 37					
3111721	4142					
3111722 3111723	4143 4144					
3111724	4145					
3111725	4146					
[793646	rows x 27 co	olumns	5]			
df.sort_	_values('coup	pon')				
	destina		passanger		temperature	
2011253	No Urgent I	D1 200		D = - =		
106000	no orgene i		Friend(s)	Rainy	55	
1860992 1860990	No orgene i	Home	Partner	Sunny	55	5 10PM
1860992 1860990 517049	No Urgent I	Home Home		-		5 10PM 5 6PM
1860990	J	Home Home Place	Partner Alone	Sunny Rainy	55 55	5 10PM 5 6PM 0 2PM
1860990 517049 517051	No Urgent I	Home Home Place Place	Partner Alone Alone Partner	Sunny Rainy Snowy Sunny	55 55 36 55	5 10PM 5 6PM 0 2PM 5 2PM
1860990 517049	No Urgent I	Home Home Place Place	Partner Alone Alone Partner	Sunny Rainy Snowy Sunny	55 55 36 55	5 10PM 6 6PM 0 2PM 5 2PM 
1860990 517049 517051  1349885 1349883 2337157	No Urgent I No Urgent I	Home Home Place Place  Home Home Place	Partner Alone Alone Partner Alone Alone Friend(s)	Sunny Rainy Snowy Sunny Sunny Sunny Sunny	55 55 36 55  86 86	10PM 6 6PM 0 2PM 6 2PM  0 10PM 0 6PM 0 2PM
1860990 517049 517051  1349885 1349883 2337157 1349702	No Urgent I No Urgent I No Urgent I No Urgent I	Home Home Place Place Home Home Place Place	Partner Alone Alone Partner Alone Alone Friend(s) Kid(s)	Sunny Rainy Snowy Sunny Sunny Sunny Sunny Sunny	55 55 36 55  86 86 86	10PM 6 6PM 2PM 5 2PM  10PM 0 6PM 0 2PM 0 10AM
1860990 517049 517051  1349885 1349883 2337157	No Urgent I No Urgent I	Home Home Place Place Home Home Place Place	Partner Alone Alone Partner Alone Alone Friend(s)	Sunny Rainy Snowy Sunny Sunny Sunny Sunny	55 55 36 55  86 86	10PM 6 6PM 2PM 5 2PM  10PM 0 6PM 0 2PM 0 10AM
1860990 517049 517051  1349885 1349883 2337157 1349702 0	No Urgent I No Urgent I No Urgent I No Urgent I No Urgent I	Home Home Place Place Home Home Place Place Place	Partner Alone Alone Partner Alone Alone Friend(s) Kid(s)	Sunny Rainy Snowy Sunny Sunny Sunny Sunny Sunny	55 55 36 55  86 86 86	10PM 6 6PM 2PM 5 2PM  10PM 0 6PM 0 2PM 0 10AM
1860990 517049 517051  1349885 1349883 2337157 1349702 0	No Urgent I No Urgent I No Urgent I No Urgent I No Urgent I	Home Home Place Place Home Place Place Place Oupon	Partner Alone Alone Partner Alone Alone Friend(s) Kid(s) Alone expiration	Sunny Rainy Snowy Sunny Sunny Sunny Sunny Sunny Sunny Sunny	55 55 36 55  86 86 86 86 55	5 10PM 6 6PM 9 2PM 5 2PM  10PM 0 6PM 10AM 10AM 2PM maritalStatus
1860990 517049 517051  1349885 1349883 2337157 1349702 0	No Urgent I No Urgent I No Urgent I No Urgent I No Urgent I	Home Home Place Place Home Home Place Place Place	Partner Alone Alone Partner Alone Alone Friend(s) Kid(s) Alone	Sunny Rainy Snowy Sunny Sunny Sunny Sunny Sunny Sunny	55 55 36 55  86 86 86 86	10PM 6PM 2PM 5 2PM  10PM 0 6PM 0 2PM 0 10AM 5 2PM
1860990 517049 517051  1349885 1349883 2337157 1349702 0	No Urgent I No Urgent I No Urgent I No Urgent I No Urgent I	Home Home Place Place Home Place Place Place Oupon	Partner Alone Alone Partner Alone Alone Friend(s) Kid(s) Alone expiration	Sunny Rainy Snowy Sunny Sunny Sunny Sunny Sunny Sunny Sunny	55 55 36 55  86 86 86 86 55 age	5 10PM 6 6PM 9 2PM 5 2PM  10PM 0 6PM 10AM 10AM 2PM maritalStatus
1860990 517049 517051  1349885 1349883 2337157 1349702 0 \ 2011253  1860992	No Urgent I No Urgent I No Urgent I No Urgent I No Urgent I	Home Home Place Place Home Place Place Place Dlace Bar Bar	Partner Alone Alone Partner Alone Alone Friend(s) Kid(s) Alone expiration 2h	Sunny Rainy Snowy Sunny Sunny Sunny Sunny Sunny Gender Male	55 55 36 55  86 86 86 86 55 age 46	10PM 6 6PM 7 2PM 6 2PM 7 10PM 8 6PM 9 2PM 9 10AM 9 2PM 9 10AM 9 2PM 10AM 10 2PM 10AM 10AM 10AM 10AM 10AM 10AM 10AM 10A
1860990 517049 517051  1349885 1349883 2337157 1349702 0 \ 2011253  1860990	No Urgent I No Urgent I No Urgent I No Urgent I No Urgent I	Home Home Place Place Home Place Place Place Place Dace Place Dace	Partner Alone Alone Partner Alone Alone Friend(s) Kid(s) Alone expiration 2h	Sunny Rainy Snowy Sunny Sunny Sunny Sunny Sunny Sunny Sunny	55 55 36 55  86 86 86 86 55 age 46	6 10PM 6 6PM 9 2PM 6 2PM 9 10PM 9 6PM 9 2PM 9 10AM 6 2PM maritalStatus Single
1860990 517049 517051  1349885 1349883 2337157 1349702 0 \ 2011253  1860992	No Urgent I No Urgent I No Urgent I No Urgent I No Urgent I	Home Home Place Place Home Place Place Place Dlace Bar Bar	Partner Alone Alone Partner Alone Alone Friend(s) Kid(s) Alone expiration 2h	Sunny Rainy Snowy Sunny Sunny Sunny Sunny Sunny Gender Male	55 55 36 55  86 86 86 86 55 age 46 21 M	10PM 6 6PM 7 2PM 6 2PM 7 10PM 8 6PM 9 2PM 9 10AM 9 2PM 9 10AM 9 2PM 10AM 10 2PM 10AM 10AM 10AM 10AM 10AM 10AM 10AM 10A
1860990 517049 517051  1349885 1349883 2337157 1349702 0 \ 2011253  1860992  1860990 	No Urgent I No Urgent I No Urgent I No Urgent I No Urgent I	Home Home Place Place Home Place Place Place Bar Bar Bar	Partner Alone Alone Partner Alone Alone Friend(s) Kid(s) Alone expiration 2h 1d 1d	Sunny Rainy Snowy Sunny Sunny Sunny Sunny Sunny Sunny Female Female Male	55 55 36 55  86 86 86 86 55 age 46 21 M 21 M	10PM 6 6PM 7 2PM 6 2PM 7 10PM 9 6PM 9 2PM 9 10AM 9 2PM 10AM 6 2PM 10AM 6 2PM 10AM 6 2PM 10AM 10AM 10AM 10AM 10AM 10AM 10AM 10A
1860990 517049 517051  1349885 1349883 2337157 1349702 0 \ 2011253  1860992  1860990 	No Urgent I No Urgent I No Urgent I No Urgent I No Urgent I	Home Home Place Place Home Place Place Place Bar Bar	Partner Alone Alone Partner Alone Alone Friend(s) Kid(s) Alone expiration 2h 1d	Sunny Rainy Snowy Sunny Sunny Sunny Sunny Sunny Sunny Female Female	55 55 36 55  86 86 86 86 55 age 46 21 M 21 M	6 10PM 6 6PM 9 2PM 6 2PM 9 10PM 9 6PM 9 10AM 6 2PM maritalStatus Single Married partner

1349885	Restaurant(<20)	2h	Male	26		Single
1349883	Restaurant(<20)	2h	Male	26		Single
2337157	Restaurant(<20)	1d	Male	21		Single
1349702	Restaurant(<20)	1d	Female	50plus	Unmarried	partner
0	Restaurant(<20)	1d	Female	21	Unmarried	partner
toCoupon	CarryAway Restaurant GEQ5min \	LessThan	20 Rest	aurant20	Го50	
2011253	1~3	4	~8	l	ess1	
1 1860992	4~8	1	.~3		1~3	
1 1860990	4~8	1	.~3		1~3	
1						
517049 1	gt8	1	.~3		1~3	
517051 1	gt8	1	.~3		1~3	
1349885	1~3	1	.~3	l	ess1	
1 1349883	1~3	1	.~3	l	ess1	
1 2337157	4~8	1	.~3	l	ess1	
1 1349702	4~8	1	.~3	l	ess1	
1 0	NaN	4	~8		1~3	
1						
	toCoupon_GEQ15min toC	Coupon_GE	Q25min	directio	n_same	
2011253	n_opp Y \ 1		0		0	
1 0 1860992	1		1		0	
1 1						
1860990 1 1	1		1		0	
517049 1 1	0		0		0	
517051	Θ		0		Θ	

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1 0
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1349885
0 1
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1349883
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2337157
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1 1
1349702
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1 0
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0
1 1
        row count
2011253
             7182
1860992
             9129
1860990
             9127
517049
             9690
517051
             9692
             5382
1349885
1349883
             5380
2337157
             3302
1349702
             5199
                1
0
[3111726 rows x 27 columns]
df.rename(columns={'destination':'Destination'},inplace=True)
df
             Destination
                           passanger weather
                                               temperature
                                                            time \
         No Urgent Place
                               Alone
                                       Sunny
                                                             2PM
0
                                                        55
         No Urgent Place
1
                           Friend(s)
                                       Sunny
                                                        80
                                                            10AM
2
         No Urgent Place
                                                        80
                           Friend(s)
                                       Sunny
                                                            10AM
3
         No Urgent Place Friend(s)
                                                        80
                                                             2PM
                                       Sunny
4
         No Urgent Place
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                           Friend(s)
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                                                        80
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3111721
                    Home
                               Alone
                                       Sunny
                                                        80
                                                             6PM
                    Home
                               Alone
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                                                             6PM
3111722
                                       Sunny
3111723
                     Home
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3111724
                    Home
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                                                            10PM
                                       Sunny
                    Home
3111725
                               Alone
                                                        80
                                                            10PM
                                       Sunny
                         coupon expiration gender age
maritalStatus
               Restaurant(<20)
                                        1d
                                            Female 21 Unmarried
partner ...
```

1		Coffee	House	2h	Female	21	Unmarried	
partner 2	 Carry	out & Tak	e away	2h	Female	21	Unmarried	
partner 3		Coffee	House	2h	Female	21	Unmarried	
partner		Coffee	Havea	1 പ	Comple	21	المسمسمة مما	
4 partner		Coffee	House	1d	Female	21	Unmarried	
3111721		Coffee	House	1d	Female	26	Married	
partner 3111722		Restauran	t(<20)	2h	Female	26	Married	
partner 3111723		Coffee	House	2h	Female	26	Married	
partner								
3111724 partner		Restauran	t(<20)	2h	Female	26	Married	
3111725 partner	Carry	out & Tak	e away	1d	Female	26	Married	
parener		A D l		h 20 D		- 2 O T -	F.0	
toCoupon			urantLessT	nan2⊍ R	estaurani	2010	50	
0	<b>-</b> `	NaN		4~8		1	~3	
1								
1 1		NaN		4~8		1	~3	
2		NaN		4~8		1	~3	
1		NaN		4~8		1	~3	
1		IValv		4~0			.~J	
4		NaN		4~8		1	~3	
1								
3111721		4~8		gt8		1	~3	
1 3111722		4~8		gt8		1	~3	
1		4 0		a. ± 0		1	2	
3111723 1		4~8		gt8		T	~3	
3111724 1		4~8		gt8		1	~3	
3111725		4~8		gt8		1	~3	
1								
			n toCoupon	_GEQ25m	in direct	ion_	same	
directio 0	n_opp		0		0		0	

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1
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1
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3111721
                                                           0
1 1
3111722
                         0
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0 1
3111723
                                                           0
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3111724
                         0
                                                            1
0 1
3111725
                         0
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0 1
        row_count
0
                1
                2
1
2
                3
3
                4
4
                5
3111721
             4142
3111722
             4143
3111723
             4144
3111724
             4145
             4146
3111725
[3111726 rows x 27 columns]
df.groupby('occupation').size().to_frame('Count').reset_index()
                                    occupation
                                                  Count
                    Architecture & Engineering
                                                  42984
0
1
     Arts Design Entertainment Sports & Media
                                                 154387
2
    Building & Grounds Cleaning & Maintenance
                                                 10780
3
                          Business & Financial
                                                 133418
4
                   Community & Social Services
                                                 59089
5
                       Computer & Mathematical
                                                 345439
                     Construction & Extraction
6
                                                 37796
7
                    Education&Training&Library
                                                 231343
8
                    Farming Fishing & Forestry
                                                  10535
           Food Preparation & Serving Related
9
                                                  73076
```

```
10
         Healthcare Practitioners & Technical
                                                 59863
11
                           Healthcare Support
                                                 59356
12
            Installation Maintenance & Repair
                                                 32630
13
                                                 53742
                                        Legal
14
                 Life Physical Social Science
                                                41776
15
                                   Management
                                               205708
16
              Office & Administrative Support 156731
17
                      Personal Care & Service
                                                42918
18
                       Production Occupations
                                                 26950
19
                           Protective Service 42979
20
                                      Retired 121473
21
                              Sales & Related 268179
22
                                       Student
                                               388562
23
             Transportation & Material Moving
                                               53476
24
                                   Unemployed 458536
df.groupby('weather')
['temperature'].mean().to frame('avg temp').reset index()
  weather
            avg temp
0
    Rainy
           55.000000
           30.000000
1
    Snowy
    Sunny
           68.947152
df.groupby('weather')
['temperature'].size().to frame('Count temp').reset index()
 weather Count temp
0
    Rainy
               296450
1
    Snowy
               344225
2
    Sunny
              2471051
df.groupby('weather')
['temperature'].nunique().to frame('count distinct temp').reset index(
           count_distinct_temp
 weather
    Rainy
0
    Snowy
                             1
1
2
    Sunny
                             3
df.groupby('weather')
['temperature'].sum().to frame('sum temp').reset index()
 weather
            sum temp
0
    Rainy
            16304750
1
    Snowv
            10326750
    Sunny
           170371930
df.groupby('weather')
['temperature'].min().to frame('min temp').reset index()
```

```
weather min temp
0
    Rainy
                 55
1
    Snowy
                 30
2
    Sunny
                 30
df.groupby('weather')
['temperature'].max().to frame('max temp').reset index()
  weather max temp
    Rainy
                 55
1
    Snowy
                 30
                 80
2
    Sunny
df.groupby('occupation').filter(lambda
x:x['occupation'].iloc[0]=='Student').groupby('occupation').size()
occupation
Student
           388562
dtype: int64
pd.concat([df,df1])['destination'].drop duplicates()
NameError
                                            Traceback (most recent call
last)
Cell In[26], line 1
----> 1 pd.concat([df,df1])['destination'].drop duplicates()
NameError: name 'df1' is not defined
pd.merge(df, df2[['time', 'part_of_day']], on='time', how='inner')
[['destination', 'time', 'part_of_day']]
NameError
                                            Traceback (most recent call
last)
Cell In[27], line 1
----> 1 pd.merge(df, df2[['time', 'part_of_day']], on='time',
how='inner')[['destination', 'time', 'part of day']]
NameError: name 'df2' is not defined
df[df['passanger'] == 'Alone'][['destination', 'passanger']]
                                            Traceback (most recent call
KeyError
last)
Cell In[28], line 1
----> 1 df[df['passanger'] == 'Alone'][['destination', 'passanger']]
```

```
File ~\anaconda3\Lib\site-packages\pandas\core\frame.py:4108, in
DataFrame. getitem (self, key)
            if is iterator(key):
   4106
   4107
                kev = list(kev)
-> 4108
            indexer = self.columns. get indexer strict(key, "columns")
[1]
   4110 # take() does not accept boolean indexers
   4111 if getattr(indexer, "dtype", None) == bool:
File ~\anaconda3\Lib\site-packages\pandas\core\indexes\base.py:6200,
in Index. get indexer strict(self, key, axis name)
   6197 else:
   6198
            keyarr, indexer, new indexer =
self. reindex non unique(keyarr)
-> 6200 self._raise_if_missing(keyarr, indexer, axis_name)
   6202 keyarr = self.take(indexer)
   6203 if isinstance(key, Index):
            # GH 42790 - Preserve name from an Index
File ~\anaconda3\Lib\site-packages\pandas\core\indexes\base.py:6252,
in Index. raise if missing(self, key, indexer, axis name)
            raise KeyError(f"None of [{key}] are in the
[{axis name}]")
   6251 not found = list(ensure index(key)[missing mask.nonzero()
[0]].unique())
-> 6252 raise KeyError(f"{not found} not in index")
KeyError: "['destination'] not in index"
df[df['weather'].str.startswith('Sun')]
             Destination
                          passanger weather
                                              temperature
                                                           time \
0
         No Urgent Place
                                                            2PM
                              Alone
                                      Sunny
                                                       55
         No Urgent Place
1
                          Friend(s)
                                                           10AM
                                       Sunny
                                                       80
2
         No Urgent Place
                          Friend(s)
                                      Sunny
                                                       80
                                                           10AM
3
         No Urgent Place Friend(s)
                                      Sunny
                                                       80
                                                            2PM
4
         No Urgent Place
                          Friend(s)
                                      Sunny
                                                       80
                                                            2PM
                                                       . . .
                                                            . . .
3111721
                    Home
                              Alone
                                                            6PM
                                      Sunny
                                                       80
3111722
                    Home
                              Alone
                                                       80
                                                            6PM
                                      Sunny
3111723
                              Alone
                                                       80
                                                            6PM
                    Home
                                      Sunny
3111724
                    Home
                              Alone
                                       Sunny
                                                       80
                                                           10PM
3111725
                    Home
                              Alone
                                      Sunny
                                                       80
                                                           10PM
                        coupon expiration gender age
maritalStatus
                    /
               Restaurant(<20)
                                            Female 21 Unmarried
                                        1d
partner
                  Coffee House
                                        2h
                                            Female 21 Unmarried
```

partner		C. Tala		21-	F1.	21	Hamana i ad
2 partner	_	out & Take	e away	2h	Female	21	Unmarried
3		Coffee	House	2h	Female	21	Unmarried
partner		331.133					J
4		Coffee	House	1d	Female	21	Unmarried
partner							
 3111721		Coffee	Ноисо	1d	Female	26	Married
partner		Corree	House	10	i ellia te	20	riai i teu
3111722		Restaurant	(<20)	2h	Female	26	Married
partner			,				
3111723		Coffee	House	2h	Female	26	Married
partner			( 20)	21	- 1	2.0	
3111724		Restaurant	(<20)	2h	Female	26	Married
partner 3111725	Carry	out & Take	away	1d	Female	26	Married
partner		out a rake	away	10	1 Cilia CC	20	Harrica
		Away Restau	ırantLessTh	nan20 Re	staurant	20To	50
toCoupon_	_GEQ5m:			4 0		-	2
0 1		NaN		4~8		Т	~3
1		NaN		4~8		1	~3
1				. 0		_	J
2		NaN		4~8		1	~3
1						_	
3		NaN		4~8		1	~3
1 4		NaN		4~8		1	~3
1		Naiv		<del>+</del> 0		_	3
3111721		4~8		gt8		1	~3
1 3111722		4~8		~+O		1	~3
1		4~8		gt8		T	~3
3111723		4~8		gt8		1	~3
1				9 - 0		_	_
3111724		4~8		gt8		1	~3
1						_	_
3111725		4~8		gt8		1	~3
1							
	toCoup	on_GEQ15min	toCoupon	GE025mi	n direct	ion	same
direction				,		_	
0		G			0		0
1 1							

```
1
                         0
                                            0
                                                            0
1
  0
2
                         1
                                                            0
1
  1
3
                                                            0
1
  0
                                                            0
4
1 0
                                                            0
3111721
1 1
3111722
                         0
                                                            1
0 1
3111723
                         1
                                                            0
1 1
                         0
3111724
                                                            1
0 1
3111725
                         0
                                                            1
0 1
        row_count
0
                 1
1
                 2
                 3
2
3
                 4
                 5
4
3111721
             4142
             4143
3111722
3111723
             4144
3111724
             4145
3111725
             4146
[2471051 rows x 27 columns]
df[(df['temperature'] >= 29) & (df['temperature'] <= 75)]</pre>
['temperature'].unique()
array([55, 30], dtype=int64)
df[df['occupation'].isin(['Sales & Related', 'Management'])]
[['occupation']]
               occupation
193
         Sales & Related
194
         Sales & Related
195
         Sales & Related
         Sales & Related
196
         Sales & Related
197
```

```
3111639 Sales & Related
3111640 Sales & Related
3111641 Sales & Related
3111642 Sales & Related
3111643 Sales & Related
[473887 rows x 1 columns]
```