Name:Sahil Rajaram Jadhav

Roll No.: 317

Prn No.:202201050011

Dataset:T20 Cricket Players

1.`import pandas as pd df  =`

`pd.read_csv("Players Data set.csv")`

`print(df)`

```
       Unnamed: 0              Player       Span  Mat  Inns  Not out  Runs  \
0               0        V Kohli (INDIA)  2010-2019   75    70       20  2633
1               1      RG Sharma (INDIA)  2007-2019  104    96       14  2633
2               2          MJ Guptill (NZ)  2009-2019   83    80        7  2436
3               3  Shoaib Malik (ICC/PAK)  2006-2019  111   104       30  2263    4
                4        BB McCullum (NZ)  2005-2015   71    70       10  2140  ..
              ...                  ...         ...  ...   ...      ...   ...
694  44    Abraash Khan (CAN)  2019-2019    7     4        0    66
695            45      PHKD Mendis (SL)  2018-2019    4     4        0    66
696            46     Waheed Ahmed (UAE)  2019-2019   10     9        4    66
697            47          J Bulele (Moz)  2019-2019    7     7        0    65
698            48   SC Kuggeleijn (NZ)  2019-2019    9     5        3    65

       HS    Ave  ball faced      SR  100  50  0   4s   6s  Unnamed: 15
0      94*  52.66        1907  138.07    0   24  2  247   71          NaN
1      118   32.1        1905  138.21    4   19  6  234  120          NaN
2      105  33.36        1810  134.58    2   15  2  215  113          NaN
3       75  30.58        1824  124.06    0    7  1  186   61          NaN
4      123  35.66        1571  136.21    2   13  3  199   91          NaN  ..   ...
             ...    ...       ...    ... ..  .. ...  ...               ...
694     22   16.5          60  110.00    0    0  0    7    1          NaN
695     41   16.5          46  143.47    0    0  1    6    3          NaN
696     19   13.2          80   82.50    0    0  0    6    2          NaN
697     24   9.28          95   68.42    0    0  1    8    0          NaN
698    35*   32.5          30  216.66    0    0  1    4    6          NaN

[699 rows x 17 columns]
```

2.`print(df[['Player','Span']])`

```
                   Player       Span
0         V Kohli (INDIA)  2010-2019
1       RG Sharma (INDIA)  2007-2019
2          MJ Guptill (NZ)  2009-2019
3   Shoaib Malik (ICC/PAK)  2006-2019
4        BB McCullum (NZ)  2005-2015 ..            ...          ...
694     Abraash Khan (CAN)  2019-2019
695       PHKD Mendis (SL)  2018-2019
696      Waheed Ahmed (UAE)  2019-2019
697          J Bulele (Moz)  2019-2019
698     SC Kuggeleijn (NZ)  2019-2019

[699 rows x 2 columns]
```

3.`df.describe()`

	Unnamed: 0	Mat	Inns	Not out	Runs	ball faced	SR	100	5
	699.000000	699.000000	699.000000	699.000000	699.000000	699.000000	699.000000	699.000000	699.00000
	24.464950	21.825465	18.506438	3.364807	351.393419	285.868383	119.062189	0.078684	1.50643
	14.421703	19.675691	17.381721	4.204305	421.934009	322.558233	21.403902	0.352381	2.67770

0.000000	2.000000	2.000000	0.000000	65.000000	30.000000	63.700000	0.000000	0.00000
12.000000	8.000000	7.000000	1.000000	104.000000	96.000000	105.105000	0.000000	0.00000
24.000000	14.000000	12.000000	2.000000	191.000000	161.000000	119.170000	0.000000	1.00000
37.000000	29.000000	23.000000	5.000000	396.500000	318.500000	131.700000	0.000000	2.00000
49.000000	111.000000	104.000000	42.000000	2633.000000	1907.000000	239.280000	4.000000	24.00000

4.df.mean()

```
<ipython-input-4-c61f0c8f89b5>:1: FutureWarning: The default value of numeric_only in DataFrame.mean is deprecated. In a future ver
df.mean()
Unnamed: 0       24.464950
Mat              21.825465
Inns             18.506438
Not out           3.364807 Runs
351.393419
ball faced      285.868383 SR
119.062189
100               0.078684
50                1.506438
0                 1.457797
4s               30.543634
6s               12.430615
Unnamed: 15           NaN
dtype: float64
```

5.df.median()

```
<ipython-input-6-6d467abf240d>:1: FutureWarning: The default value of numeric_only in DataFrame.median is deprecated. In a future v
df.median()
Unnamed: 0       24.00
Mat              14.00
Inns             12.00
Not out           2.00
Runs            191.00
ball faced      161.00
SR              119.17
100               0.00
50                1.00
0                 1.00
4s               15.00
6s                6.00
Unnamed: 15       NaN
dtype: float64
```

6.df.loc[df["Mat"].max()]

```
Unnamed: 0              11
Player         DR Smith (WI)
Span             2006-2015
Mat                    33
Inns                   32
Not out                 0
Runs                  582
HS                     72
Ave                 18.18
ball faced            474 SR
122.78
100                     0
50                      3
0                       1
4s                     62
6s                     31
Unnamed: 15           NaN
Name: 111, dtype: object
```

7.df["ball faced"].describe()

```
count      699.000000
mean       285.868383
std        322.558233
min         30.000000
25%         96.000000
50%        161.000000 75%
318.500000 max     1907.000000
Name: ball faced, dtype: float64
```

8.df.count()

```
Unnamed: 0      699
```

```
Player          699
Span            699
Mat             699
Inns            699
Not out         699
Runs            699
HS              699
Ave             699
ball faced      699 SR
699
100             699
50              699
0               699
4s              699
6s              699
Unnamed: 15       0 dtype:
int64
```

9.print(df.loc[df['Runs'
]>1000])

	Unnamed: 0	Player	Span	Mat	Inns	Not out \
0	0	V Kohli (INDIA)	2010-2019	75	70	20
1	1	RG Sharma (INDIA)	2007-2019	104	96	14
2	2	MJ Guptill (NZ)	2009-2019	83	80	7
3	3	Shoaib Malik (ICC/PAK)	2006-2019	111	104	30
4	4	BB McCullum (NZ)	2005-2015	71	70	10
5	5	DA Warner (AUS)	2009-2019	76	76	8
6	6	EJG Morgan (ENG)	2009-2019	86	84	17
7	7	Mohammad Shahzad (AFG)	2010-2018	65	65	3
8	8	JP Duminy (SA)	2007-2019	81	75	25
9	9	PR Stirling (IRE)	2009-2019	72	71	6
10	10	Mohammad Hafeez (PAK)	2006-2018	89	86	8
11	11	TM Dilshan (SL)	2006-2016	80	79	12
12	12	AJ Finch (AUS)	2011-2019	58	58	9
13	13	LRPL Taylor (NZ)	2006-2019	95	87	19
14	14	Umar Akmal (PAK)	2009-2019	84	79	14
15	15	AB de Villiers (SA)	2006-2017	78	75	11
16	16	H Masakadza (ZIM)	2006-2019	66	66	2
17	17	AD Hales (ENG)	2011-2019	60	60	7
18	18	CH Gayle (WI)	2006-2019	58	54	4
19	19	MS Dhoni (INDIA)	2006-2019	98	85	42
20	20	Tamim Iqbal (BDESH/ICC/World)	2007-2018	75	75	5
21	21	MN Samuels (WI)	2007-2018	67	65	10
22	22	SK Raina (INDIA)	2006-2018	78	66	11
23	23	GJ Maxwell (AUS)	2012-2019	61	54	9
24	24	Shakib Al Hasan (BDESH)	2006-2019	76	76	10
25	25	C Munro (NZ)	2012-2019	60	57	7
26	26	KS Williamson (NZ)	2011-2019	57	55	7
27	27	S Dhawan (INDIA)	2011-2019	58	57	3
28	28	KJ O'Brien (IRE)	2008-2019	90	83	10
29	29	DPMD Jayawardene (SL)	2006-2014	55	55	8
30	30	Ahmed Shehzad (PAK)	2009-2019	59	59	2
31	31	SR Watson (AUS)	2006-2016	58	56	6
32	32	Mahmudullah (BDESH)	2007-2019	83	76	16
33	33	Shahid Afridi (ICC/PAK)	2006-2018	99	91	12
34	34	Babar Azam (PAK)	2016-2019	36	36	8
35	35	KJ Coetzer (SCOT)	2008-2019	58	56	2
36	36	KC Sangakkara (SL)	2006-2014	56	53	9
37	37	F du Plessis (SA/World)	2012-2019	44	44	6
38	38	Mohammad Nabi (AFG)	2010-2019	75	70	11
39	39	DA Miller (SA/World)	2010-2019	72	62	18
40	40	HM Amla (SA/World)	2009-2018	44	44	6
41	41	Mushfiqur Rahim (BDESH)	2006-2019	84	76	13
42	42	JC Buttler (ENG)	2011-2018	66	58	11
43	43	RD Berrington (SCOT)	2008-2019	61	54	10
44	44	GC Wilson (IRE)	2008-2019	78	65	8
45	45	Yuvraj Singh (INDIA)	2007-2017	58	51	9
46	46	KP Pietersen (ENG)	2005-2013	37	36	5
47	47	MDKJ Perera (SL)	2013-2019	42	42	0
48	48	NLTC Perera (ICC/SL/World)	2010-2019	79	70	21
49	49	Asghar Afghan (AFG)	2010-2019	66	60	4
50	0	DJ Bravo (WI)	2006-2016	66	59	12
51	1	KL Rahul (INDIA)	2016-2019	34	31	5
52	2	BN Cooper (NL)	2013-2019	51	48	9
53	3	WTS Porterfield (IRE)	2008-2018	61	59	6
54	4	KA Pollard (WI)	2008-2019	68	58	12

```
55            5                   AD Mathews (SL)  2009-2018  72   57      18   56
              6                   CS MacLeod (SCOT)  2009-2019  49   47       7
                                                          (   )
10.df.loc[ (df['Mat']>50) & (df['50'] <50)  ]
```

	Unnamed: 0	Player	Span	Mat	Inns	Not out	Runs	HS	Ave	ball faced	SR	100	50	0	4s	6s	Un
0	0	V Kohli (INDIA)	2010- 2019	75	70	20	2633	94*	52.66	1907	138.07	0	24	2	247	71	
1	1	RG Sharma (INDIA)	2007- 2019	104	96	14	2633	118	32.1	1905	138.21	4	19	6	234	120	
2	2	MJ Guptill (NZ)	2009- 2019	83	80	7	2436	105	33.36	1810	134.58	2	15	2	215	113	
3	3	Shoaib Malik (ICC/PAK)	2006- 2019	111	104	30	2263	75	30.58	1824	124.06	0	7	1	186	61	
4	4	BB McCullum (NZ)	2005- 2015	71	70	10	2140	123	35.66	1571	136.21	2	13	3	199	91	
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	
379	29	Umar Gul (PAK)	2007- 2016	60	27	9	165	32	9.16	156	105.76	0	0	6	11	10	

```
11.print(df.iloc[::-1])

     Unnamed: 0                 Player        Span  Mat  Inns  Not out  Runs  \
698          48    SC Kuggeleijn (NZ)   2019-2019    9     5        3    65
697          47        J Bulele (Moz)   2019-2019    7     7        0    65
696          46    Waheed Ahmed (UAE)   2019-2019   10     9        4    66
695          45     PHKD Mendis (SL)   2018-2019    4     4        0    66
694          44    Abraash Khan (CAN)   2019-2019    7     4        0    66  ..
...         ...                   ...         ...  ...   ...      ...   ...
4             4      BB McCullum (NZ)   2005-2015   71    70       10  2140
3             3  Shoaib Malik (ICC/PAK)  2006-2019  111   104       30  2263
2             2       MJ Guptill (NZ)   2009-2019   83    80        7  2436
1             1     RG Sharma (INDIA)   2007-2019  104    96       14  2633
0             0        V Kohli (INDIA)  2010-2019   75    70       20  2633

      HS    Ave  ball faced      SR  100  50  0   4s   6s  Unnamed: 15
698  35*   32.5          30  216.66    0   0  1    4    6          NaN
697   24   9.28          95   68.42    0   0  1    8    0          NaN
696   19   13.2          80   82.50    0   0  0    6    2          NaN
695   41   16.5          46  143.47    0   0  1    6    3          NaN
694   22   16.5          60  110.00    0   0  0    7    1          NaN  ..
...  ...    ...         ...     ...   ..  ..  ..  ...  ...          ...
4    123  35.66        1571  136.21    2  13  3  199   91          NaN
3     75  30.58        1824  124.06    0   7  1  186   61          NaN
2    105  33.36        1810  134.58    2  15  2  215  113          NaN
1    118   32.1        1905  138.21    4  19  6  234  120          NaN
0    94*  52.66        1907  138.07    0  24  2  247   71          NaN

[699 rows x 17 columns]


12.print(df.groupby('SR').count())

        Unnamed: 0  Player  Span  Mat  Inns  Not out  Runs  HS  Ave  \
```

```
SR
63.70          1     1     1  1     1       1     1  1  1
66.66          1     1     1  1     1       1     1  1  1    68.42
1     1   1   1     1       1     1  1     1  70.19          1
1     1   1   1     1       1  1     1
72.00          1     1     1  1     1       1     1  1  1    ...
...     ...   ...  ...  ...       ...   ...  ..  ...
190.56         1     1     1  1     1       1     1  1  1
190.82         1     1     1  1     1       1     1  1  1
205.76         1     1     1  1     1       1     1  1  1
216.66         1     1     1  1     1       1     1  1  1    239.28
1     1   1   1     1       1  1     1
```

```
       ball faced  100  50  0  4s  6s  Unnamed: 15  SR
63.70          1    1   1  1   1   1            0
66.66          1    1   1  1   1   1            0
68.42          1    1   1  1   1   1            0
70.19          1    1   1  1   1   1            0
72.00          1    1   1  1   1   1            0  ...
...  ...  ..  ..  ..  ..        ...
190.56         1    1   1  1   1   1            0
190.82         1    1   1  1   1   1            0
205.76         1    1   1  1   1   1            0
216.66         1    1   1  1   1   1            0
239.28         1    1   1  1   1   1            0
[646 rows x 16 columns]
```

13.df.groupby('Not out').get_group(20)

Unnamed: 0	Player	Span	Mat	Inns	Not out	Runs	HS	Ave	ball faced	SR	100	50	0	4s	6s	Unnamed: 15
0	0	V Kohli (INDIA)	2010-2019	75	70	20	2633	94*	52 66	1907	138 07	0	24	2	247	71	NaN

14.df.head(20)

Unnamed: 0	Player	Span	Mat	Inns	Not out	Runs	HS	Ave	ball faced	SR	100	50	0	4s	6s
0	0	V Kohli (INDIA)	2010-2019	75	70	20	2633	94*	52.66	1907	138.07	0	24	2	247	71
1	1	RG Sharma (INDIA)	2007-2019	104	96	14	2633	118	32.1	1905	138.21	4	19	6	234	120
2	2	MJ Guptill (NZ)	2009-2019	83	80	7	2436	105	33.36	1810	134.58	2	15	2	215	113
3	3	Shoaib Malik (ICC/PAK)	2006-2019	111	104	30	2263	75	30.58	1824	124.06	0	7	1	186	61
4	4	BB McCullum (NZ)	2005-2015	71	70	10	2140	123	35.66	1571	136.21	2	13	3	199	91
5	5	DA Warner	2009-	76	76	8	2079	100*	30.57	1476	140.85	1	15	5	203	86

15.df.tail6(20) 6   Morgan 2009-   86 84 17 2002   91 29.88   1475 135.72   0 11   3 151   96
2019 (ENG)

	Mohammad 0	Player	Span	Mat	Inns	Not out	Runs	HS	Ave	ball faced	SR	100	50	0	4s	6s
7	7	Shahzad 72 (AFG)	65 2010-2018	65	3		1936	118*	31.22	1436	134.81	1	12	3	218	
679	29	TB Sole (SCOT)	2019-2019	9	6	2	69	33*	17.25	43	160.46	0	0	0	9	1
8	8	JP Duminy (SAJ)	2007-2019	81	75	25	1934	96*	38.68	1532	126.24	0	11	6	138	71
680	30	Umanath (IRE)	2019-2019	7	7	1	69	25	11.5	77	89.61	0	0	1	7	2
9	9	PR Stirling (Mex)	2009-2019	72	71	6	1929	91	29.67	1401	137.68	0	16	8	233	59
681	31	R Ankad Mohammad (Mex)	2019-2006-2019	8	7	3	68	40*	17	72	94.44	0	0	2	7	0
10	10	Hafeez (PAKAG)	2018	89	86	8	1908	86	24.46	1643	116.12	0	10	6	196	51
682	32	Cremer 0 (ZIM)	2008-2018	29	19	6	68	17	5.23	102	66.66	0	0	2	2	
683	33	Dawlat Zadran 6 (AFG)	2012-2019	34	17	8	68	13	7.55	42	161.90	0	0	3	4	
684	34	TM Dowlin 0 (WI)	2009-2010	2	2	1	68	37*	68	69	98.55	0	0	0	8	
685	35 5	R Escobar (Arg)	2019-2019	4	1		68	28*	22.66	76	89.47	0	0	0	6	1
686	36 11	AR Patel (INDIA)	2015-2018	7	3		68	20*	17	54	125.92	0	0	0	3	3
687	37	Sikander Zulfiqar 11 0 (NL)	2016-2019	8	1		68	18	9.71	68	100.00	0	0	0	5	
688	38 8	JNT Vare (PNG)	2015-2017	7	0		68	38	9.71	71	95.77	0	0	0	4	0

```
                C Viljoen 2019-
689      39 12       7        3        68        33        17        70        97.14    0         0         0         7         1
                (NAM)   2019
```

16.print(df.groupby('0').count())

```
      Unnamed: 0  Player  Span  Mat  Inns  Not out  Runs   HS  Ave  ball faced  \
0
0             255     255   255  255   255      255   255  255  255         255
1             177     177   177  177   177      177   177  177  177         177
2             127     127   127  127   127      127   127  127  127         127
3              62      62    62   62    62       62    62   62   62          62
4              38      38    38   38    38       38    38   38   38          38
5              15      15    15   15    15       15    15   15   15          15
6              15      15    15   15    15       15    15   15   15          15
7               2       2     2    2     2        2     2    2    2           2
8               4       4     4    4     4        4     4    4    4           4
9               1       1     1    1     1        1     1    1    1           1
10              3       3     3    3     3        3     3    3    3           3

      SR  100   50   4s   6s  Unnamed: 15
0
0    255  255  255  255  255            0
1    177  177  177  177  177            0
2    127  127  127  127  127            0
3     62   62   62   62   62            0
4     38   38   38   38   38            0
5     15   15   15   15   15            0
6     15   15   15   15   15            0
7      2    2    2    2    2            0
8      4    4    4    4    4            0
9      1    1    1    1    1            0
10     3    3    3    3    3            0
```

17.df['Span'].value_counts()

```
2019-2019    212
2015-2019     38
2018-2019     23
2016-2019     23
2012-2019     19
...    2006-2007
1
2007-2008      1
2013-2017      1
2016-2018      1
2015-2018      1
Name: Span, Length: 100, dtype: int64
```

18.df.loc[df['6s'].max()]

```
Unnamed: 0                    20
Player        RN ten Doeschate (NL)
Span                   2008-2019
Mat                           22
Inns                          22
Not out                       10
Runs                         533
HS                        59 Ave
44.41         ball         faced
400 SR                    133.25
100                            0
50                             3
0                              1
4s                            27
6s                            19
Unnamed: 15                  NaN
Name: 120, dtype: object
```

19.df['Player']

```
0          V Kohli (INDIA)
1         RG Sharma (INDIA)
2          MJ Guptill (NZ)
3       Shoaib Malik (ICC/PAK)
4         BB McCullum (NZ)              ...
694       Abraash Khan (CAN)
```

```
695          PHKD Mendis (SL)
696          Waheed Ahmed (UAE)
697          J Bulele (Moz)
698          SC Kuggeleijn (NZ)
Name: Player, Length: 699, dtype: object
```

20.df['6s'].max()

```
120
```

21.df.loc[df['Mat']>70]

	Unnamed: 0	Player	Span	Mat	Inns	Not out	Runs	HS	Ave	ball faced	SR	100	50	0	4
0	0	V Kohli (INDIA)	2010-2019	75	70	20	2633	94*	52.66	1907	138.07	0	24	2	24
1	1	RG Sharma (INDIA)	2007-2019	104	96	14	2633	118	32.1	1905	138.21	4	19	6	23
2	2	MJ Guptill (NZ)	2009-2019	83	80	7	2436	105	33.36	1810	134.58	2	15	2	21
3	3	Shoaib Malik (ICC/PAK)	2006-2019	111	104	30	2263	75	30.58	1824	124.06	0	7	1	18
4	4	BB McCullum (NZ)	2005-2015	71	70	10	2140	123	35.66	1571	136.21	2	13	3	19
5	5	DA Warner (AUS)	2009-2019	76	76	8	2079	100*	30.57	1476	140.85	1	15	5	20
6	6	EJG Morgan (ENG)	2009-2019	86	84	17	2002	91	29.88	1475	135.72	0	11	3	15
8	8	JP Duminy (SA)	2007-2019	81	75	25	1934	96*	38.68	1532	126.24	0	11	6	13
9	9	PR Stirling (IRE)	2009-2019	72	71	6	1929	91	29.67	1401	137.68	0	16	8	23
10	10	Mohammad Hafeez (PAK)	2006-2018	89	86	8	1908	86	24.46	1643	116.12	0	10	6	19
11	11	TM Dilshan (SL)	2006-2016	80	79	12	1889	104*	28.19	1567	120.54	1	13	10	22
13	13	LRPL Taylor (NZ)	2006-2019	95	87	19	1743	63	25.63	1430	121.88	0	5	5	11
14	14	Umar Akmal (PAK)	2009-2019	84	79	14	1690	94	26	1377	122.73	0	8	10	12
15	15	AB de Villiers (SA)	2006-2017	78	75	11	1672	79*	26.12	1237	135.16	0	10	5	14
19	19	MS Dhoni (INDIA)	2006-2019	98	85	42	1617	56	37.6	1282	126.13	0	2	1	11
20	20	Tamim Iqbal (BDESH/ICC/World)	2007-2018	75	75	5	1613	103*	23.04	1383	116.63	1	6	6	17
22	22	SK Raina (INDIA)	2006-2018	78	66	11	1605	101	29.18	1190	134.87	1	5	3	14
24	24	Shakib Al Hasan (BDESH)	2006-2019	76	76	10	1567	84	23.74	1266	123.77	0	9	5	16
28	28	KJ O'Brien (IRE)	2008-2019	90	83	10	1504	124	20.6	1124	133.80	1	3	10	11
32	32	Mahmudullah (BDESH)	2007-2019	83	76	16	1430	64*	23.83	1166	122.64	0	4	2	11

✓ 0s completed at 8:04 PM ● ✕