

SURIYA S 225229140

```
In [1]: import pandas as pd
```

```
In [2]: temperature_trichy=pd.Series([40.2,39.8,36.3,39.1,41.3,32.9,36.6])
```

```
In [3]: temperature_trichy
```

```
Out[3]: 0    40.2  
        1    39.8  
        2    36.3  
        3    39.1  
        4    41.3  
        5    32.9  
        6    36.6  
dtype: float64
```

```
In [4]: temperature_trichy[1]
```

```
Out[4]: 39.8
```

```
In [5]: temperature_trichy[temperature_trichy>=40]
```

```
Out[5]: 0    40.2  
        4    41.3  
dtype: float64
```

```
In [6]: temperature_trichy[temperature_trichy>=40].index
```

```
Out[6]: Int64Index([0, 4], dtype='int64')
```

```
In [7]: students=[['DS01','Rex','1msc'],['Ds02','peter','2msc'],['cs01','ann','3bsc']]  
df_stud=pd.DataFrame(students,columns=['rollno','name','class'])
```

```
In [8]: df_stud
```

```
Out[8]:
```

	rollno	name	class
0	DS01	Rex	1msc
1	Ds02	peter	2msc
2	cs01	ann	3bsc

```
In [9]: df_stud.columns
```

```
Out[9]: Index(['rollno', 'name', 'class'], dtype='object')
```

```
In [10]: df_stud['address']=['Delhi','Bangalore','Chennai']
```

In [11]: df_stud

Out[11]:

	rollno	name	class	address
0	DS01	Rex	1msc	Delhi
1	Ds02	peter	2msc	Bangalore
2	cs01	ann	3bsc	Chennai

In [12]: phonebook = {'rex':[9942002764, 'rex@abc.com'], 'sam':[9932176542, 'sam@xyz.com']}

In [13]: df_phonebook = pd.DataFrame.from_dict(phonebook, orient = 'index')
df_phonebook

Out[13]:

	0	1
rex	9942002764	rex@abc.com
sam	9932176542	sam@xyz.com
peter	9865323645	ann@bhc.com

In [39]: reviews = pd.read_csv("ign.csv")

In [43]: reviews.head()

Out[43]:

	Unnamed: 0	score_phrase	title	url	platform	score	genre	edito
0	0	Amazing	LittleBigPlanet PS Vita	/games/littlebigplanet-vita/vita-98907	PlayStation Vita	9.0	Platformer	
1	1	Amazing	LittleBigPlanet PS Vita -- Marvel Super Hero E...	/games/littlebigplanet-ps-vita-marvel-super-he...	PlayStation Vita	9.0	Platformer	
2	2	Great	Splice: Tree of Life	/games/splice/ipad-141070	iPad	8.5	Puzzle	
3	3	Great	NHL 13	/games/nhl-13/xbox-360-128182	Xbox 360	8.5	Sports	
4	4	Great	NHL 13	/games/nhl-13/ps3-128181	PlayStation 3	8.5	Sports	

In [44]: `reviews.tail(3)`

Out[44]:

	Unnamed: 0	score_phrase	title	url	platform	score	genre	editors
18622	18622	Mediocre	Star Ocean: Integrity and Faithlessness	/games/star-ocean-5/ps4-20035681	PlayStation 4	5.8	RPG	
18623	18623	Masterpiece	Inside	/games/inside-playdead/xbox-one-121435	Xbox One	10.0	Adventure	
18624	18624	Masterpiece	Inside	/games/inside-playdead/pc-20055740	PC	10.0	Adventure	



In [45]: `reviews.shape`

Out[45]: (18625, 11)

In [46]: `reviews.dtypes`

Out[46]:

Unnamed: 0	int64
score_phrase	object
title	object
url	object
platform	object
score	float64
genre	object
editors_choice	object
release_year	int64
release_month	int64
release_day	int64
dtype:	object

In [47]: `reviews['title'].tail()`

Out[47]:

18620	Tokyo Mirage Sessions #FE
18621	LEGO Star Wars: The Force Awakens
18622	Star Ocean: Integrity and Faithlessness
18623	Inside
18624	Inside

Name: title, dtype: object

```
In [48]: reviews[['title', 'genre']].head(10)
```

Out[48]:

	title	genre
0	LittleBigPlanet PS Vita	Platformer
1	LittleBigPlanet PS Vita -- Marvel Super Hero E...	Platformer
2	Splice: Tree of Life	Puzzle
3	NHL 13	Sports
4	NHL 13	Sports
5	Total War Battles: Shogun	Strategy
6	Double Dragon: Neon	Fighting
7	Guild Wars 2	RPG
8	Double Dragon: Neon	Fighting
9	Total War Battles: Shogun	Strategy

```
In [49]: reviews.iloc[0:5]
```

Out[49]:

	Unnamed: 0	score_phrase	title	url	platform	score	genre	edito
0	0	Amazing	LittleBigPlanet PS Vita	/games/littlebigplanet-vita/vita-98907	PlayStation Vita	9.0	Platformer	
1	1	Amazing	LittleBigPlanet PS Vita -- Marvel Super Hero E...	/games/littlebigplanet-ps-vita-marvel-super-he...	PlayStation Vita	9.0	Platformer	
2	2	Great	Splice: Tree of Life	/games/splice/ipad-141070	iPad	8.5	Puzzle	
3	3	Great	NHL 13	/games/nhl-13/xbox-360-128182	Xbox 360	8.5	Sports	
4	4	Great	NHL 13	/games/nhl-13/ps3-128181	PlayStation 3	8.5	Sports	

In [50]: `reviews.iloc[4:,4:]`

Out[50]:

	platform	score	genre	editors_choice	release_year	release_month	release_day
4	PlayStation 3	8.5	Sports	N	2012	9	11
5	Macintosh	7.0	Strategy	N	2012	9	11
6	Xbox 360	3.0	Fighting	N	2012	9	11
7	PC	9.0	RPG	Y	2012	9	11
8	PlayStation 3	3.0	Fighting	N	2012	9	11
9	PC	7.0	Strategy	N	2012	9	11
10	PlayStation 3	7.5	Fighting	N	2012	9	11
11	Xbox 360	7.5	Fighting	N	2012	9	11
12	iPhone	7.0	NaN	N	2012	9	10
13	Xbox 360	9.0	Action, Adventure	Y	2012	9	7
14	PC	9.0	Action, Adventure	Y	2012	9	7
15	Macintosh	6.5	Adventure	N	2012	9	6
16	PC	6.5	Adventure	N	2012	9	6
17	iPhone	8.0	Action	N	2012	9	5
18	PlayStation 3	5.5	Action, Adventure	N	2012	9	3
19	Xbox 360	7.0	Fighting	N	2012	9	3
20	PlayStation 3	7.0	Fighting	N	2012	9	3
21	Xbox 360	7.5	RPG	N	2012	8	31
22	PlayStation 3	7.5	RPG	N	2012	8	31
23	PC	7.5	RPG	N	2012	8	31
24	PC	9.0	Action, RPG	Y	2012	8	31
25	PC	7.0	Shooter	N	2012	8	30
26	iPad	9.0	Action, RPG	Y	2012	8	30
27	PC	7.5	Shooter	N	2012	8	29
28	PC	8.0	Adventure	N	2012	8	29
29	PlayStation 3	6.5	Action, RPG	N	2012	8	28
30	Macintosh	9.0	Adventure	Y	2012	8	28
31	PC	8.7	RPG	Y	2012	10	4
32	PlayStation 3	4.9	Platformer	N	2012	10	4

	platform	score	genre	editors_choice	release_year	release_month	release_day
33	Nintendo DS	9.6	RPG	Y	2012	10	3
...
18595	PC	4.4	Action	N	2016	7	16
18596	PC	6.5	Action, Adventure	N	2016	7	14
18597	Xbox One	4.9	Shooter, Adventure	N	2016	7	13
18598	PC	6.8	Action	N	2016	7	13
18599	Android	7.0	Battle	N	2016	7	13
18600	PC	7.4	Shooter	N	2016	8	19
18601	PlayStation 4	7.4	Shooter	N	2016	8	19
18602	Xbox One	7.4	Shooter	N	2016	8	19
18603	PC	7.8	Platformer	N	2016	8	18
18604	PlayStation 4	8.6	Sports	N	2016	8	17
18605	PlayStation 4	6.0	Adventure	N	2016	8	16
18606	PC	6.4	Strategy	N	2016	8	4
18607	iPhone	7.0	Battle	N	2016	7	13
18608	PlayStation 4	5.4	Racing, Action	N	2016	7	13
18609	Nintendo 3DS	8.0	Action	N	2016	7	12
18610	PlayStation 4	6.0	Adventure	N	2016	7	12
18611	Xbox One	5.8	Shooter	N	2016	7	6
18612	Nintendo 3DS	7.8	Puzzle	N	2016	7	6
18613	PC	8.0	Strategy	N	2016	7	1
18614	Nintendo 3DS	9.2	Adventure	Y	2016	6	29
18615	PlayStation Vita	9.2	Adventure	Y	2016	6	29
18616	PC	7.5	Adventure	N	2016	8	2
18617	PlayStation 4	8.4	Adventure	N	2016	8	2
18618	PC	9.1	Action	Y	2016	7	28
18619	PC	7.9	Puzzle, Action	N	2016	7	28
18620	Wii U	7.6	RPG	N	2016	6	29

	platform	score	genre	editors_choice	release_year	release_month	release_day
18621	PlayStation 4	9.0	Action, Adventure	Y	2016	6	29
18622	PlayStation 4	5.8	RPG	N	2016	6	28
18623	Xbox One	10.0	Adventure	Y	2016	6	28
18624	PC	10.0	Adventure	Y	2016	6	28

18621 rows × 7 columns

```
In [51]: reviews.iloc[:,0]
```

```
Out[51]: 0          0
1          1
2          2
3          3
4          4
5          5
6          6
7          7
8          8
9          9
10         10
11         11
12         12
13         13
14         14
15         15
16         16
17         17
18         18
19         19
20         20
21         21
22         22
23         23
24         24
25         25
26         26
27         27
28         28
29         29
...
18595     18595
18596     18596
18597     18597
18598     18598
18599     18599
18600     18600
18601     18601
18602     18602
18603     18603
18604     18604
18605     18605
18606     18606
18607     18607
18608     18608
18609     18609
18610     18610
18611     18611
18612     18612
18613     18613
18614     18614
18615     18615
18616     18616
18617     18617
18618     18618
```



```
18619    18619
18620    18620
18621    18621
18622    18622
18623    18623
18624    18624
```

Name: Unnamed: 0, Length: 18625, dtype: int64

In [52]: `reviews.iloc[10,:]`

```
Out[52]: Unnamed: 0                10
score_phrase                    Good
title                Tekken Tag Tournament 2
url          /games/tekken-tag-tournament-2/ps3-124584
platform                    PlayStation 3
score                      7.5
genre                    Fighting
editors_choice                N
release_year                2012
release_month                9
release_day                 11
Name: 10, dtype: object
```

In [53]: `reviews.drop(reviews.columns[0],axis=1,inplace=True)`
`reviews.head()`

Out[53]:

	score_phrase	title	url	platform	score	genre	editors_choice	r
0	Amazing	LittleBigPlanet PS Vita	/games/littlebigplanet-vita/vita-98907	PlayStation Vita	9.0	Platformer	Y	
1	Amazing	LittleBigPlanet PS Vita -- Marvel Super Hero E...	/games/littlebigplanet-ps-vita-marvel-super-he...	PlayStation Vita	9.0	Platformer	Y	
2	Great	Splice: Tree of Life	/games/splice/ipad-141070	iPad	8.5	Puzzle	N	
3	Great	NHL 13	/games/nhl-13/xbox-360-128182	Xbox 360	8.5	Sports	N	
4	Great	NHL 13	/games/nhl-13/ps3-128181	PlayStation 3	8.5	Sports	N	

In [54]: `students=[['DS01', 'Rex', '1msc'],['Ds02', 'peter', '2msc'],['cs01', 'ann', '3bsc']]`
`df_stud=pd.DataFrame(students,columns=['rollno', 'name', 'class'])`
`df_stud`

Out[54]:

	rollno	name	class
0	DS01	Rex	1msc
1	Ds02	peter	2msc
2	cs01	ann	3bsc

```
In [55]: df_stud['name'].loc[:]
```

```
Out[55]: 0    Rex
1    peter
2    ann
Name: name, dtype: object
```

```
In [56]: reviews.loc[0:5]
```

```
Out[56]:
```

	score_phrase	title	url	platform	score	genre	editors_choice	r
0	Amazing	LittleBigPlanet PS Vita	/games/littlebigplanet-vita/vita-98907	PlayStation Vita	9.0	Platformer	Y	
1	Amazing	LittleBigPlanet PS Vita -- Marvel Super Hero E...	/games/littlebigplanet-ps-vita-marvel-super-he...	PlayStation Vita	9.0	Platformer	Y	
2	Great	Splice: Tree of Life	/games/splice/ipad-141070	iPad	8.5	Puzzle	N	
3	Great	NHL 13	/games/nhl-13/xbox-360-128182	Xbox 360	8.5	Sports	N	
4	Great	NHL 13	/games/nhl-13/ps3-128181	PlayStation 3	8.5	Sports	N	
5	Good	Total War Battles: Shogun	/games/total-war-battles-shogun/mac-142565	Macintosh	7.0	Strategy	N	

```
In [57]: reviews['score_phrase'].loc[:4]
```

```
Out[57]: 0    Amazing
1    Amazing
2    Great
3    Great
4    Great
Name: score_phrase, dtype: object
```

```
In [58]: reviews['score_phrase'].loc[:9]
```

```
Out[58]: 0    Amazing
1    Amazing
2    Great
3    Great
4    Great
5    Good
6    Awful
7    Amazing
8    Awful
9    Good
Name: score_phrase, dtype: object
```

```
In [59]: some_reviews=reviews.iloc[5:15,:]
```

In [60]: `some_reviews.head()`

Out[60]:

	score_phrase	title	url	platform	score	genre	editors_choice	release_year
5	Good	Total War Battles: Shogun	/games/total-war-battles-shogun/mac-142565	Macintosh	7.0	Strategy	N	2012
6	Awful	Double Dragon: Neon	/games/double-dragon-neon/xbox-360-131320	Xbox 360	3.0	Fighting	N	2012
7	Amazing	Guild Wars 2	/games/guild-wars-2/pc-896298	PC	9.0	RPG	Y	2012
8	Awful	Double Dragon: Neon	/games/double-dragon-neon/ps3-131321	PlayStation 3	3.0	Fighting	N	2012
9	Good	Total War Battles: Shogun	/games/total-war-battles-shogun/pc-142564	PC	7.0	Strategy	N	2012

In [61]: `some_reviews['score'].head(3)`

Out[61]:

```
5    7.0
6    3.0
7    9.0
Name: score, dtype: float64
```

In [62]: `reviews[['score', 'genre', 'release_year']].head()`

Out[62]:

	score	genre	release_year
0	9.0	Platformer	2012
1	9.0	Platformer	2012
2	8.5	Puzzle	2012
3	8.5	Sports	2012
4	8.5	Sports	2012

In [63]: `type(reviews['score'])`

Out[63]: `pandas.core.series.Series`

In [64]: `reviews['score'].mean()`

Out[64]: 6.950459060402666

```
In [65]: reviews.mean()
```

```
Out[65]: score          6.950459  
release_year    2006.515329  
release_month    7.138470  
release_day     15.603866  
dtype: float64
```

```
In [66]: reviews.mean(axis=1).head()
```

```
Out[66]: 0    510.500  
1    510.500  
2    510.375  
3    510.125  
4    510.125  
dtype: float64
```

```
In [67]: reviews['score'].median()
```

```
Out[67]: 7.3
```

```
In [68]: reviews['score'].min()
```

```
Out[68]: 0.5
```

```
In [69]: reviews['score'].max()
```

```
Out[69]: 10.0
```

```
In [70]: reviews['score'].std()
```

```
Out[70]: 1.7117358608045874
```

```
In [71]: reviews['score'].notnull().sum()
```

```
Out[71]: 18625
```

```
In [72]: reviews.describe()
```

```
Out[72]:
```

	score	release_year	release_month	release_day
count	18625.000000	18625.000000	18625.00000	18625.000000
mean	6.950459	2006.515329	7.13847	15.603866
std	1.711736	4.587529	3.47671	8.690128
min	0.500000	1970.000000	1.00000	1.000000
25%	6.000000	2003.000000	4.00000	8.000000
50%	7.300000	2007.000000	8.00000	16.000000
75%	8.200000	2010.000000	10.00000	23.000000
max	10.000000	2016.000000	12.00000	31.000000

```
In [73]: reviews.corr()
```

```
Out[73]:
```

	score	release_year	release_month	release_day
score	1.000000	0.062716	0.007632	0.020079
release_year	0.062716	1.000000	-0.115515	0.016867
release_month	0.007632	-0.115515	1.000000	-0.067964
release_day	0.020079	0.016867	-0.067964	1.000000

```
In [74]: M=reviews['score']/2  
M.head()
```

```
Out[74]: 0    4.50  
1    4.50  
2    4.25  
3    4.25  
4    4.25  
Name: score, dtype: float64
```

```
In [75]: score_filter=reviews['score']>7
```

```
In [76]: score_filter.head()
```

```
Out[76]: 0    True  
1    True  
2    True  
3    True  
4    True  
Name: score, dtype: bool
```

```
In [78]: filtered_review=reviews[score_filter]
```

In [79]: `filtered_review`

Out[79]:

	score_phrase	title	url	platform	score	genre	editors_c
0	Amazing	LittleBigPlanet PS Vita	/games/littlebigplanet-vita/vita-98907	PlayStation Vita	9.0	Platformer	
1	Amazing	LittleBigPlanet PS Vita -- Marvel Super Hero E...	/games/littlebigplanet-ps-vita-marvel-super-he...	PlayStation Vita	9.0	Platformer	
2	Great	Splice: Tree of Life	/games/splice/ipad-141070	iPad	8.5	Puzzle	
3	Great	NHL 13	/games/nhl-13/xbox-360-128182	Xbox 360	8.5	Sports	
4	Great	NHL 13	/games/nhl-13/ps3-128181	PlayStation 3	8.5	Sports	
7	Amazing	Guild Wars 2	/games/guild-wars-2/pc-896298	PC	9.0	RPG	

In [80]: `filtered_review.shape`

Out[80]: (9800, 10)

In [81]: `filtered_review['title'].head(10)`

Out[81]:

```

0           LittleBigPlanet PS Vita
1  LittleBigPlanet PS Vita -- Marvel Super Hero E...
2           Splice: Tree of Life
3           NHL 13
4           NHL 13
7           Guild Wars 2
10          Tekken Tag Tournament 2
11          Tekken Tag Tournament 2
13          Mark of the Ninja
14          Mark of the Ninja
Name: title, dtype: object
```

```
In [82]: xbox_one_filter=(reviews['score']>7)&(reviews['platform']=='Xbox One')
         filtered_reviews2=reviews[xbox_one_filter]
         filtered_reviews2.head()
```

Out[82]:

	score_phrase	title	url	platform	score	genre	editors_choice	release_
17137	Amazing	Gone Home	/games/gone-home/xbox-one-20014361	Xbox One	9.5	Simulation	Y	:
17197	Amazing	Rayman Legends	/games/rayman-legends/xbox-one-20008449	Xbox One	9.5	Platformer	Y	:
17295	Amazing	LEGO Marvel Super Heroes	/games/lego-marvel-super-heroes/xbox-one-20000826	Xbox One	9.0	Action	Y	:
17313	Great	Dead Rising 3	/games/dead-rising-3/xbox-one-124306	Xbox One	8.3	Action	N	:
17317	Great	Killer Instinct	/games/killer-instinct-2013/xbox-one-20000538	Xbox One	8.4	Fighting	N	:



```
In [83]: filtered_reviews2.shape
```

Out[83]: (140, 10)

```
In [84]: action_reviews=reviews[reviews['genre']=='Action']
```

In [85]: `action_reviews.head()`

Out[85]:

	score_phrase	title	url	platform	score	genre	editors_choice	release_year
17	Great	Avengers Initiative	/games/avengers-initiative/iphone-141579	iPhone	8.0	Action	N	2012
34	Good	War of the Roses	/games/war-of-the-roses-140577/pc-115849	PC	7.3	Action	N	2012
45	Amazing	Bad Piggies	/games/bad-piggies/iphone-141455	iPhone	9.2	Action	Y	2012
49	Okay	Demon's Score	/games/demons-score/iphone-118050	iPhone	6.9	Action	N	2012
69	Great	Hotline Miami	/games/hotline-miami/pc-139657	PC	8.8	Action	Y	2012

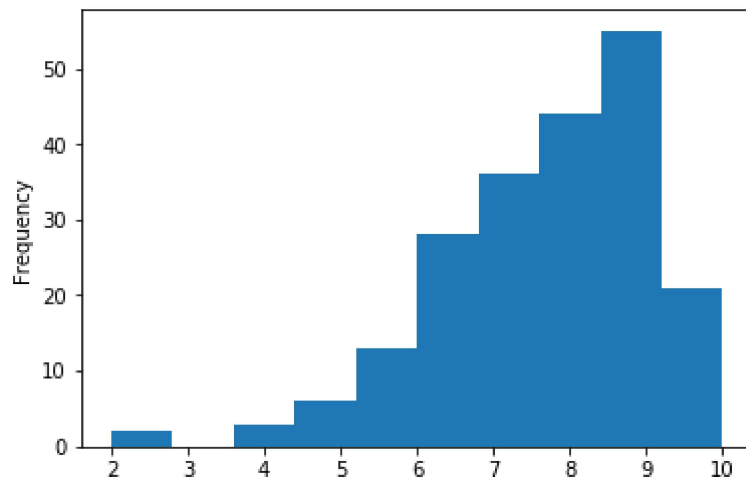
In [86]: `action_reviews.shape`

Out[86]: (3797, 10)

In [87]: `import matplotlib.pyplot as plt`

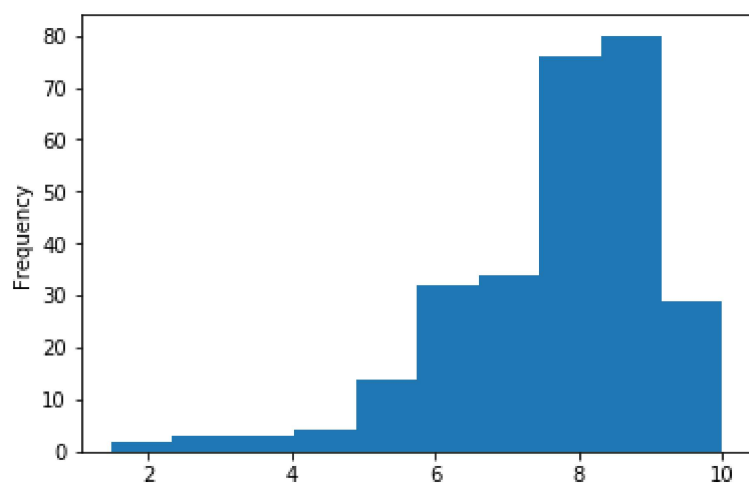
In [88]: `reviews[reviews["platform"]=="Xbox One"]["score"].plot(kind="hist")`

Out[88]: <matplotlib.axes._subplots.AxesSubplot at 0x2687ee34b00>




```
In [89]: reviews[reviews["platform"]=="PlayStation 4"]["score"].plot(kind="hist")
```

```
Out[89]: <matplotlib.axes._subplots.AxesSubplot at 0x2687ee34a20>
```



```
In [ ]:
```