```
import pandas as pd
df = pd.read_csv(r"C:\Users\joykaaria\Desktop\data weather.csv")
df
```

	weat_con	date	duetemp	etemp relhum		visibility	pree_kpa
0	snow	1/1/2023	-51.0	45	20	10	20
1	snow	1/2/2023	-51.0	45	21	11	20
2	snow	1/3/2023	-51.0	45	21	11	20
3	snow	1/4/2023	-51.0	45	21	11	20
4	snow	1/5/2023	-51.0	45	21	11	20
5	snow	1/6/2023	-51.0	45	21	11	20
6	snow	1/7/2023	-51.0	45	21	11	20
7	snow	1/8/2023	-51.0	45	21	11	20
8	snow	1/9/2023	-51.0	45	21	11	30
9	snow	1/10/2023	-51.0	45	21	11	30
10	clear	1/11/2023	-51.0	45	21	19	30
11	clear	1/12/2023	-51.0	45	21	19	30
12	clear	1/13/2023	-51.0	45	30	19	25
13	clear	1/14/2023	-51.0	45	30	19	25
14	clear	1/15/2023	-51.0	45	40	25	25
15	clear	1/16/2023	-51.0	45	40	25	6
16	clear	1/17/2023	-51.0	45	40	25	6
17	clear	1/18/2023	-51.0	46	40	25	6
18	clear	1/19/2023	-3.0	45	40	25	6
19	clear	1/20/2023	-3.0	47	40	25	6
20	clear	1/21/2023	-3.0	47	40	25	30
21	clear	1/22/2023	-3.0	47	40	25	30
22	clear	1/23/2023	-3.0	47	40	25	30
23	clear	1/24/2023	-3.0	47	60	25	30
24	clear	1/25/2023	-3.0	47	60	25	30
25	drizzle	1/26/2023	-3.0	47	60	25	30
26	drizzle	1/27/2023	-3.0	47	60	25	30
27	drizzle	1/28/2023	-3.0	47	60	30	30
28	drizzle	1/29/2023	-3.0	47	60	30	30
29	drizzle	1/30/2023	-3.0	47	60	30	30
30	drizzle	1/31/2023	-3.0	67	60	30	30
31	drizzle	2/1/2023	-3.0	67	60	30	40
32	drizzle	2/2/2023	-3.0	67	60	30	40

	weat_con	date	duetemp	relhum	windspe	visibility	pree_kpa
33	freezing	2/3/2023	-3.0	67	60	30	40
34	freezing	2/4/2023	-3.0	67	42	30	40
35	freezing	2/5/2023	-3.0	67	42	30	40
36	freezing	2/6/2023	-3.0	67	42	30	40
37	freezing	2/7/2023	-3.0	67	42	30	40
38	freezing	2/8/2023	-3.0	67	42	30	40
39	freezing	2/9/2023	-3.0	67	42	25	40
40	freezing	2/10/2023	-3.0	67	42	30	40
41	freezing	2/11/2023	-3.0	67	42	40	40
42	freezing	2/12/2023	-3.0	67	42	40	40
43	freezing	2/13/2023	-3.0	4	42	40	40
44	rain	2/14/2023	-3.0	4	42	40	40
45	rain	2/15/2023	-1.8	4	42	40	40
46	frog	2/16/2023	-1.8	4	42	40	40
47	frog	2/17/2023	-1.8	4	42	40	40
48	frog	2/18/2023	-1.8	4	42	40	40

In []: .head()

In [2]: df.head()

Out[2]:		weat_con	date	duetemp	relhum	windspe	visibility	pree_kpa
	0	snow	1/1/2023	-51.0	45	20	10	20
	1	snow	1/2/2023	-51.0	45	21	11	20
	2	snow	1/3/2023	-51.0	45	21	11	20
	3	snow	1/4/2023	-51.0	45	21	11	20
	4	snow	1/5/2023	-51.0	45	21	11	20

In []: .shape

In [3]: df.shape

Out[3]: (49, 7)

In []: .index

In [4]: df.index

Out[4]: RangeIndex(start=0, stop=49, step=1)

```
In [ ]:
          .columns
          df.columns
In [5]:
         Index(['weat_con', 'date', 'duetemp', 'rel_-hum', 'windspe', 'visibility',
Out[5]:
                 pree kpa'],
                dtype='object')
In [ ]:
          .dtypes
 In [6]:
          df.dtypes
                         object
         weat_con
Out[6]:
         date
                         object
                        float64
         duetemp
         rel -hum
                          int64
         windspe
                          int64
         visibility
                          int64
                          int64
         pree_kpa
         dtype: object
          .unique() single column only
In [ ]:
         df['weat_con'].unique()
In [8]:
         array(['snow', 'clear', 'drizzle', 'freezing', 'rain', 'frog'],
Out[8]:
                dtype=object)
In [9]:
          df.nunique()
                         6
         weat_con
Out[9]:
                        49
         date
         duetemp
                         3
                         5
         rel_-hum
         windspe
                         6
                         6
         visibility
         pree_kpa
                         5
         dtype: int64
          .count single column, whole dataframe
In [ ]:
         df.count()
In [10]:
         weat con
                        49
Out[10]:
         date
                        49
         duetemp
                        49
         rel -hum
                        49
         windspe
                        49
         visibility
                        49
                        49
         pree_kpa
         dtype: int64
          .value_counts() single column
In [ ]:
In [11]:
         df['weat_con'].value_counts()
```

```
clear
                      15
Out[11]:
         freezing
                      11
         snow
                      10
         drizzle
                       8
         frog
                       3
                       2
         rain
         Name: weat_con, dtype: int64
          .info()
In [ ]:
In [12]:
         df.info()
          <class 'pandas.core.frame.DataFrame'>
         RangeIndex: 49 entries, 0 to 48
         Data columns (total 7 columns):
          #
               Column
                           Non-Null Count
                                            Dtype
               -----
          0
               weat con
                           49 non-null
                                            object
                           49 non-null
          1
               date
                                            object
           2
                           49 non-null
                                            float64
               duetemp
           3
               rel_-hum
                           49 non-null
                                            int64
          4
               windspe
                           49 non-null
                                            int64
          5
               visibility 49 non-null
                                            int64
               pree kpa
                           49 non-null
                                            int64
         dtypes: float64(1), int64(4), object(2)
         memory usage: 2.8+ KB
         Q1). Find all the unique "windspeed" values in data
In [ ]:
          df.head(2)
In [14]:
Out[14]:
                         date duetemp rel_-hum windspe visibility pree_kpa
            weat con
         0
                      1/1/2023
                                  -51.0
                                             45
                                                      20
                                                               10
                                                                        20
                snow
          1
                                             45
                                                      21
                                                               11
                                                                       20
                snow 1/2/2023
                                  -51.0
         df.nunique()
In [15]:
         weat_con
                         6
Out[15]:
         date
                        49
                         3
         duetemp
                         5
         rel -hum
                         6
         windspe
                         6
         visibility
                         5
         pree kpa
         dtype: int64
           df['windspe'].nunique()
In [16]:
Out[16]:
In [17]:
          df['windspe'].unique()
         array([20, 21, 30, 40, 60, 42], dtype=int64)
Out[17]:
          Q2). Find the number of times when the "weather is exactly clear"
```

```
In [19]:
          df.head(2)
Out[19]:
              weat_con
                            date duetemp rel_-hum windspe visibility pree_kpa
          0
                 snow 1/1/2023
                                     -51.0
                                                  45
                                                           20
                                                                    10
                                                                               20
                                     -51.0
                                                  45
                                                           21
                                                                               20
           1
                 snow 1/2/2023
                                                                    11
            #value_counts()
In [21]:
           df.weat con.value_counts()
          clear
                        15
Out[21]:
          freezing
                        11
          snow
                        10
          drizzle
                         8
                         3
          frog
                         2
          rain
          Name: weat con, dtype: int64
In [24]:
          #filtering
           #df.head(2)
           df[df.weat con == 'clear']
Out[24]:
               weat_con
                              date duetemp rel_-hum windspe visibility pree_kpa
           10
                   clear 1/11/2023
                                        -51.0
                                                    45
                                                             21
                                                                       19
                                                                                 30
           11
                   clear 1/12/2023
                                        -51.0
                                                    45
                                                             21
                                                                       19
                                                                                 30
           12
                   clear 1/13/2023
                                        -51.0
                                                    45
                                                             30
                                                                       19
                                                                                 25
           13
                                                                                 25
                   clear 1/14/2023
                                        -51.0
                                                    45
                                                             30
                                                                       19
           14
                                                    45
                                                             40
                                                                       25
                                                                                 25
                   clear 1/15/2023
                                        -51.0
           15
                   clear 1/16/2023
                                                             40
                                                                       25
                                                                                  6
                                        -51.0
                                                    45
           16
                   clear 1/17/2023
                                                    45
                                                             40
                                                                       25
                                                                                  6
                                        -51.0
           17
                   clear 1/18/2023
                                                             40
                                                                       25
                                                                                  6
                                        -51.0
                                                    46
                                                                       25
                                                                                  6
           18
                   clear 1/19/2023
                                        -3.0
                                                    45
                                                             40
           19
                   clear 1/20/2023
                                         -3.0
                                                    47
                                                             40
                                                                       25
                                                                                  6
          20
                                                    47
                                                             40
                                                                       25
                                                                                 30
                   clear 1/21/2023
                                         -3.0
          21
                                                                       25
                                                                                 30
                   clear 1/22/2023
                                         -3.0
                                                    47
                                                             40
          22
                   clear 1/23/2023
                                         -3.0
                                                    47
                                                             40
                                                                       25
                                                                                 30
                                                                       25
          23
                   clear 1/24/2023
                                                             60
                                                                                 30
                                         -3.0
                                                    47
          24
                                         -3.0
                                                    47
                                                             60
                                                                       25
                                                                                 30
                   clear 1/25/2023
In [26]:
          #groupby()
           #df.head(2)
           df.groupby('weat con').get group('clear')
```

Out[26]:		weat_con	date	duetemp	relhum	windspe	visibility	pree_kpa
	10	clear	1/11/2023	-51.0	45	21	19	30
	11	clear	1/12/2023	-51.0	45	21	19	30
	12	clear	1/13/2023	-51.0	45	30	19	25
	13	clear	1/14/2023	-51.0	45	30	19	25
	14	clear	1/15/2023	-51.0	45	40	25	25
	15	clear	1/16/2023	-51.0	45	40	25	6
	16	clear	1/17/2023	-51.0	45	40	25	6
	17	clear	1/18/2023	-51.0	46	40	25	6
	18	clear	1/19/2023	-3.0	45	40	25	6
	19	clear	1/20/2023	-3.0	47	40	25	6
	20	clear	1/21/2023	-3.0	47	40	25	30
	21	clear	1/22/2023	-3.0	47	40	25	30
	22	clear	1/23/2023	-3.0	47	40	25	30
	23	clear	1/24/2023	-3.0	47	60	25	30
	24	clear	1/25/2023	-3.0	47	60	25	30

In []: Q3.Find the number of times when the "wind speed was exactly 42 km/h"

In [27]: df.head(2)

date duetemp rel_-hum windspe visibility pree_kpa Out[27]: weat_con 0 snow 1/1/2023 -51.0 45 20 10 20 45 snow 1/2/2023 -51.0 21 11 20

In [30]: df[df['windspe'] == 42] #answer

Out[30]:		weat_con	date	duetemp	relhum	windspe	visibility	pree_kpa
	34	freezing	2/4/2023	-3.0	67	42	30	40
	35	freezing	2/5/2023	-3.0	67	42	30	40
	36	freezing	2/6/2023	-3.0	67	42	30	40
	37	freezing	2/7/2023	-3.0	67	42	30	40
	38	freezing	2/8/2023	-3.0	67	42	30	40
	39	freezing	2/9/2023	-3.0	67	42	25	40
	40	freezing	2/10/2023	-3.0	67	42	30	40
	41	freezing	2/11/2023	-3.0	67	42	40	40
	42	freezing	2/12/2023	-3.0	67	42	40	40
	43	freezing	2/13/2023	-3.0	4	42	40	40
	44	rain	2/14/2023	-3.0	4	42	40	40
	45	rain	2/15/2023	-1.8	4	42	40	40
	46	frog	2/16/2023	-1.8	4	42	40	40
	47	frog	2/17/2023	-1.8	4	42	40	40
	48	frog	2/18/2023	-1.8	4	42	40	40
In []:	Q4)F	ind out	all the n	ull value	s in the	data		
n [31]:	df.i	isnull().	sum()					
ut[31]:	date duet rel_ wind visi pree	emp -hum	0 0 0 0 0 0					
1 [32]:	df.r	notnull()	.sum()					
Out[32]:	date duet rel_ wind visi pree dtyp	emp -hum spe bility _kpa e: int64		a a molu o a t	ibor' to we	other con	dition	
	QS)r	Kename u	ne column i	iairie wear	liler to we	ather con	ultion	

```
df.head(2)
In [37]:
Out[37]:
             weather condition
                                 date duetemp rel_-hum windspe visibility pree_kpa
          0
                        snow 1/1/2023
                                          -51.0
                                                     45
                                                              20
                                                                       10
                                                                                20
          1
                        snow 1/2/2023
                                          -51.0
                                                     45
                                                              21
                                                                       11
                                                                                20
          Q6) What is the mean "visibility"
In [ ]:
In [38]:
          df.head(2)
                                 date duetemp rel_-hum windspe visibility pree_kpa
Out[38]:
            weather condition
          0
                        snow 1/1/2023
                                          -51.0
                                                     45
                                                              20
                                                                       10
                                                                                20
                                                                                20
                        snow 1/2/2023
                                          -51.0
                                                     45
                                                              21
                                                                       11
          df.visibility.mean()
In [39]:
          25.408163265306122
Out[39]:
          Q7) What is the standard deviation of "pressure"
In [ ]:
In [40]:
          df.pree_kpa.std()
          10.733514491224822
Out[40]:
          Q8) What is the variance of relative humidity
In [ ]:
          df['rel_-hum'].var()
In [42]:
          340.4583333333334
Out[42]:
          Q9) Find all instances when 'snow' was recorded
In [ ]:
In [44]:
          # value counts()
          #df.head(2)
          df['weather condition'].value_counts()
          clear
                      15
Out[44]:
          freezing
                      11
                      10
          snow
          drizzle
                       8
          frog
                       3
          rain
                       2
          Name: weather condition, dtype: int64
In [45]:
          #fltering
          df[df['weather condition'] == "snow"]
```

Out[45]:		weather condition	date	duetemp	relhum	windspe	visibility	pree_kpa
	0	snow	1/1/2023	-51.0	45	20	10	20
	1	snow	1/2/2023	-51.0	45	21	11	20
	2	snow	1/3/2023	-51.0	45	21	11	20
	3	snow	1/4/2023	-51.0	45	21	11	20
	4	snow	1/5/2023	-51.0	45	21	11	20
	5	snow	1/6/2023	-51.0	45	21	11	20
	6	snow	1/7/2023	-51.0	45	21	11	20
	7	snow	1/8/2023	-51.0	45	21	11	20
	8	snow	1/9/2023	-51.0	45	21	11	30
	9	snow	1/10/2023	-51.0	45	21	11	30

In [51]: #str.contains
 df[df['weather condition'].str.contains('snow')]

Out[51]:		weather condition	date	duetemp	relhum	windspe	visibility	pree_kpa
	0	snow	1/1/2023	-51.0	45	20	10	20
	1	snow	1/2/2023	-51.0	45	21	11	20
	2	snow	1/3/2023	-51.0	45	21	11	20
	3	snow	1/4/2023	-51.0	45	21	11	20
	4	snow	1/5/2023	-51.0	45	21	11	20
	5	snow	1/6/2023	-51.0	45	21	11	20
	6	snow	1/7/2023	-51.0	45	21	11	20
	7	snow	1/8/2023	-51.0	45	21	11	20
	8	snow	1/9/2023	-51.0	45	21	11	30
	9	snow	1/10/2023	-51.0	45	21	11	30

```
In [3]: #Q10)Find all instances "when spedd is above 24" and "visibility" is 25
import pandas as pd
df = pd.read_csv(r"C:\Users\joykaaria\Desktop\data weather.csv")
df
```

	weat_con	date	duetemp	duetemp relhum		visibility	pree_kpa
0	snow	1/1/2023	-51.0	45	20	10	20
1	snow	1/2/2023	-51.0	45	21	11	20
2	snow	1/3/2023	-51.0	45	21	11	20
3	snow	1/4/2023	-51.0	45	21	11	20
4	snow	1/5/2023	-51.0	45	21	11	20
5	snow	1/6/2023	-51.0	45	21	11	20
6	snow	1/7/2023	-51.0	45	21	11	20
7	snow	1/8/2023	-51.0	45	21	11	20
8	snow	1/9/2023	-51.0	45	21	11	30
9	snow	1/10/2023	-51.0	45	21	11	30
10	clear	1/11/2023	-51.0	45	21	19	30
11	clear	1/12/2023	-51.0	45	21	19	30
12	clear	1/13/2023	-51.0	45	30	19	25
13	clear	1/14/2023	-51.0	45	30	19	25
14	clear	1/15/2023	-51.0	45	40	25	25
15	clear	1/16/2023	-51.0	45	40	25	6
16	clear	1/17/2023	-51.0	45	40	25	6
17	clear	1/18/2023	-51.0	46	40	25	6
18	clear	1/19/2023	-3.0	45	40	25	6
19	clear	1/20/2023	-3.0	47	40	25	6
20	clear	1/21/2023	-3.0	47	40	25	30
21	clear	1/22/2023	-3.0	47	40	25	30
22	clear	1/23/2023	-3.0	47	40	25	30
23	clear	1/24/2023	-3.0	47	60	25	30
24	clear	1/25/2023	-3.0	47	60	25	30
25	drizzle	1/26/2023	-3.0	47	60	25	30
26	drizzle	1/27/2023	-3.0	47	60	25	30
27	drizzle	1/28/2023	-3.0	47	60	30	30
28	drizzle	1/29/2023	-3.0	47	60	30	30
29	drizzle	1/30/2023	-3.0	47	60	30	30
30	drizzle	1/31/2023	-3.0	67	60	30	30
31	drizzle	2/1/2023	-3.0	67	60	30	40
32	drizzle	2/2/2023	-3.0	67	60	30	40

	weat_con	date	duetemp	relhum	windspe	visibility	pree_kpa
33	freezing	2/3/2023	-3.0	67	60	30	40
34	freezing	2/4/2023	-3.0	67	42	30	40
35	freezing	2/5/2023	-3.0	67	42	30	40
36	freezing	2/6/2023	-3.0	67	42	30	40
37	freezing	2/7/2023	-3.0	67	42	30	40
38	freezing	2/8/2023	-3.0	67	42	30	40
39	freezing	2/9/2023	-3.0	67	42	25	40
40	freezing	2/10/2023	-3.0	67	42	30	40
41	freezing	2/11/2023	-3.0	67	42	40	40
42	freezing	2/12/2023	-3.0	67	42	40	40
43	freezing	2/13/2023	-3.0	4	42	40	40
44	rain	2/14/2023	-3.0	4	42	40	40
45	rain	2/15/2023	-1.8	4	42	40	40
46	frog	2/16/2023	-1.8	4	42	40	40
47	frog	2/17/2023	-1.8	4	42	40	40
48	frog	2/18/2023	-1.8	4	42	40	40

In [4]: df.head(2)
Out[4]: weat_con date duetemp rel_-hum windspe visibility pree_kpa

	weat_con	date	duetemp	relhum	windspe	visibility	pree_kpa	
0	snow	1/1/2023	-51.0	45	20	10	20	
1	snow	1/2/2023	-51.0	45	21	11	20	

In [9]: df.rename(columns = {'weat_con':'weather condition'}, inplace = True)

In [10]: df.head(2)

Out[10]: weather condition date duetemp rel_-hum windspe visibility pree_kpa 0 1/1/2023 -51.0 45 20 10 20 snow 45 11 1/2/2023 -51.0 21 20 snow

In []: Q10) Find all instances when "wind speed is above 24 and visibility is 25"

In [11]: df.head(2)

Out[11]:		weather condition	date	duetemp	relhum	windspe	visibility	pree_kpa
	0	snow	1/1/2023	-51.0	45	20	10	20
	1	snow	1/2/2023	-51.0	45	21	11	20
In [12]:	df	[(df['windspe']	> 24) &	(df['visi	bility']	== 25)]		

Out[12]:		weather condition	date	duetemp	relhum	windspe	visibility	pree_kpa
	14	clear	1/15/2023	-51.0	45	40	25	25
	15	clear	1/16/2023	-51.0	45	40	25	6
	16	clear	1/17/2023	-51.0	45	40	25	6
	17	clear	1/18/2023	-51.0	46	40	25	6
	18	clear	1/19/2023	-3.0	45	40	25	6
	19	clear	1/20/2023	-3.0	47	40	25	6
	20	clear	1/21/2023	-3.0	47	40	25	30
	21	clear	1/22/2023	-3.0	47	40	25	30
	22	clear	1/23/2023	-3.0	47	40	25	30
	23	clear	1/24/2023	-3.0	47	60	25	30
	24	clear	1/25/2023	-3.0	47	60	25	30
	25	drizzle	1/26/2023	-3.0	47	60	25	30
	26	drizzle	1/27/2023	-3.0	47	60	25	30
	39	freezing	2/9/2023	-3.0	67	42	25	40

In []: Q11) What is the mean value of each column against each'weather condition'

In [13]: df.head(2)

Out[13]:		weather condition	date	duetemp	relhum	windspe	visibility	pree_kpa
	0	snow	1/1/2023	-51.0	45	20	10	20
	1	snow	1/2/2023	-51.0	45	21	11	20

In [15]: df.groupby('weather condition').mean()

				relhun		dspe v	isibility	pree_kpa		
	weather condit	tion								
	cl	lear	-28.6	45.86666	7 38.80	0000 23	.400000	21.0		
	driz	zzle	-3.0	54.500000	0 60.00	0000 28	.750000	32.5		
	freez	ing	-3.0	61.272727	7 43.63	6364 32	.272727	40.0		
	f	rog	-1.8	4.000000	0 42.00	0000 40	.000000	40.0		
	ı	rain	-2.4	4.000000	0 42.00	0000 40	.000000	40.0		
	sn	iow	-51.0	45.000000	20.90	0000 10	.900000	22.0		
[]:	Q12) What is	the	minimum	and max	imum v	alue of	each c	olumn aga	inst'weathe	er condition
[16]:	df.head(2)									
[16]:	weather cor	nditior	n da	te duete	mp rel	hum v	vindspe	visibility	pree_kpa	
	0	snov	1/1/20	23 -5	1.0	45	20	10	20	
	1	snov	1/2/20	23 -5	1.0	45	21	11	20	
[19]:	df.groupby('	weath	ner cond	ition').	max()					
[19]: [19]:	df.groupby('	weath				num wir	ndspe vi	sibility pr	ee_kpa	
_	df.groupby('					num wir	ndspe vi	sibility pr	ee_kpa	
_	weather condit	tion		duetem	o relh	num wir	ndspe vi	sibility pr	ee_kpa	
	weather condit	tion lear 1	date	duetemp	o relh					
_	weather condit	tion lear 1 zzle	date /25/2023	duetemp	o relh	47	60	25	30	
	weather condit	tion lear 1 zzle ting	date /25/2023 2/2/2023	-3.0 -3.0	o relh	47 67	60	25	30 40	
_	weather condit	tion lear 1 zzle ting	date /25/2023 2/2/2023 2/9/2023	-3.0 -3.0 -3.0	o relh	47 67 67	60 60 60	25 30 40	30 40 40	
_	weather condit	tion lear 1 zzle ting rog 2 rain 2	date /25/2023 2/2/2023 2/9/2023	-3.0 -3.0 -3.0 -1.8	o relh	47 67 67 4	60 60 60 42	25 30 40 40	30 40 40 40	
[19]:	weather condit	tion lear 1 zzle ting rog 2 rain 2	date /25/2023 2/2/2023 2/9/2023 2/18/2023 2/15/2023 1/9/2023	-3.0 -3.0 -1.8 -1.8	o relh	47 67 67 4 4 45	60 60 60 42 42 21	25 30 40 40 40 11	30 40 40 40 40	
[19]:	weather condit cl driz freez f sn	tion lear 1 zzle ting frog 2 rain 2 now	date /25/2023 2/2/2023 2/9/2023 2/18/2023 1/9/2023	-3.0 -3.0 -1.8 -1.8 -51.0	o relh	47 67 67 4 4 45	60 60 60 42 42 21	25 30 40 40 40 11	30 40 40 40 40	
[19]: [19]: [22]:	weather condit cl driz freez f sn	tion lear 1 zzle ting frog 2 rain 2 now	date /25/2023 2/2/2023 2/9/2023 2/18/2023 1/9/2023 2 record	-3.0 -3.0 -1.6 -51.0 s where	o relh	47 67 67 4 4 45 r condi	60 60 60 42 42 21	25 30 40 40 40 11	30 40 40 40 40	
[19]: [19]: [22]:	weather condit cl driz freez f sn Q13) Show al df[df['weath	tion lear 1 zzle ting frog 2 rain 2 now	date /25/2023 2/2/2023 2/9/2023 2/18/2023 1/9/2023 2 record	-3.0 -3.0 -3.0 -1.8 -51.0 s where '] == 'f	o relh	47 67 67 4 4 45 r condi	60 60 60 42 42 21 tion is	25 30 40 40 40 11 fog	30 40 40 40 40 30	
_	weather condit cl driz freez f Q13) Show al df[df['weath weather co	tion lear 1 zzle ting frog 2 rain 2 now	date /25/2023 2/2/2023 2/9/2023 2/18/2023 1/9/2023 2 record ondition on og 2/16/3	-3.0 -3.0 -3.0 -1.8 -51.0 s where '] == 'f	relh	47 67 4 4 45 r condi	60 60 60 42 42 21 tion is	25 30 40 40 40 11 fog	30 40 40 40 40 30 pree_kpa	
[19]: [19]: [22]:	weather conditions of the cond	tion lear 1 zzle ting frog 2 rain 2 now	date /25/2023 2/2/2023 2/9/2023 2/18/2023 1/9/2023 2 record ondition on og 2/16/3	-3.0 -3.0 -3.0 -1.8 -51.0 s where '] == 'f date due 2023	relh	47 67 67 4 4 45 r condi-	60 60 60 42 42 21 tion is	25 30 40 40 40 11 fog	30 40 40 40 40 30 pree_kpa 0 40	

Out[49]:

In [49]: df[(df['weather condition'] == 'clear') & (df['visibility'] > 15)]

	weather condition	date	duetemp	relhum	windspe	visibility	pree_kpa
10	clear	1/11/2023	-51.0	45	21	19	30
11	clear	1/12/2023	-51.0	45	21	19	30
12	clear	1/13/2023	-51.0	45	30	19	25
13	clear	1/14/2023	-51.0	45	30	19	25
14	clear	1/15/2023	-51.0	45	40	25	25
15	clear	1/16/2023	-51.0	45	40	25	6
16	clear	1/17/2023	-51.0	45	40	25	6
17	clear	1/18/2023	-51.0	46	40	25	6
18	clear	1/19/2023	-3.0	45	40	25	6
19	clear	1/20/2023	-3.0	47	40	25	6
20	clear	1/21/2023	-3.0	47	40	25	30
21	clear	1/22/2023	-3.0	47	40	25	30
22	clear	1/23/2023	-3.0	47	40	25	30
23	clear	1/24/2023	-3.0	47	60	25	30
24	clear	1/25/2023	-3.0	47	60	25	30

In [26]: df.head(2)

Out[26]:		weather condition	date	duetemp	relhum	windspe	visibility	pree_kpa
	0	snow	1/1/2023	-51.0	45	20	10	20
	1	snow	1/2/2023	-51.0	45	21	11	20

Q15)Find all instances when: A"weather is clear' and relative humidity is greater than 50 or B.'visibility is above 15

In [27]: df.head(2)

Out[27]:		weather condition	date	duetemp	relhum	windspe	visibility	pree_kpa
	0	snow	1/1/2023	-51.0	45	20	10	20
	1	snow	1/2/2023	-51.0	45	21	11	20

In [48]: df[(df['weather condition'] == 'clear') & (df['rel_-hum'] > 40) | (df['visibility'] ==

Out[48]:		weather condition	date	duetemp	relhum	windspe	visibility	pree_kpa
	10	clear	1/11/2023	-51.0	45	21	19	30
	11	clear	1/12/2023	-51.0	45	21	19	30
	12	clear	1/13/2023	-51.0	45	30	19	25
	13	clear	1/14/2023	-51.0	45	30	19	25
	14	clear	1/15/2023	-51.0	45	40	25	25
	15	clear	1/16/2023	-51.0	45	40	25	6
	16	clear	1/17/2023	-51.0	45	40	25	6
	17	clear	1/18/2023	-51.0	46	40	25	6
	18	clear	1/19/2023	-3.0	45	40	25	6
	19	clear	1/20/2023	-3.0	47	40	25	6
	20	clear	1/21/2023	-3.0	47	40	25	30
	21	clear	1/22/2023	-3.0	47	40	25	30
	22	clear	1/23/2023	-3.0	47	40	25	30
	23	clear	1/24/2023	-3.0	47	60	25	30
	24	clear	1/25/2023	-3.0	47	60	25	30