

3xnqsfhoh

February 18, 2025

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

```
[21]: df = pd.read_excel(r'C:\Users\mikim\Downloads\Address_RawData.xlsx')
```

```
[23]: df
```

```
[23]:
```

	Address	Date \
0	27th Cross, Shree Colony, Electronic City, Ban...	3rd Mar 2001
1	1st Street, SBI Colony, Kukatpally, Hyderabad ...	15th Jun 2002
2	14th Main, BTM Colony, Mysore Road, Bangalore ...	28th Feb 2003
3	3rd Avenue, Srinagar Colony, Banjara Hills, Hy...	12th Oct 2004
4	42nd Street, Patel Colony, Vadapalani, Chennai...	25th Dec 2005
5	8th Cross, Raghavendra Colony, JP Nagar, Banga...	17th Apr 2006
6	22nd Road, Sai Colony, Gachibowli, Hyderabad -...	29th Jan 2007
7	11th Street, Sarojini Colony, T Nagar, Chennai...	8th Aug 2008
8	5th Main, Vivekananda Colony, Rajajinagar, Ban...	22nd Nov 2009
9	31st Avenue, Venkateshwara Colony, Kondapur, H...	5th Sep 2010
10	46th Street, Lakshmi Colony, Adyar, Chennai - ...	10th May 2011
11	9th Cross, Shiva Colony, Peenya, Bangalore - 5...	31st Jul 2012
12	24th Road, Gayatri Colony, Manikonda, Hyderaba...	24th Mar 2013
13	17th Street, Rama Colony, Velachery, Chennai -...	2nd Feb 2014
14	6th Main, Annapurna Colony, Yelahanka, Bangalo...	19th Oct 2015
15	35th Avenue, Siva Sankara Colony, Secunderabad...	14th Jun 2016
16	28th Street, Lakshmi Narasimha Colony, Guntur,...	7th Jan 2017
17	4th Cross, Raghavendra Colony, Vijayanagar, Ba...	26th Apr 2001
18	19th Road, Srinivasa Colony, Ameerpet, Hyderab...	9th Mar 2005
19	12th Street, Thiruvalluvar Colony, Tambaram, C...	1st Jul 2009
20	8th Main, Mahalakshmi Colony, Koramangala, Ban...	18th Sep 2012
21	25th Avenue, Venkatadri Colony, Kavadiguda, Hy...	11th Dec 2013
22	43rd Street, Vivekananda Colony, Chrompet, Che...	28th May 2014
23	15th Cross, Rama Krishna Colony, Mathikere, Ba...	4th Jan 2015
24	32nd Road, Siva Parvathi Colony, Kompally, Hyd...	20th Feb 2016
25	6th Street, Shanthi Colony, Anna Nagar, Chenna...	15th Aug 2010
26	21st Main, Geetha Colony, Jalahalli, Bangalore...	8th Nov 2011
27	38th Avenue, Anantha Padmanabha Colony, Malkaj...	31st Dec 2012

Name Time

0	Baxter Rasmussen Group	15:14:07
1	Lozano Vega-Gentry	11:49:23
2	Berry Murillo-Perry	09:27:05
3	Olsen Dominguez	18:18:42
4	Bender Martin	08:41:19
5	Downs Steele Group	16:25:11
6	Peck Lester	13:07:35
7	Mullen Sanford	10:43:22
8	Meyers Browning-Simon	07:15:09
9	Gallagher Beck-Hendrix	14:53:16
10	Schroeder Oconnell	17:39:04
11	Dodson Hoffman	12:29:08
12	Mata Graham-Francis	09:01:51
13	Cox Carpenter-Cook	18:47:28
14	Lutz Carter-Hancock	15:32:15
15	Beasley Singleton	11:11:42
16	Foley Winters-Mendoza	08:19:25
17	Mata Valentine LLC	16:58:07
18	Jacobson Simon LLC	13:40:20
19	Kirk Mays-Mccormick	10:17:09
20	Frye Patterson Inc	07:36:03
21	Houston Manning	14:22:18
22	Howard Greer and Sons	17:14:01
23	Valenzuela Watts-Donaldson	12:52:05
24	Wilcox Tucker LLC	09:44:52
25	Moody Giles Ltd	18:29:39
26	Poole Simmons Group	15:55:24
27	Harper Hinton	11:34:17

```
[25]: df.columns
```

```
[25]: Index(['Address', 'Date', 'Name', 'Time'], dtype='object')
```

```
[83]: new_address = df['Address'].str.split(r'[_]',expand= True)
new_address
```

```
[83]:
```

	0	1	2 \
0	27th Cross	Shree Colony	Electronic City
1	1st Street	SBI Colony	Kukatpally
2	14th Main	BTM Colony	Mysore Road
3	3rd Avenue	Srinagar Colony	Banjara Hills
4	42nd Street	Patel Colony	Vadapalani
5	8th Cross	Raghavendra Colony	JP Nagar
6	22nd Road	Sai Colony	Gachibowli
7	11th Street	Sarojini Colony	T Nagar
8	5th Main	Vivekananda Colony	Rajajinagar
9	31st Avenue	Venkateshwara Colony	Kondapur

10	46th Street	Lakshmi Colony	Adyar
11	9th Cross	Shiva Colony	Peenya
12	24th Road	Gayatri Colony	Manikonda
13	17th Street	Rama Colony	Velachery
14	6th Main	Annapurna Colony	Yelahanka
15	35th Avenue	Siva Sankara Colony	Secunderabad
16	28th Street	Lakshmi Narasimha Colony	Guntur
17	4th Cross	Raghavendra Colony	Vijayanagar
18	19th Road	Srinivasa Colony	Ameerpet
19	12th Street	Thiruvalluvar Colony	Tambaram
20	8th Main	Mahalakshmi Colony	Koramangala
21	25th Avenue	Venkatadri Colony	Kavadiguda
22	43rd Street	Vivekananda Colony	Chrompet
23	15th Cross	Rama Krishna Colony	Mathikere
24	32nd Road	Siva Parvathi Colony	Kompally
25	6th Street	Shanthi Colony	Anna Nagar
26	21st Main	Geetha Colony	Jalahalli
27	38th Avenue	Anantha Padmanabha Colony	Malkajgiri

3

0	Bangalore - 560100
1	Hyderabad - 500072
2	Bangalore - 560026
3	Hyderabad - 500034
4	Chennai - 600026
5	Bangalore - 560078
6	Hyderabad - 500032
7	Chennai - 600017
8	Bangalore - 560010
9	Hyderabad - 500084
10	Chennai - 600020
11	Bangalore - 560058
12	Hyderabad - 500089
13	Chennai - 600042
14	Bangalore - 560064
15	Hyderabad - 500015
16	Vijayawada - 522002
17	Bangalore - 560040
18	Hyderabad - 500016
19	Chennai - 600045
20	Bangalore - 560034
21	Hyderabad - 500080
22	Chennai - 600044
23	Bangalore - 560054
24	Hyderabad - 500014
25	Chennai - 600040
26	Bangalore - 560013

27      Hyderabad - 500047

```
[85]: new_address.columns = ['Street Name', 'Colony', 'Area', 'Zip Code']
      new_address
```

```
[85]:
```

	Street Name	Colony	Area \
0	27th Cross	Shree Colony	Electronic City
1	1st Street	SBI Colony	Kukatpally
2	14th Main	BTM Colony	Mysore Road
3	3rd Avenue	Srinagar Colony	Banjara Hills
4	42nd Street	Patel Colony	Vadapalani
5	8th Cross	Raghavendra Colony	JP Nagar
6	22nd Road	Sai Colony	Gachibowli
7	11th Street	Sarojini Colony	T Nagar
8	5th Main	Vivekananda Colony	Rajajinagar
9	31st Avenue	Venkateshwara Colony	Kondapur
10	46th Street	Lakshmi Colony	Adyar
11	9th Cross	Shiva Colony	Peenya
12	24th Road	Gayatri Colony	Manikonda
13	17th Street	Rama Colony	Velachery
14	6th Main	Annapurna Colony	Yelahanka
15	35th Avenue	Siva Sankara Colony	Secunderabad
16	28th Street	Lakshmi Narasimha Colony	Guntur
17	4th Cross	Raghavendra Colony	Vijayanagar
18	19th Road	Srinivasa Colony	Ameerpet
19	12th Street	Thiruvalluvar Colony	Tambaram
20	8th Main	Mahalakshmi Colony	Koramangala
21	25th Avenue	Venkatadri Colony	Kavadiguda
22	43rd Street	Vivekananda Colony	Chrompet
23	15th Cross	Rama Krishna Colony	Mathikere
24	32nd Road	Siva Parvathi Colony	Kompally
25	6th Street	Shanthi Colony	Anna Nagar
26	21st Main	Geetha Colony	Jalahalli
27	38th Avenue	Anantha Padmanabha Colony	Malkajgiri

	Zip Code
0	Bangalore - 560100
1	Hyderabad - 500072
2	Bangalore - 560026
3	Hyderabad - 500034
4	Chennai - 600026
5	Bangalore - 560078
6	Hyderabad - 500032
7	Chennai - 600017
8	Bangalore - 560010
9	Hyderabad - 500084
10	Chennai - 600020

11	Bangalore	-	560058
12	Hyderabad	-	500089
13	Chennai	-	600042
14	Bangalore	-	560064
15	Hyderabad	-	500015
16	Vijayawada	-	522002
17	Bangalore	-	560040
18	Hyderabad	-	500016
19	Chennai	-	600045
20	Bangalore	-	560034
21	Hyderabad	-	500080
22	Chennai	-	600044
23	Bangalore	-	560054
24	Hyderabad	-	500014
25	Chennai	-	600040
26	Bangalore	-	560013
27	Hyderabad	-	500047

```
[87]: new_address1 = new_address['Zip Code'].str.split(r'-', expand= True)
      new_address1
```

```
[87]:
```

	0	1
0	Bangalore	560100
1	Hyderabad	500072
2	Bangalore	560026
3	Hyderabad	500034
4	Chennai	600026
5	Bangalore	560078
6	Hyderabad	500032
7	Chennai	600017
8	Bangalore	560010
9	Hyderabad	500084
10	Chennai	600020
11	Bangalore	560058
12	Hyderabad	500089
13	Chennai	600042
14	Bangalore	560064
15	Hyderabad	500015
16	Vijayawada	522002
17	Bangalore	560040
18	Hyderabad	500016
19	Chennai	600045
20	Bangalore	560034
21	Hyderabad	500080
22	Chennai	600044
23	Bangalore	560054
24	Hyderabad	500014

25	Chennai	600040
26	Bangalore	560013
27	Hyderabad	500047

```
[89]: new_address1.columns = ['City', 'Pin Code']
      new_address1
```

```
[89]:
```

	City	Pin Code
0	Bangalore	560100
1	Hyderabad	500072
2	Bangalore	560026
3	Hyderabad	500034
4	Chennai	600026
5	Bangalore	560078
6	Hyderabad	500032
7	Chennai	600017
8	Bangalore	560010
9	Hyderabad	500084
10	Chennai	600020
11	Bangalore	560058
12	Hyderabad	500089
13	Chennai	600042
14	Bangalore	560064
15	Hyderabad	500015
16	Vijayawada	522002
17	Bangalore	560040
18	Hyderabad	500016
19	Chennai	600045
20	Bangalore	560034
21	Hyderabad	500080
22	Chennai	600044
23	Bangalore	560054
24	Hyderabad	500014
25	Chennai	600040
26	Bangalore	560013
27	Hyderabad	500047

```
[101]: new_address= new_address.drop('Zip Code', axis=1)
```

```
-----
KeyError                                Traceback (most recent call last)
Cell In[101], line 1
----> 1 new_address= new_address.drop('Zip Code', axis=1)
      2 new_address

File ~\anaconda3\Lib\site-packages\pandas\core\frame.py:5581, in DataFrame.
    drop(self, labels, axis, index, columns, level, inplace, errors)
```

```

5433 def drop(
5434     self,
5435     labels: IndexLabel | None = None,
5436     (...)
5442     errors: IgnoreRaise = "raise",
5443 ) -> DataFrame | None:
5444     """
5445     Drop specified labels from rows or columns.
5446
5447     (...)
5448
5449     weight 1.0      0.8
5450     """
-> 5581     return super().drop(
5582         labels=labels,
5583         axis=axis,
5584         index=index,
5585         columns=columns,
5586         level=level,
5587         inplace=inplace,
5588         errors=errors,
5589     )

```

File ~\anaconda3\Lib\site-packages\pandas\core\generic.py:4788, in NDFrame.

```

-> drop(self, labels, axis, index, columns, level, inplace, errors)
4786 for axis, labels in axes.items():
4787     if labels is not None:
-> 4788         obj = obj._drop_axis(labels, axis, level=level, errors=errors)
4790 if inplace:
4791     self._update_inplace(obj)

```

File ~\anaconda3\Lib\site-packages\pandas\core\generic.py:4830, in NDFrame.

```

-> _drop_axis(self, labels, axis, level, errors, only_slice)
4828     new_axis = axis.drop(labels, level=level, errors=errors)
4829     else:
-> 4830         new_axis = axis.drop(labels, errors=errors)
4831     indexer = axis.get_indexer(new_axis)
4833 # Case for non-unique axis
4834 else:

```

File ~\anaconda3\Lib\site-packages\pandas\core\indexes\base.py:7070, in Index.

```

-> drop(self, labels, errors)
7068 if mask.any():
7069     if errors != "ignore":
-> 7070         raise KeyError(f"{labels[mask].tolist()} not found in axis")
7071     indexer = indexer[~mask]
7072 return self.delete(indexer)

```

```
KeyError: '['Zip Code'] not found in axis"
```

```
[103]: new_address
```

```
[103]:
```

	Street Name	Colony	Area
0	27th Cross	Shree Colony	Electronic City
1	1st Street	SBI Colony	Kukatpally
2	14th Main	BTM Colony	Mysore Road
3	3rd Avenue	Srinagar Colony	Banjara Hills
4	42nd Street	Patel Colony	Vadapalani
5	8th Cross	Raghavendra Colony	JP Nagar
6	22nd Road	Sai Colony	Gachibowli
7	11th Street	Sarojini Colony	T Nagar
8	5th Main	Vivekananda Colony	Rajajinagar
9	31st Avenue	Venkateshwara Colony	Kondapur
10	46th Street	Lakshmi Colony	Adyar
11	9th Cross	Shiva Colony	Peenya
12	24th Road	Gayatri Colony	Manikonda
13	17th Street	Rama Colony	Velachery
14	6th Main	Annapurna Colony	Yelahanka
15	35th Avenue	Siva Sankara Colony	Secunderabad
16	28th Street	Lakshmi Narasimha Colony	Guntur
17	4th Cross	Raghavendra Colony	Vijayanagar
18	19th Road	Srinivasa Colony	Ameerpet
19	12th Street	Thiruvalluvar Colony	Tambaram
20	8th Main	Mahalakshmi Colony	Koramangala
21	25th Avenue	Venkatadri Colony	Kavadiguda
22	43rd Street	Vivekananda Colony	Chrompet
23	15th Cross	Rama Krishna Colony	Mathikere
24	32nd Road	Siva Parvathi Colony	Kompally
25	6th Street	Shanthi Colony	Anna Nagar
26	21st Main	Geetha Colony	Jalahalli
27	38th Avenue	Anantha Padmanabha Colony	Malkajgiri

```
[45]: new_date = df['Date'].str.split(r' ',expand= True)
      new_date
```

```
[45]:
```

	0	1	2
0	3rd	Mar	2001
1	15th	Jun	2002
2	28th	Feb	2003
3	12th	Oct	2004
4	25th	Dec	2005
5	17th	Apr	2006
6	29th	Jan	2007
7	8th	Aug	2008
8	22nd	Nov	2009



9	5th	Sep	2010
10	10th	May	2011
11	31st	Jul	2012
12	24th	Mar	2013
13	2nd	Feb	2014
14	19th	Oct	2015
15	14th	Jun	2016
16	7th	Jan	2017
17	26th	Apr	2001
18	9th	Mar	2005
19	1st	Jul	2009
20	18th	Sep	2012
21	11th	Dec	2013
22	28th	May	2014
23	4th	Jan	2015
24	20th	Feb	2016
25	15th	Aug	2010
26	8th	Nov	2011
27	31st	Dec	2012

```
[47]: new_date.columns = ['Date', 'Month', 'Year']
      new_date
```

```
[47]:
```

	Date	Month	Year
0	3rd	Mar	2001
1	15th	Jun	2002
2	28th	Feb	2003
3	12th	Oct	2004
4	25th	Dec	2005
5	17th	Apr	2006
6	29th	Jan	2007
7	8th	Aug	2008
8	22nd	Nov	2009
9	5th	Sep	2010
10	10th	May	2011
11	31st	Jul	2012
12	24th	Mar	2013
13	2nd	Feb	2014
14	19th	Oct	2015
15	14th	Jun	2016
16	7th	Jan	2017
17	26th	Apr	2001
18	9th	Mar	2005
19	1st	Jul	2009
20	18th	Sep	2012
21	11th	Dec	2013
22	28th	May	2014

23	4th	Jan	2015
24	20th	Feb	2016
25	15th	Aug	2010
26	8th	Nov	2011
27	31st	Dec	2012

```
[57]: df['Time'] = df['Time'].astype(str)
new_time = df['Time'].str.split(r':', expand= True)
new_time
```

```
[57]:
```

	0	1	2
0	15	14	07
1	11	49	23
2	09	27	05
3	18	18	42
4	08	41	19
5	16	25	11
6	13	07	35
7	10	43	22
8	07	15	09
9	14	53	16
10	17	39	04
11	12	29	08
12	09	01	51
13	18	47	28
14	15	32	15
15	11	11	42
16	08	19	25
17	16	58	07
18	13	40	20
19	10	17	09
20	07	36	03
21	14	22	18
22	17	14	01
23	12	52	05
24	09	44	52
25	18	29	39
26	15	55	24
27	11	34	17

```
[59]: new_time.columns = ['Hour', 'Minute', 'Second']
new_time
```

```
[59]:
```

	Hour	Minute	Second
0	15	14	07
1	11	49	23
2	09	27	05

3	18	18	42
4	08	41	19
5	16	25	11
6	13	07	35
7	10	43	22
8	07	15	09
9	14	53	16
10	17	39	04
11	12	29	08
12	09	01	51
13	18	47	28
14	15	32	15
15	11	11	42
16	08	19	25
17	16	58	07
18	13	40	20
19	10	17	09
20	07	36	03
21	14	22	18
22	17	14	01
23	12	52	05
24	09	44	52
25	18	29	39
26	15	55	24
27	11	34	17

```
[107]: Clean_data = pd.concat([new_address,new_address1,new_date,new_time],axis=1)
```

```
[109]: Clean_data
```

```
[109]:
```

	Street Name	Colony	Area	City \
0	27th Cross	Shree Colony	Electronic City	Bangalore
1	1st Street	SBI Colony	Kukatpally	Hyderabad
2	14th Main	BTM Colony	Mysore Road	Bangalore
3	3rd Avenue	Srinagar Colony	Banjara Hills	Hyderabad
4	42nd Street	Patel Colony	Vadapalani	Chennai
5	8th Cross	Raghavendra Colony	JP Nagar	Bangalore
6	22nd Road	Sai Colony	Gachibowli	Hyderabad
7	11th Street	Sarojini Colony	T Nagar	Chennai
8	5th Main	Vivekananda Colony	Rajajinagar	Bangalore
9	31st Avenue	Venkateshwara Colony	Kondapur	Hyderabad
10	46th Street	Lakshmi Colony	Adyar	Chennai
11	9th Cross	Shiva Colony	Peenya	Bangalore
12	24th Road	Gayatri Colony	Manikonda	Hyderabad
13	17th Street	Rama Colony	Velachery	Chennai
14	6th Main	Annapurna Colony	Yelahanka	Bangalore
15	35th Avenue	Siva Sankara Colony	Secunderabad	Hyderabad

16	28th Street	Lakshmi Narasimha Colony	Guntur	Vijayawada
17	4th Cross	Raghavendra Colony	Vijayanagar	Bangalore
18	19th Road	Srinivasa Colony	Ameerpet	Hyderabad
19	12th Street	Thiruvalluvar Colony	Tambaram	Chennai
20	8th Main	Mahalakshmi Colony	Koramangala	Bangalore
21	25th Avenue	Venkatadri Colony	Kavadiguda	Hyderabad
22	43rd Street	Vivekananda Colony	Chrompet	Chennai
23	15th Cross	Rama Krishna Colony	Mathikere	Bangalore
24	32nd Road	Siva Parvathi Colony	Kompally	Hyderabad
25	6th Street	Shanthi Colony	Anna Nagar	Chennai
26	21st Main	Geetha Colony	Jalahalli	Bangalore
27	38th Avenue	Anantha Padmanabha Colony	Malkajgiri	Hyderabad

	Pin Code	Date	Month	Year	Hour	Minute	Second
0	560100	3rd	Mar	2001	15	14	07
1	500072	15th	Jun	2002	11	49	23
2	560026	28th	Feb	2003	09	27	05
3	500034	12th	Oct	2004	18	18	42
4	600026	25th	Dec	2005	08	41	19
5	560078	17th	Apr	2006	16	25	11
6	500032	29th	Jan	2007	13	07	35
7	600017	8th	Aug	2008	10	43	22
8	560010	22nd	Nov	2009	07	15	09
9	500084	5th	Sep	2010	14	53	16
10	600020	10th	May	2011	17	39	04
11	560058	31st	Jul	2012	12	29	08
12	500089	24th	Mar	2013	09	01	51
13	600042	2nd	Feb	2014	18	47	28
14	560064	19th	Oct	2015	15	32	15
15	500015	14th	Jun	2016	11	11	42
16	522002	7th	Jan	2017	08	19	25
17	560040	26th	Apr	2001	16	58	07
18	500016	9th	Mar	2005	13	40	20
19	600045	1st	Jul	2009	10	17	09
20	560034	18th	Sep	2012	07	36	03
21	500080	11th	Dec	2013	14	22	18
22	600044	28th	May	2014	17	14	01
23	560054	4th	Jan	2015	12	52	05
24	500014	20th	Feb	2016	09	44	52
25	600040	15th	Aug	2010	18	29	39
26	560013	8th	Nov	2011	15	55	24
27	500047	31st	Dec	2012	11	34	17

```
[111]: Clean_excel = Clean_data.to_excel(r'C:\Users\mikim\Downloads\Address_CleanData.
      ↪xlsx',index= False)
```

```
[ ]:
```