

In [3]:

```
import pandas as pd
nba = pd.read_csv("data for panda exercise.csv")
nba
```

Out[3]:

	Student Code	Degree	Student Name	Mid	Quiz 1	Quiz 2	Best of Quizzes	Assignment 1	Assignment 2	Best of Assignments	Total Sessional (50)	Final (50)	Total (100)	Grade
0	022-14-19987	BS(CS)	Abdul Basit	28	8.0	3.0	8	7.0	9.0	9	45	25.0	70	B
1	022-14-110233	BS(CS)	Adeel Ahmed	17	NaN	5.0	5	8.0	10.0	10	32	18.0	50	F
2	022-14-110585	BS(CS)	Afrah Zareen	18	5.0	2.0	5	8.0	10.0	10	33	30.0	63	C
3	022-14-19718	BS(CS)	Ahmed Ali Raza	14	7.0	2.0	7	NaN	2.0	2	23	23.0	46	F
4	022-14-110648	BS(CS)	Ahsan Ali Vohra	27	7.0	6.0	7	7.0	9.0	9	43	34.0	77	B
5	022-14-110232	BS(CS)	Ameer Hamza	25	9.0	6.0	9	8.0	10.0	10	44	27.0	71	B
6	022-14-110588	BS(CS)	Anas Ali Khan	28	5.0	6.0	6	8.0	10.0	10	44	30.0	74	B
7	022-14-110388	BS(CS)	Aneebullah Niazi	26	9.0	6.0	9	8.0	10.0	10	45	40.0	85	A
8	022-14-110601	BS(CS)	Areesha Sohail	19	9.0	4.0	9	7.0	9.0	9	37	24.0	61	C
9	022-14-110599	BS(CS)	Arsalan	28	8.0	6.0	8	8.0	NaN	8	44	40.0	84	A
10	022-14-110214	BS(CS)	Fatima Haider Warsi	30	8.0	7.0	8	8.0	NaN	8	46	45.0	91	A
11	022-14-110591	BS(CS)	Habib Ullah	28	8.0	5.0	8	5.0	NaN	5	41	35.0	76	B
12	022-15-110994	BS(CS)	Hafiza Tooba Akbani	23	7.0	5.0	7	8.0	10.0	10	40	33.0	73	B
13	022-14-110600	BS(CS)	Hamza Abdul Jabbar	24	8.0	4.0	8	8.0	10.0	10	42	25.0	67	C
14	022-14-110389	BS(CS)	Hareem Afshan	21	7.0	4.0	7	6.0	8.0	8	36	29.0	65	C
15	022-14-19916	BS(CS)	Haseeb Sajid	18	NaN	NaN	0	NaN	NaN	0	18	NaN	18	F
16	022-14-110596	BS(CS)	Hassam Ahmed	23	5.0	5.0	5	7.0	9.0	9	37	35.0	72	B
17	022-14-110396	BS(CS)	Khalid Anwer	20	8.0	5.0	8	9.0	11.0	11	39	31.0	70	B
18	022-14-110223	BS(CS)	Madiha Jabeen	16	5.0	2.0	5	8.0	10.0	10	31	29.0	60	C
19	022-14-110222	BS(CS)	Mohammad Hunain	27	9.0	6.0	9	8.0	10.0	10	46	45.0	91	A
20	022-14-110412	BS(CS)	Muhammad Aamir	24	7.0	6.0	7	7.0	9.0	9	40	31.0	71	B
21	022-14-110593	BS(CS)	Muhammad Abdul Rehman Siddiqui	20	9.0	6.0	9	9.0	11.0	11	40	20.0	60	C
22	022-14-110398	BS(CS)	Muhammad Abdullah	20	7.0	6.0	7	7.0	NaN	7	34	23.0	57	F
23	022-14-19983	BS(CS)	Muhammad Ali Iqbal	26	5.0	NaN	5	8.0	10.0	10	41	21.0	62	C
24	022-14-110215	BS(CS)	Muhammad Bilal	28	5.0	4.0	5	9.0	11.0	11	44	33.0	77	B
25	022-14-110105	BS(CS)	Muhammad Faraz	26	9.0	6.0	9	8.0	10.0	10	45	41.0	86	A
26	022-14-110370	BS(CS)	Muhammad Ghazali Faridi	27	6.0	NaN	6	6.0	8.0	8	41	24.0	65	C
27	022-14-110452	BS(CS)	Muhammad Osama Khan	27	8.0	6.0	8	8.0	10.0	10	45	26.0	71	B
28	022-14-110387	BS(CS)	Muhammad Saqib Intizar	22	6.0	6.0	6	9.0	11.0	11	39	18.0	57	F
29	022-14-110217	BS(CS)	Muhammad Shahroz Khurshid	17	7.0	1.0	7	6.0	NaN	6	30	9.0	39	F
30	022-14-110401	BS(CS)	Muhammad Shozab	23	8.0	6.0	8	9.0	NaN	9	40	32.0	72	B
31	022-14-110231	BS(CS)	Muhammad Taha Hasnain	27	7.0	5.0	7	10.0	NaN	10	44	29.0	73	B
32	022-14-110035	BS(CS)	Muhammad Wajahat Khan	9	NaN	2.0	2	8.0	10.0	10	21	8.0	29	F
33	022-14-19919	BS(CS)	Muhammad Younus Baig	20	4.0	2.0	4	8.0	10.0	10	34	17.0	51	F
34	022-14-110413	BS(CS)	Nazeer Bin Zafar	25	9.0	6.0	9	8.0	10.0	10	44	42.0	86	A
35	022-14-19923	BS(CS)	Rabi Ahmed	20	8.0	5.0	8	NaN	10.0	10	38	28.0	66	C
36	022-14-110582	BS(CS)	Rida Nasim	25	9.0	5.0	9	9.0	NaN	9	43	27.0	70	B
37	022-14-110230	BS(CS)	Sadaf Nosheen	27	9.0	5.0	9	9.0	NaN	9	45	30.0	75	B
38	022-14-110229	BS(CS)	Sadaquat Rafique	9	6.0	6.0	6	5.0	7.0	7	22	17.0	39	F
39	022-14-110107	BS(CS)	Sania Iqbal	28	4.0	4.0	4	9.0	11.0	11	43	25.0	68	C
40	022-14-110584	BS(CS)	Sharif Taqi	27	9.0	6.0	9	8.0	10.0	10	46	35.0	81	A
41	022-14-110225	BS(CS)	Shariqa Ahmad	20	7.0	6.0	7	8.0	10.0	10	37	20.0	57	F
42	022-14-110587	BS(CS)	Sumbul Rehman	28	5.0	6.0	6	8.0	10.0	10	44	23.0	67	C
43	022-14-110451	BS(CS)	Syed Faizan Uddin	28	9.0	4.0	9	6.0	8.0	8	45	34.0	79	B
44	022-14-110589	BS(CS)	Syed Sohaib	25	7.0	5.0	7	9.0	NaN	9	41	22.0	63	C
45	022-14-110400	BS(CS)	Syeda Sabika Raza	27	9.0	6.0	9	9.0	NaN	9	45	35.0	80	A
46	022-14-19911	BS(CS)	Usman Khan	25	8.0	5.0	8	8.0	10.0	10	43	22.0	65	C
47	022-14-110219	BS(CS)	Waqar Ahmed	11	9.0	5.0	9	5.0	7.0	7	27	19.0	46	F

In [4]:

```
nba.head(10)
```

Out[4]:

	Student Code	Degree	Student Name	Mid	Quiz 1	Quiz 2	Best of Quizzes	Assignment 1	Assignment 2	Best of Assignments	Total Sessional (50)	Final (50)	Total (100)	Grade
0	022-14-19987	BS(CS)	Abdul Basit	28	8.0	3.0	8	7.0	9.0	9	45	25.0	70	B
1	022-14-110233	BS(CS)	Adeel Ahmed	17	NaN	5.0	5	8.0	10.0	10	32	18.0	50	F
2	022-14-110585	BS(CS)	Afrah Zareen	18	5.0	2.0	5	8.0	10.0	10	33	30.0	63	C
3	022-14-19718	BS(CS)	Ahmed Ali Raza	14	7.0	2.0	7	NaN	2.0	2	23	23.0	46	F
4	022-14-110648	BS(CS)	Ahsan Ali Vohra	27	7.0	6.0	7	7.0	9.0	9	43	34.0	77	B
5	022-14-110232	BS(CS)	Ameer Hamza	25	9.0	6.0	9	8.0	10.0	10	44	27.0	71	B
6	022-14-110588	BS(CS)	Anas Ali Khan	28	5.0	6.0	6	8.0	10.0	10	44	30.0	74	B
7	022-14-110388	BS(CS)	Aneebullah Niazi	26	9.0	6.0	9	8.0	10.0	10	45	40.0	85	A
8	022-14-110601	BS(CS)	Areesha Sohail	19	9.0	4.0	9	7.0	9.0	9	37	24.0	61	C
9	022-14-110599	BS(CS)	Arsalan	28	8.0	6.0	8	8.0	NaN	8	44	40.0	84	A

```
In [5]: nba.tail(10)
```

Out[5]:

	Student Code	Degree	Student Name	Mid	Quiz 1	Quiz 2	Best of Quizzes	Assignment 1	Assignment 2	Best of Assignments	Total Sessional (50)	Final (50)	Total (100)	Grade
38	022-14-110229	BS(CS)	Sadaquat Rafique	9	6.0	6.0	6	5.0	7.0	7	22	17.0	39	F
39	022-14-110107	BS(CS)	Sania Iqbal	28	4.0	4.0	4	9.0	11.0	11	43	25.0	68	C
40	022-14-110584	BS(CS)	Sharif Taqi	27	9.0	6.0	9	8.0	10.0	10	46	35.0	81	A
41	022-14-110225	BS(CS)	Shariqa Ahmad	20	7.0	6.0	7	8.0	10.0	10	37	20.0	57	F
42	022-14-110587	BS(CS)	Sumbul Rehman	28	5.0	6.0	6	8.0	10.0	10	44	23.0	67	C
43	022-14-110451	BS(CS)	Syed Faizan Uddin	28	9.0	4.0	9	6.0	8.0	8	45	34.0	79	B
44	022-14-110589	BS(CS)	Syed Sohaib	25	7.0	5.0	7	9.0	NaN	9	41	22.0	63	C
45	022-14-110400	BS(CS)	Syeda Sabika Raza	27	9.0	6.0	9	9.0	NaN	9	45	35.0	80	A
46	022-14-19911	BS(CS)	Usman Khan	25	8.0	5.0	8	8.0	10.0	10	43	22.0	65	C
47	022-14-110219	BS(CS)	Waqar Ahmed	11	9.0	5.0	9	5.0	7.0	7	27	19.0	46	F

```
In [6]: nba.index
```

Out[6]: RangeIndex(start=0, stop=48, step=1)

```
In [7]: nba.shape
```

Out[7]: (48, 14)

```
In [8]: nba.dtypes
```

Out[8]: Student Code object
Degree object
Student Name object
Mid int64
Quiz 1 float64
Quiz 2 float64
Best of Quizzes int64
Assignment 1 float64
Assignment 2 float64
Best of Assignments int64
Total Sessional (50) int64
Final (50) float64
Total (100) int64
Grade object
dtype: object

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

Out[9]: Index(['Student Code', 'Degree', 'Student Name', 'Mid', 'Quiz 1', 'Quiz 2',
'Best of Quizzes', 'Assignment 1', 'Assignment 2',
'Best of Assignments', 'Total Sessional (50)', 'Final (50)',
'Total (100)', 'Grade'],
dtype='object')

```
In [10]: nba.axes
```

Out[10]: [RangeIndex(start=0, stop=48, step=1),
Index(['Student Code', 'Degree', 'Student Name', 'Mid', 'Quiz 1', 'Quiz 2',
'Best of Quizzes', 'Assignment 1', 'Assignment 2',
'Best of Assignments', 'Total Sessional (50)', 'Final (50)',
'Total (100)', 'Grade'],
dtype='object')]

```
In [12]: nba.info()
```

```
<class 'pandas.core.frame.DataFrame'>  
RangeIndex: 48 entries, 0 to 47  
Data columns (total 14 columns):  
Student Code      48 non-null object  
Degree            48 non-null object  
Student Name      48 non-null object  
Mid               48 non-null int64  
Quiz 1            45 non-null float64  
Quiz 2            45 non-null float64  
Best of Quizzes   48 non-null int64  
Assignment 1      45 non-null float64  
Assignment 2      36 non-null float64  
Best of Assignments 48 non-null int64  
Total Sessional (50) 48 non-null int64  
Final (50)        47 non-null float64  
Total (100)       48 non-null int64  
Grade            48 non-null object  
dtypes: float64(5), int64(5), object(4)  
memory usage: 5.3+ KB
```

```
In [13]: nba.get_dtype_counts()
```

Out[13]: float64 5
int64 5
object 4
dtype: int64