```
import pandas as pd
```

```
from google.colab import files
```

```
uploaded = files.upload()
```

> Choose Files WC_players.csv
> • **WC_players.csv**(n/a) - 4990 bytes, last modified: 25/10/2020 - 100% done
> Saving WC_players.csv to WC_players.csv

```
import io
```

```
df = pd.read_csv(io.BytesIO(uploaded['WC_players.csv'])) #playerlist
```

```
print(df)
```

```
                    Player      ID      Country
    0       Gulbadin Naib (c)  352048  Afghanistan
    1       Rashid Khan (vc)   793463  Afghanistan
    2              Aftab Alam  440963  Afghanistan
    3            Asghar Afghan 320652  Afghanistan
    4            Dawlat Zadran 516561  Afghanistan
    ..                    ...     ...          ...
    147          Ashley Nurse  315594   WestIndies
    148  Nicholas Pooran (wk)  604302   WestIndies
    149           Kemar Roach  230553   WestIndies
    150          Andre Russell 276298   WestIndies
    151          Oshane Thomas 914567   WestIndies

    [152 rows x 3 columns]
```

```
df.head()
```

	Player	ID	Country
0	Gulbadin Naib (c)	352048	Afghanistan
1	Rashid Khan (vc)	793463	Afghanistan
2	Aftab Alam	440963	Afghanistan
3	Asghar Afghan	320652	Afghanistan
4	Dawlat Zadran	516561	Afghanistan

```
df.shape
```

```
    (152, 3)
```

```
df.columns
```

```
    Index(['Player', 'ID', 'Country'], dtype='object')
```

```python
df.Player
```

```
0          Gulbadin Naib (c)
1           Rashid Khan (vc)
2                 Aftab Alam
3              Asghar Afghan
4              Dawlat Zadran
                 ...
147             Ashley Nurse
148       Nicholas Pooran (wk)
149              Kemar Roach
150             Andre Russell
151             Oshane Thomas
Name: Player, Length: 152, dtype: object
```

```python
df.Country.unique()
```

```
array(['Afghanistan', 'Australia', 'Bangladesh', 'England', 'India',
       'NewZealand', 'Pakistan', 'SouthAfrica', 'SriLanka', 'WestIndies'],
      dtype=object)
```

```python
df[df.Country == 'Afghanistan']
```

	Player	ID	Country
0	Gulbadin Naib (c)	352048	Afghanistan
1	Rashid Khan (vc)	793463	Afghanistan
2	Aftab Alam	440963	Afghanistan
3	Asghar Afghan	320652	Afghanistan
4	Dawlat Zadran	516561	Afghanistan
5	Hamid Hassan	311427	Afghanistan
6	Hashmatullah Shahidi	440970	Afghanistan
7	Hazratullah Zazai	793457	Afghanistan
8	Mohammad Nabi	25913	Afghanistan
9	Mohammad Shahzad (wk)	419873	Afghanistan
10	Mujeeb Ur Rahman	974109	Afghanistan
11	Najibullah Zadran	524049	Afghanistan
12	Noor Ali Zadran	318340	Afghanistan
13	Rahmat Shah	533956	Afghanistan
14	Samiullah Shinwari	318339	Afghanistan

```python
df[df.Country == 'Afghanistan'].head(1)
```

```
df[df.Country == 'Australia']
```

	Player	ID	Country
15	Aaron Finch (c)	5334	Australia
16	Pat Cummins (vc)	489889	Australia
17	Alex Carey (wk)	326434	Australia
18	Jason Behrendorff	272477	Australia
19	Nathan Coulter-Nile	261354	Australia
20	Usman Khawaja	215155	Australia
21	Nathan Lyon	272279	Australia
22	Shaun Marsh	6683	Australia
23	Glenn Maxwell	325026	Australia
24	Jhye Richardson	774223	Australia
25	Kane Richardson	272262	Australia
26	Steve Smith	267192	Australia
27	Mitchell Starc	311592	Australia
28	Marcus Stoinis	325012	Australia
29	David Warner	219889	Australia
30	Adam Zampa	379504	Australia

```
df[df.Country == 'Australia'].head(1)
```

	Player	ID	Country
15	Aaron Finch (c)	5334	Australia

```
df[df.Country == 'Bangladesh']
```

	Player	ID	Country
31	Mashrafe Mortaza (c)	56007	Bangladesh
32	Shakib Al Hasan (vc)	56143	Bangladesh
33	Tamim Iqbal	56194	Bangladesh
34	Liton Das	536936	Bangladesh
35	Mushfiqur Rahim (wk)	56029	Bangladesh
36	Mahmudullah	56025	Bangladesh

```
df[df.Country == 'Bangladesh'].head(1)
```

	Player	ID	Country
31	Mashrafe Mortaza (c)	56007	Bangladesh
40	Soumya Sarkar	436077	Bangladesh

```
df[df.Country == 'India']
```

	Player	ID	Country
61	Virat Kohli (c)	253802	India
62	Rohit Sharma (vc)	34102	India
63	Shikhar Dhawan	28235	India
64	K. L. Rahul	422108	India
65	Vijay Shankar	477021	India
66	MS Dhoni (wk)	28081	India
67	Kedar Jadhav	290716	India
68	Dinesh Karthik	30045	India
69	Yuzvendra Chahal	430246	India
70	Kuldeep Yadav	559235	India
71	Bhuvneshwar Kumar	326016	India
72	Jasprit Bumrah	625383	India
73	Hardik Pandya	625371	India
74	Ravindra Jadeja	234675	India
75	Mohammed Shami	481896	India

```
df[df.Country == 'India'].head(1)
```

	Player	ID	Country
61	Virat Kohli (c)	253802	India

```
df[df.Country == 'England']
```

	Player	ID	Country
46	Eoin Morgan (c)	24598	England
47	Jos Buttler (vc, wk)	308967	England
48	Moeen Ali	8917	England
49	Jonny Bairstow	297433	England
50	Tom Curran	550235	England
51	Joe Denly	12454	England
52	Alex Hales	249866	England
53	Liam Plunkett	19264	England
54	Adil Rashid	244497	England
55	Joe Root	303669	England
56	Jason Roy	298438	England
57	Ben Stokes	311158	England
58	David Willey	308251	England
59	Chris Woakes	247235	England
60	Mark Wood	351588	England

```
df[df.Country == 'England'].head(1)
```

	Player	ID	Country
46	Eoin Morgan (c)	24598	England

```
df[df.Country == 'NewZealand']
```

	Player	ID	Country
76	Kane Williamson (c)	277906	NewZealand
77	Tom Latham (vc, wk)	388802	NewZealand
78	Tim Southee	232364	NewZealand

```
df[df.Country == 'NewZealand'].head(1)
```

	Player	ID	Country
76	Kane Williamson (c)	277906	NewZealand
83	Martin Guptill	226492	NewZealand

```
df[df.Country == 'Pakistan']
```

	Player	ID	Country
91	Sarfaraz Ahmed (c, wk)	227760	Pakistan
92	Babar Azam (vc)	348144	Pakistan
93	Shoaib Malik	42657	Pakistan
94	Fakhar Zaman	512191	Pakistan
95	Imam-ul-Haq	568276	Pakistan
96	Abid Ali	39950	Pakistan
97	Mohammad Hafeez	41434	Pakistan
98	Shadab Khan	922943	Pakistan
99	Imad Wasim	227758	Pakistan
100	Hasan Ali	681305	Pakistan
101	Faheem Ashraf	681117	Pakistan
102	Shaheen Afridi	1072470	Pakistan
103	Junaid Khan	259551	Pakistan
104	Mohammad Hasnain	1158100	Pakistan
105	Haris Sohail	318788	Pakistan

```
df[df.Country == 'Pakistan'].head(1)
```

	Player	ID	Country
91	Sarfaraz Ahmed (c, wk)	227760	Pakistan

```
df[df.Country == 'SouthAfrica']
```

	Player	ID	Country
106	Faf du Plessis (c)	44828	SouthAfrica
107	Quinton de Kock (vc, wk)	379143	SouthAfrica
108	Hashim Amla	43906	SouthAfrica
109	Aiden Markram	600498	SouthAfrica
110	Rassie van der Dussen	337790	SouthAfrica
111	David Miller	321777	SouthAfrica
112	JP Duminy	44932	SouthAfrica
113	Andile Phehlukwayo	540316	SouthAfrica
114	Dwaine Pretorius	327830	SouthAfrica
115	Dale Steyn	47492	SouthAfrica
116	Kagiso Rabada	550215	SouthAfrica
117	Lungi Ngidi	542023	SouthAfrica
118	Anrich Nortje	481979	SouthAfrica
119	Chris Morris	439952	SouthAfrica

```
df[df.Country == 'SouthAfrica'].head(1)
```

	Player	ID	Country
106	Faf du Plessis (c)	44828	SouthAfrica

```
df[df.Country == 'SriLanka']
```

	Player	ID	Country
122	Dimuth Karunaratne (c)	227772	SriLanka
123	Dhananjaya de Silva (vc)	465793	SriLanka

```
df[df.Country == 'SriLanka'].head(1)
```

	Player	ID	Country
122	Dimuth Karunaratne (c)	227772	SriLanka

```
df[df.Country == 'WestIndies']
```

	Player	ID	Country
137	Jason Holder (c)	391485	WestIndies
138	Chris Gayle (vc)	51880	WestIndies
139	Carlos Brathwaite	457249	WestIndies
140	Darren Bravo	277472	WestIndies
141	Sheldon Cottrell	495551	WestIndies
142	Fabian Allen	670013	WestIndies
143	Shannon Gabriel	446101	WestIndies
144	Shimron Hetmyer	670025	WestIndies
145	Shai Hope	581379	WestIndies
146	Evin Lewis	431901	WestIndies
147	Ashley Nurse	315594	WestIndies
148	Nicholas Pooran (wk)	604302	WestIndies
149	Kemar Roach	230553	WestIndies
150	Andre Russell	276298	WestIndies
151	Oshane Thomas	914567	WestIndies

```
df[df.Country == 'WestIndies'].head(1)
```

	Player	ID	Country
137	Jason Holder (c)	391485	WestIndies

```
from google.colab import files
```

```
uploaded = files.upload()
```

[Choose Files] ODI_Match_Totals.csv

```
import io

df = pd.read_csv(io.BytesIO(uploaded['ODI_Match_Totals.csv'])) #playerlist

print(df)
```

```
       Unnamed: 0  Score  Overs  ...      Match_ID      Country  Country_ID
0             412    250   48.3  ...  ODI # 3315     Pakistan           7
1             680    165   48.0  ...  ODI # 3315        India           6
2             413    157   48.5  ...  ODI # 3316     Pakistan           7
3             681    167   43.4  ...  ODI # 3316        India           6
4             117    198   40.0  ...  ODI # 3317     SriLanka           8
...           ...    ...    ...  ...         ...          ...         ...
1291          549  340/7   50.0  ...  ODI # 4138     Pakistan           7
1292          979  341/7   49.3  ...  ODI # 4138      England           1
1293         1296  120/8   33.0  ...  ODI # 4139  Afghanistan          40
1294          550  193/6   31.5  ...  ODI # 4140     Pakistan           7
1295          980  351/9   50.0  ...  ODI # 4140      England           1

[1296 rows x 13 columns]
```

```
df.info()
df.head()
```

```
df[pd.isnull(df['Target'])]  #records of target that are not null
```

```python
df['Target'].fillna('Withdraw',inplace = True)
```

```python
df[pd.isnull(df['Target'])]
```

```python
mapping_dict= {"Result" : {"won" : 1,"lost" : 0, "n/r" : 0}}
df.replace(mapping_dict,inplace=True)
```

```python
df.head(5)
```

```python
df['Score'].value_counts().plot(kind='bar', figsize=(50,5))
```

```python
df.plot(kind='scatter',x='Country',y='Result')
```

```python
df.isnull()
```

```python
df.fillna(0)
```

```python
df['Result'].max() #maximum value
```

```python
df[df.Country == 'India' ].Result.value_counts()
```

```
grounds = df['Ground'].unique()
grounds.sort()
grounds
```

```
df['Start Date','Result'].value_counts().index
```

```
list_of_years = list(df['Start Date'].value_counts().index)
top15_years_by_matches_held =  list_of_years[:15]


print(df['Start Date'].value_counts().index)

print('\n',type(df['Start Date'].value_counts().index))
```

```
df.Ground.values_count()
```

```
sns.set_style('whitegrid')

d.plot(kind='bar', xlabel='Grounds→', ylabel = 'Matches played→',
                   title='Maximum matches played in top 15 ground',
                   yticks=[x for x in range(25,461,25)],
                   figsize=(13,7));
```

```python
top_won_country =  df['Result'].value_counts().head(10)
```

```python
top_won_country_df = pd.DataFrame(top_won_country)
top_won_country_df
```

```python
df.Result.value_counts().plot(kind = 'pie')
```

```
df.head(65)
```

```
df.drop
```

```
df.Ground.value_counts() #Country with highest no of ODI
```

```
df.Ground.value_counts().plot(kind = 'bar')
```

```
df.columns
```

```python
df[['Opposition', 'Country']] #display the country and its target country
```

```python
dups_value = df.pivot_table(index=['Opposition','Country'], aggfunc='size')
print (dups_value)
```

```python
import matplotlib.pyplot as plt
import seaborn as sns
plt.rcParams['figure.figsize'] = (20.0, 10.0)
plt.rcParams['font.family'] = "serif"
```

```python
plt.rcParams['font.size'] = 20
bg_color = (0.88,0.85,0.95)
plt.rcParams['figure.facecolor'] = bg_color
```

```python
plt.rcParams['axes.facecolor'] = bg_color
fig, ax = plt.subplots(1)
p = sns.heatmap(df,
                cmap='coolwarm',
                annot=True,
                fmt=".1f",
                annot_kws={'size':16},
                ax=ax)
plt.xlabel('Target')
plt.ylabel('Inns')
ax.set_ylim((0,15))
plt.text(5,12.3, "Heat Map", fontsize = 95, color='Black', fontstyle='italic')
```

```python
df = pd.pivot_table(data=sns.load_dataset("ODI_Match_Totals"),
                    index='scores',
                    values='overs',
                    columns='target')
df.head()
```