day-2-pandas-series-1

December 31, 2022

1 Importing Pandas

[18]:
```
import pandas as pd
```

2 Pandas Series

A Pandas Series is like a column in a table. It is a 1-D array holding data of any type.**

3 Creating a Series from lists

[19]:
```
#using String
country = ['india','USA','Nepal','Russia']
pd.Series(country)
```

[19]:
```
0     india
1       USA
2     Nepal
3    Russia
dtype: object
```

[20]:
```
numbers = [13,14,15,16,70,89,85]  #using integers
pd.Series(numbers)
```

[20]:
```
0    13
1    14
2    15
3    16
4    70
5    89
6    85
dtype: int64
```

4 Custom Index

[21]:
```
# custom index
marks = [67,57,89,100]
subjects = ['maths','english','science','hindi']
```

[22]:
```
result = pd.Series(marks,index=subjects)
result
```

[22]:
```
maths       67
english     57
science     89
hindi      100
dtype: int64
```

Give a specific series name

[23]:
```
result = pd.Series(marks,index=subjects,name='Rohit Verma')
result
```

[23]:
```
maths       67
english     57
science     89
hindi      100
Name: Rohit Verma, dtype: int64
```

5 Creating a Series from dict

[24]:
```
marks = {
    'Maths':67,
    'English':57,
    'Science':89,
    'Hindi':100,
    'Data Science':96
}
marks
```

[24]:
```
{'Maths': 67, 'English': 57, 'Science': 89, 'Hindi': 100, 'Data Science': 96}
```

[25]:
```
dic=pd.Series(marks,name='Rohit_Result')
dic
```

[25]:
```
Maths           67
English         57
Science         89
Hindi          100
Data Science    96
```

```
Name: Rohit_Result, dtype: int64
```

6 Some attribute of a Series pandas

size,dtype,is_unique,name,index,values

[26]:
```
#size
dic
```

[26]:
```
Maths           67
English         57
Science         89
Hindi          100
Data Science    96
Name: Rohit_Result, dtype: int64
```

[27]:
```
dic.size
```

[27]:
```
5
```

[28]:
```
#dtype
dic.dtype
```

[28]:
```
dtype('int64')
```

[29]:
```
#is_unique, means all the element is present in the series is unique
dic.is_unique
```

[29]:
```
True
```

[30]:
```
pd.Series([1,1,2,3,4,5,5,6]).is_unique #it contain some same values
```

[30]:
```
False
```

[31]:
```
#index
dic.index
```

[31]:
```
Index(['Maths', 'English', 'Science', 'Hindi', 'Data Science'], dtype='object')
```

[32]:
```
#values
dic.values
```

[32]:
```
array([ 67,  57,  89, 100,  96])
```

7 Series using read_csv file

[33]:
```
#here i have random number file download from campus x
num=pd.read_csv("/content/subs.csv",squeeze=True)
num                #generally pandas load csv file and save them in data frame␣
 ↪that's why we use 'squeeze'parameter
```

[33]:
```
0       48
1       57
2       40
3       43
4       44
      ...
360    231
361    226
362    155
363    144
364    172
Name: Subscribers gained, Length: 365, dtype: int64
```

[34]:
```
#i have alrady download two file from campus x youtube chanel it's 'movie' and␣
 ↪'virat kohli matches runs'
vk=pd.read_csv("/content/kohli_ipl.csv",squeeze=True,index_col='match_no') #in␣
 ↪this i use 'index_col' parameter to give specific index name
vk
```

[34]:
```
match_no
1       1
2      23
3      13
4      12
5       1
       ..
211     0
212    20
213    73
214    25
215     7
Name: runs, Length: 215, dtype: int64
```

[35]:
```
movie=pd.read_csv("/content/bollywood.csv",squeeze=True,index_col="movie")
movie
```

[35]:
```
movie
Uri: The Surgical Strike                   Vicky Kaushal
Battalion 609                                Vicky Ahuja
The Accidental Prime Minister (film)         Anupam Kher
```

```
Why Cheat India                              Emraan Hashmi
Evening Shadows                             Mona Ambegaonkar
                                                        …
Hum Tumhare Hain Sanam                       Shah Rukh Khan
Aankhen (2002 film)                         Amitabh Bachchan
Saathiya (film)                                 Vivek Oberoi
Company (film)                                   Ajay Devgn
Awara Paagal Deewana                            Akshay Kumar
Name: lead, Length: 1500, dtype: object
```

8 Pandas series method

head(),tail(),count(),value_counts(),sort_values(),sort_index(),inplace-parameter

[36]:
```
movie.head() #check the top 5 reacord's or give the specific number in head()␣
↪like head(4)
```

[36]:
```
movie
Uri: The Surgical Strike                    Vicky Kaushal
Battalion 609                                 Vicky Ahuja
The Accidental Prime Minister (film)          Anupam Kher
Why Cheat India                              Emraan Hashmi
Evening Shadows                             Mona Ambegaonkar
Name: lead, dtype: object
```

[37]:
```
movie.head(4)
```

[37]:
```
movie
Uri: The Surgical Strike                  Vicky Kaushal
Battalion 609                               Vicky Ahuja
The Accidental Prime Minister (film)        Anupam Kher
Why Cheat India                            Emraan Hashmi
Name: lead, dtype: object
```

[38]:
```
#check tail()
movie.tail()
```

[38]:
```
movie
Hum Tumhare Hain Sanam      Shah Rukh Khan
Aankhen (2002 film)        Amitabh Bachchan
Saathiya (film)                Vivek Oberoi
Company (film)                   Ajay Devgn
Awara Paagal Deewana           Akshay Kumar
Name: lead, dtype: object
```

[39]:
```
#value_counts is count the number of times
movie.value_counts()
```

[39]:
```
Akshay Kumar        48
Amitabh Bachchan    45
Ajay Devgn          38
Salman Khan         31
Sanjay Dutt         26
                    ..
Diganth              1
Parveen Kaur         1
Seema Azmi           1
Akanksha Puri        1
Edwin Fernandes      1
Name: lead, Length: 566, dtype: int64
```

[40]:
```
#sample is give the random records from the series
movie.sample()
```

[40]:
```
movie
Goal (2007 Hindi film)    John Abraham
Name: lead, dtype: object
```

[41]:
```
movie.sample(5)
```

[41]:
```
movie
Muskaan                       Aftab Shivdasani
Deadline: Sirf 24 Ghante         Rajit Kapoor
Sharafat Gayi Tel Lene             Zayed Khan
Shart: The Challenge            Tusshar Kapoor
My Wife's Murder                   Anil Kapoor
Name: lead, dtype: object
```

[42]:
```
#sorting the values
vk.sort_values()
```

[42]:
```
match_no
87       0
211      0
207      0
206      0
91       0
       ...
164    100
120    100
123    108
126    109
128    113
Name: runs, Length: 215, dtype: int64
```

[43]:
```
vk.sort_values(ascending=False) #ascending is the parameter for values
 ↪ascending and descending
```

[43]:
```
match_no
128    113
126    109
123    108
164    100
120    100
       …
93       0
211      0
130      0
8        0
135      0
Name: runs, Length: 215, dtype: int64
```

[44]:
```
# sort_index
vk.sort_index(ascending=False)
```

[44]:
```
match_no
215     7
214    25
213    73
212    20
211     0
       ..
5       1
4      12
3      13
2      23
1       1
Name: runs, Length: 215, dtype: int64
```

[45]:
```
#inplace is the, if you want to change you'r orignal series than you can you
 ↪the inplace parameter
vk.sort_index(inplace=True)
vk
```

[45]:
```
match_no
1       1
2      23
3      13
4      12
5       1
       ..
211     0
```

```
212    20
213    73
214    25
215     7
Name: runs, Length: 215, dtype: int64
```

9 We can apply the some mathematicla operation on the series

count(),min(),max(),sum(),var(),median(),std(),mean(),describe()

[46]:
```
#count()
vk.count()
```

[46]:
```
215
```

[47]:
```
#min
vk.min()
```

[47]:
```
0
```

[48]:
```
#max()
vk.max()
```

[48]:
```
113
```

[49]:
```
vk.sum()
```

[49]:
```
6634
```

[50]:
```
#mean
vk.mean()
```

[50]:
```
30.855813953488372
```

[51]:
```
#median
vk.median()
```

[51]:
```
24.0
```

[52]:
```
#std
vk.std()
```

[52]:
```
26.22980132830278
```

[53]:
```
#var
vk.var()
```

[53]:
```
688.0024777222343
```

[54]:
```
vk.describe()
```

[54]:
```
count    215.000000
mean      30.855814
std       26.229801
min        0.000000
25%        9.000000
50%       24.000000
75%       48.000000
max      113.000000
Name: runs, dtype: float64
```

10 Series indexing

[55]:
```
vk[5]
```

[55]:
```
1
```

[56]:
```
movie[4]
```

[56]:
```
'Mona Ambegaonkar'
```

[57]:
```
movie[-2]
```

[57]:
```
'Ajay Devgn'
```

[58]:
```
movie[45]
```

[58]:
```
'Natalia Janoszek'
```

11 Slicing Series

[59]:
```
vk[5:16] #we give the index 5 to 15 for slicing
```

[59]:
```
match_no
6      9
7     34
8      0
9     21
10     3
11    10
12    38
13     3
```

```
14    11
15    50
16     2
Name: runs, dtype: int64
```

[60]:
```
## negative slicing
vk[-5:]
```

[60]:
```
match_no
211     0
212    20
213    73
214    25
215     7
Name: runs, dtype: int64
```

[61]:
```
movie[::2] #[start : End : steps]
```

[61]:
```
movie
Uri: The Surgical Strike                   Vicky Kaushal
The Accidental Prime Minister (film)         Anupam Kher
Evening Shadows                          Mona Ambegaonkar
Fraud Saiyaan                                Arshad Warsi
Manikarnika: The Queen of Jhansi           Kangana Ranaut
                                                       …
Raaz (2002 film)                             Dino Morea
Waisa Bhi Hota Hai Part II                   Arshad Warsi
Kaante                                   Amitabh Bachchan
Aankhen (2002 film)                      Amitabh Bachchan
Company (film)                                Ajay Devgn
Name: lead, Length: 750, dtype: object
```

Fancy indexing

[62]:
```
vk[[1,7,8,122]]          # in this we give the specific index values
```

[62]:
```
match_no
1       1
7      34
8       0
122    52
Name: runs, dtype: int64
```

[63]:
```
movie[[4,8,2,155]]
```

[63]:
```
movie
Evening Shadows                          Mona Ambegaonkar
```

```
Manikarnika: The Queen of Jhansi          Kangana Ranaut
The Accidental Prime Minister (film)         Anupam Kher
Bhaiaji Superhit                              Sunny Deol
Name: lead, dtype: object
```

indexing with labels

[64]:
```
movie["Bhaiaji Superhit"]
```

[64]:
```
'Sunny Deol'
```

[65]:
```
movie['Evening Shadows']
```

[65]:
```
'Mona Ambegaonkar'
```

12 Write the Series(Editing Series)

[66]:
```
dic
```

[66]:
```
Maths           67
English         57
Science         89
Hindi          100
Data Science    96
Name: Rohit_Result, dtype: int64
```

[69]:
```
# editing the values by using the index
dic[0] = 89     #in this we are change the 'maths' vlues 67 to 89
dic
```

[69]:
```
Maths           89
English         57
Science         89
Hindi          100
Data Science    96
Name: Rohit_Result, dtype: int64
```

[72]:
```
# what if an index does not exist
dic['Social Science'] = 45  #if index not present in the series then it is␣
 ↪autometcally create new index and value
dic
```

[72]:
```
Maths            89
English          57
Science          89
Hindi           100
```

```
Data Science       96
Social Science     45
Name: Rohit_Result, dtype: int64
```

[73]:
```
runs = [44,58,63,82,63,45]
run=pd.Series(runs)
run
```

[73]:
```
0    44
1    58
2    63
3    82
4    63
5    45
dtype: int64
```

Slicing

[74]:
```
run[2:4]
```

[74]:
```
2    63
3    82
dtype: int64
```

[76]:
```
run[2:4] = 100
run
```

[76]:
```
0     44
1     58
2    100
3    100
4     63
5     45
dtype: int64
```

Fancy indexing

[78]:
```
run[[0,2,5]] = [100,100,100]
run
```

[78]:
```
0    100
1     58
2    100
3    100
4     63
5    100
dtype: int64
```

Editing the series using index label

[79]:
```
movie
```

[79]:
```
movie
Uri: The Surgical Strike                   Vicky Kaushal
Battalion 609                                Vicky Ahuja
The Accidental Prime Minister (film)         Anupam Kher
Why Cheat India                            Emraan Hashmi
Evening Shadows                         Mona Ambegaonkar
                                                    …
Hum Tumhare Hain Sanam                    Shah Rukh Khan
Aankhen (2002 film)                     Amitabh Bachchan
Saathiya (film)                             Vivek Oberoi
Company (film)                                Ajay Devgn
Awara Paagal Deewana                        Akshay Kumar
Name: lead, Length: 1500, dtype: object
```

[81]:
```
movie['Uri: The Surgical Strike'] = "Rohit Verma"
movie                    #first index uri movie value change
```

[81]:
```
movie
Uri: The Surgical Strike                    Rohit Verma
Battalion 609                                Vicky Ahuja
The Accidental Prime Minister (film)         Anupam Kher
Why Cheat India                            Emraan Hashmi
Evening Shadows                         Mona Ambegaonkar
                                                    …
Hum Tumhare Hain Sanam                    Shah Rukh Khan
Aankhen (2002 film)                     Amitabh Bachchan
Saathiya (film)                             Vivek Oberoi
Company (film)                                Ajay Devgn
Awara Paagal Deewana                        Akshay Kumar
Name: lead, Length: 1500, dtype: object
```

12.1 Series with Python Functionalities

len,type,dir,sorted,max,min

[83]:
```
print(len(movie))
```

```
1500
```

[84]:
```
print(type(movie))
```

```
<class 'pandas.core.series.Series'>
```

[ ]:
```
print(dir(movie))
```

[ ]:
```
print(sorted(movie))
```

[90]:
```
print(min(dic))
```

```
45
```

[89]:
```
print(max(dic))
```

```
100
```

13 Type Conversion

[91]:
```
#we have series dic
dic
```

[91]:
```
Maths              89
English            57
Science            89
Hindi             100
Data Science       96
Social Science     45
Name: Rohit_Result, dtype: int64
```

[92]:
```
#converting this series into list
list(dic)
```

[92]:
```
[89, 57, 89, 100, 96, 45]
```

[93]:
```
#converting this series into dic
dict(dic)
```

[93]:
```
{'Maths': 89,
 'English': 57,
 'Science': 89,
 'Hindi': 100,
 'Data Science': 96,
 'Social Science': 45}
```

Membership Operator

[94]:
```
movie
```

[94]:
```
movie
Uri: The Surgical Strike                   Rohit Verma
Battalion 609                              Vicky Ahuja
The Accidental Prime Minister (film)        Anupam Kher
Why Cheat India                           Emraan Hashmi
```

```
Evening Shadows                          Mona Ambegaonkar
                                                  ...
Hum Tumhare Hain Sanam                     Shah Rukh Khan
Aankhen (2002 film)                      Amitabh Bachchan
Saathiya (film)                              Vivek Oberoi
Company (film)                               Ajay Devgn
Awara Paagal Deewana                        Akshay Kumar
Name: lead, Length: 1500, dtype: object
```

[97]:
```
"Uri: The Surgical Strike"  in  movie #if the value present in the series it␣
 ↪give the 'True' other "False"
```

[97]:
```
True
```

[99]:
```
"Radhe"  in movie #because radhe movie not present in the movie series
```

[99]:
```
False
```

[ ]:
```
#looping
for i in movie:
  print(i)
```

14 Arithmetic operator use in the series

[103]:
```
dic
```

[103]:
```
Maths              89
English            57
Science            89
Hindi             100
Data Science       96
Social Science     45
Name: Rohit_Result, dtype: int64
```

[104]:
```
#addistion
100 + dic
```

[104]:
```
Maths             189
English           157
Science           189
Hindi             200
Data Science      196
Social Science    145
Name: Rohit_Result, dtype: int64
```

[107]:
```
vk
```

[107]:
```
match_no
1       1
2      23
3      13
4      12
5       1
       ..
211     0
212    20
213    73
214    25
215     7
Name: runs, Length: 215, dtype: int64
```

[108]:
```
#Relastional operator
vk >=50
```

[108]:
```
match_no
1      False
2      False
3      False
4      False
5      False
       …
211    False
212    False
213     True
214    False
215    False
Name: runs, Length: 215, dtype: bool
```

15 Boolean Indexing on Series

[109]:
```
# Find no of 50's and 100's scored by kohli
vk[vk >= 50].size
```

[109]:
```
50
```

[112]:
```
#find the number of match which in 0 run
vk[vk ==0].size
```

[112]:
```
9
```

[114]:
```
# Count number of match when virat run more than 90 run
vk[vk > 90].size
```

[114]: 8

[117]:
```
# find actors who have done more than 20 movies
movie_count=movie.value_counts()
movie_count
```

[117]:
```
Akshay Kumar        48
Amitabh Bachchan    45
Ajay Devgn          38
Salman Khan         31
Sanjay Dutt         26
                    ..
Diganth              1
Parveen Kaur         1
Seema Azmi           1
Akanksha Puri        1
Edwin Fernandes      1
Name: lead, Length: 567, dtype: int64
```

[118]:
```
movie_count[movie_count > 20]
```

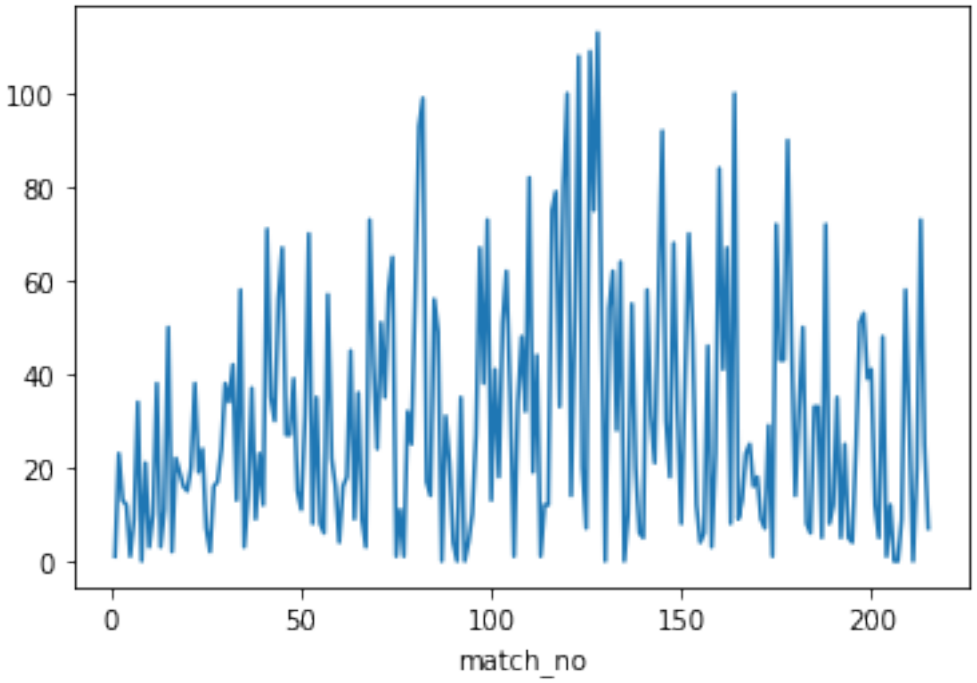
[118]:
```
Akshay Kumar        48
Amitabh Bachchan    45
Ajay Devgn          38
Salman Khan         31
Sanjay Dutt         26
Shah Rukh Khan      22
Emraan Hashmi       21
Name: lead, dtype: int64
```

16 Plotting Graphs on Series

Using the plot()

[120]:
```
vk.plot()
```

[120]:
```
<matplotlib.axes._subplots.AxesSubplot at 0x7ff45449df10>
```



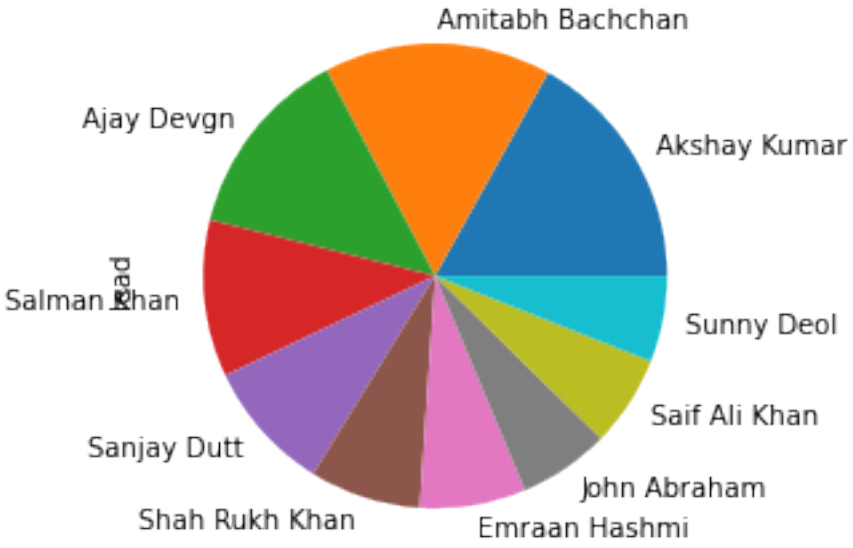
[124]:
```
vk.max()
```

[124]: 113

17 ploting the pie chart on the series

[127]:
```
movie.value_counts().head(10).plot(kind="pie")  #using the 'kind' parameter
```

[127]: <matplotlib.axes._subplots.AxesSubplot at 0x7ff453eb06a0>



18 Some important mathod of a Series

astype,between,clip,drop_duplicates,isnull,dropna,fillna,isin,apply,copy

[129]:
```
# astype
import sys
sys.getsizeof(vk)
```

[129]: 11752

[130]:
```
sys.getsizeof(vk.astype('int16'))
```

[130]: 10462

[131]:
```
# between
vk[vk.between(51,99)].size
```

[131]: 43

get the vlaue between 100 to 200 using clip method

[132]:
```
# clip
vk
```

[132]:
```
match_no
1        1
2       23
```

```
3      13
4      12
5       1
       ..
211     0
212    20
213    73
214    25
215     7
Name: runs, Length: 215, dtype: int64
```

[134]:
```
vk.clip(100,200) #get the vlaue between 100 to 200
```

[134]:
```
match_no
1      100
2      100
3      100
4      100
5      100
      ...
211    100
212    100
213    100
214    100
215    100
Name: runs, Length: 215, dtype: int64
```

drop_duplicates

[142]:
```
# drop_duplicates
import numpy as np
temp = pd.Series([1,1,2,2,3,3,4,4])
temp
```

[142]:
```
0    1
1    1
2    2
3    2
4    3
5    3
6    4
7    4
dtype: int64
```

[136]:
```
temp.drop_duplicates(keep='last')
```

[136]:
```
1    1
3    2
5    3
7    4
dtype: int64
```

[137]:
```
temp.duplicated().sum()
```

[137]:
```
4
```

[138]:
```
vk.duplicated().sum()
```

[138]:
```
137
```

[140]:
```
movie.drop_duplicates()
```

[140]:
```
movie
Uri: The Surgical Strike                   Rohit Verma
Battalion 609                              Vicky Ahuja
The Accidental Prime Minister (film)       Anupam Kher
Why Cheat India                          Emraan Hashmi
Evening Shadows                        Mona Ambegaonkar
                                                   …
Sssshhh…                               Tanishaa Mukerji
Rules: Pyaar Ka Superhit Formula                  Tanuja
Right Here Right Now (film)                        Ankit
Talaash: The Hunt Begins…                 Rakhee Gulzar
The Pink Mirror                           Edwin Fernandes
Name: lead, Length: 567, dtype: object
```

[143]:
```
temp = pd.Series([1,2,3,np.nan,5,6,np.nan,8,np.nan,10])
temp
```

[143]:
```
0     1.0
1     2.0
2     3.0
3     NaN
4     5.0
5     6.0
6     NaN
7     8.0
8     NaN
9    10.0
dtype: float64
```

[144]:
```
temp.size
```

[144]: 10

[145]:
```
temp.count()
```

[145]: 7

isnull

[146]:
```
temp.isnull().sum()
```

[146]: 3

dropna()

[147]:
```
temp.dropna()
```

[147]:
```
0     1.0
1     2.0
2     3.0
4     5.0
5     6.0
7     8.0
9    10.0
dtype: float64
```

fillna()

[148]:
```
temp.fillna(temp.mean())
```

[148]:
```
0     1.0
1     2.0
2     3.0
3     5.0
4     5.0
5     6.0
6     5.0
7     8.0
8     5.0
9    10.0
dtype: float64
```

isin

[149]:
```
vk[(vk == 49) | (vk == 99)]
```

[149]:
```
match_no
82    99
86    49
Name: runs, dtype: int64
```

[150]:
```
movie
```

[150]:
```
movie
Uri: The Surgical Strike                    Rohit Verma
Battalion 609                               Vicky Ahuja
The Accidental Prime Minister (film)        Anupam Kher
Why Cheat India                           Emraan Hashmi
Evening Shadows                         Mona Ambegaonkar
                                                    …
Hum Tumhare Hain Sanam                    Shah Rukh Khan
Aankhen (2002 film)                     Amitabh Bachchan
Saathiya (film)                             Vivek Oberoi
Company (film)                               Ajay Devgn
Awara Paagal Deewana                       Akshay Kumar
Name: lead, Length: 1500, dtype: object
```

[152]:
```
movie[(movie=='Vicky Ahuja') | (movie=="Vivek Oberoi")]
```

[152]:
```
movie
Battalion 609                Vicky Ahuja
Zila Ghaziabad              Vivek Oberoi
Jayantabhai Ki Luv Story    Vivek Oberoi
Grand Masti                 Vivek Oberoi
Kismat Love Paisa Dilli     Vivek Oberoi
1920: The Evil Returns       Vicky Ahuja
Prince (2010 film)          Vivek Oberoi
Mission Istaanbul           Vivek Oberoi
Home Delivery               Vivek Oberoi
Kisna: The Warrior Poet     Vivek Oberoi
Vaastu Shastra (film)        Vicky Ahuja
Dum (2003 Hindi film)       Vivek Oberoi
Saathiya (film)             Vivek Oberoi
Name: lead, dtype: object
```

[155]:
```
movie[movie.isin(['Emraan Hashmi','Akshay Kumar'])]
```

[155]:
```
movie
Why Cheat India                     Emraan Hashmi
Kesari (film)                        Akshay Kumar
Mission Mangal                       Akshay Kumar
Housefull 4                          Akshay Kumar
Good Newwz                           Akshay Kumar
                                                …
Police Force: An Inside Story        Akshay Kumar
Tumsa Nahin Dekha: A Love Story    Emraan Hashmi
Andaaz                               Akshay Kumar
Andaaz                               Akshay Kumar
```

```
Awara Paagal Deewana                Akshay Kumar
Name: lead, Length: 69, dtype: object
```

[156]:
```
movie[movie.isin(['Emraan Hashmi','Akshay Kumar'])].count()
```

[156]:
```
69
```

copy

[157]:
```
movie
```

[157]:
```
movie
Uri: The Surgical Strike                   Rohit Verma
Battalion 609                              Vicky Ahuja
The Accidental Prime Minister (film)        Anupam Kher
Why Cheat India                           Emraan Hashmi
Evening Shadows                         Mona Ambegaonkar
                                                  ...
Hum Tumhare Hain Sanam                    Shah Rukh Khan
Aankhen (2002 film)                     Amitabh Bachchan
Saathiya (film)                            Vivek Oberoi
Company (film)                               Ajay Devgn
Awara Paagal Deewana                      Akshay Kumar
Name: lead, Length: 1500, dtype: object
```

[158]:
```
new_movie = movie.head()
```

[159]:
```
new_movie
```

[159]:
```
movie
Uri: The Surgical Strike                   Rohit Verma
Battalion 609                              Vicky Ahuja
The Accidental Prime Minister (film)        Anupam Kher
Why Cheat India                           Emraan Hashmi
Evening Shadows                         Mona Ambegaonkar
Name: lead, dtype: object
```

[160]:
```
new_movie[1] = "Om Shanti Om"
```

[162]:
```
new_movie = movie.head().copy()
```

[163]:
```
new_movie
```

[163]:
```
movie
Uri: The Surgical Strike                   Rohit Verma
Battalion 609                             Om Shanti Om
The Accidental Prime Minister (film)        Anupam Kher
```

```
Why Cheat India                          Emraan Hashmi
Evening Shadows                       Mona Ambegaonkar
Name: lead, dtype: object
```

[164]:

[ ]: