

```
import pandas as pd

titanic=pd.read_csv(r'https://github.com/YBI-Foundation/Dataset/raw/main/Titanic.csv')

```

```
titanic.head()
```

| | pclass | survived | name |
|--------|--------|----------|---|
| sex \ | | | |
| 0 | 1 | 1 | Allen, Miss. Elisabeth Walton |
| female | | | |
| 1 | 1 | 1 | Allison, Master. Hudson Trevor |
| male | | | |
| 2 | 1 | 0 | Allison, Miss. Helen Loraine |
| female | | | |
| 3 | 1 | 0 | Allison, Mr. Hudson Joshua Creighton |
| male | | | |
| 4 | 1 | 0 | Allison, Mrs. Hudson J C (Bessie Waldo Daniels) |
| female | | | |

| | age | sibsp | parch | ticket | fare | cabin | embarked | boat | body |
|---|-------|-------|-------|--------|----------|---------|----------|------|-------|
| \ | | | | | | | | | |
| 0 | 29.00 | 0 | 0 | 24160 | 211.3375 | B5 | S | 2 | NaN |
| 1 | 0.92 | 1 | 2 | 113781 | 151.5500 | C22 C26 | S | 11 | NaN |
| 2 | 2.00 | 1 | 2 | 113781 | 151.5500 | C22 C26 | S | NaN | NaN |
| 3 | 30.00 | 1 | 2 | 113781 | 151.5500 | C22 C26 | S | NaN | 135.0 |
| 4 | 25.00 | 1 | 2 | 113781 | 151.5500 | C22 C26 | S | NaN | NaN |

| | home.dest |
|---|---------------------------------|
| 0 | St Louis, MO |
| 1 | Montreal, PQ / Chesterville, ON |
| 2 | Montreal, PQ / Chesterville, ON |
| 3 | Montreal, PQ / Chesterville, ON |
| 4 | Montreal, PQ / Chesterville, ON |

```
titanic.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 1309 entries, 0 to 1308
Data columns (total 14 columns):
#   Column      Non-Null Count  Dtype
---  -
0   pclass      1309 non-null   int64
1   survived    1309 non-null   int64
2   name        1309 non-null   object
3   sex         1309 non-null   object
```

```

4   age          1046 non-null   float64
5   sibsp        1309 non-null   int64
6   parch        1309 non-null   int64
7   ticket       1309 non-null   object
8   fare         1308 non-null   float64
9   cabin        295 non-null   object
10  embarked     1307 non-null   object
11  boat         486 non-null   object
12  body         121 non-null   float64
13  home.dest    745 non-null   object
dtypes: float64(3), int64(4), object(7)
memory usage: 143.3+ KB

```

```
titanic.columns
```

```

Index(['pclass', 'survived', 'name', 'sex', 'age', 'sibsp', 'parch',
      'ticket',
      'fare', 'cabin', 'embarked', 'boat', 'body', 'home.dest'],
      dtype='object')

```

```
titanic.name
```

```

0           Allen, Miss. Elisabeth Walton
1       Allison, Master. Hudson Trevor
2           Allison, Miss. Helen Loraine
3       Allison, Mr. Hudson Joshua Creighton
4   Allison, Mrs. Hudson J C (Bessie Waldo Daniels)
...
1304           Zabour, Miss. Hileni
1305           Zabour, Miss. Thamine
1306       Zakarian, Mr. Mapriededer
1307           Zakarian, Mr. Ortin
1308           Zimmerman, Mr. Leo
Name: name, Length: 1309, dtype: object

```

```
titanic['name']
```

```

0           Allen, Miss. Elisabeth Walton
1       Allison, Master. Hudson Trevor
2           Allison, Miss. Helen Loraine
3       Allison, Mr. Hudson Joshua Creighton
4   Allison, Mrs. Hudson J C (Bessie Waldo Daniels)
...
1304           Zabour, Miss. Hileni
1305           Zabour, Miss. Thamine
1306       Zakarian, Mr. Mapriededer
1307           Zakarian, Mr. Ortin
1308           Zimmerman, Mr. Leo
Name: name, Length: 1309, dtype: object

```

```
name=titanic['name']
```

```
name.shape
```

```
(1309,)
```

```
name=titanic[['name']]
```

```
name
```

```

                                     name
0                Allen, Miss. Elisabeth Walton
1            Allison, Master. Hudson Trevor
2            Allison, Miss. Helen Loraine
3            Allison, Mr. Hudson Joshua Creighton
4  Allison, Mrs. Hudson J C (Bessie Waldo Daniels)
...
1304                Zabour, Miss. Hileni
1305                Zabour, Miss. Thamine
1306            Zakarian, Mr. Mapriededer
1307            Zakarian, Mr. Ortin
1308            Zimmerman, Mr. Leo
```

```
[1309 rows x 1 columns]
```

Select 100row and all the columns using iloc function

```
titanic.iloc[ 100,:]
```

```
pclass                1
survived              1
name      Duff Gordon, Sir. Cosmo Edmund ("Mr Morgan")
sex                male
age              49.0
sibsp              1
parch              0
ticket            PC 17485
fare             56.9292
cabin            A20
embarked          C
boat              1
body              NaN
home.dest          London / Paris
Name: 100, dtype: object
```

```
titanic.loc[100,:]
```

```
pclass                1
survived              1
name      Duff Gordon, Sir. Cosmo Edmund ("Mr Morgan")
sex                male
age              49.0
sibsp              1
parch              0
```

```

ticket                PC 17485
fare                  56.9292
cabin                 A20
embarked              C
boat                  1
body                  NaN
home.dest             London / Paris
Name: 100, dtype: object

```

Select all the rows with columns label name and fare column with iloc function

```
titanic.iloc[:,[2,8]]
```

```

                                name      fare
0          Allen, Miss. Elisabeth Walton  211.3375
1      Allison, Master. Hudson Trevor    151.5500
2          Allison, Miss. Helen Loraine    151.5500
3      Allison, Mr. Hudson Joshua Creighton  151.5500
4  Allison, Mrs. Hudson J C (Bessie Waldo Daniels)  151.5500
...
1304                                Zabour, Miss. Hileni    14.4542
1305                                Zabour, Miss. Thamine    14.4542
1306                                Zakarian, Mr. Mapriededer    7.2250
1307                                Zakarian, Mr. Ortin    7.2250
1308                                Zimmerman, Mr. Leo    7.8750

```

```
[1309 rows x 2 columns]
```

```
titanic.loc[:,['name','fare']]
```

```

                                name      fare
0          Allen, Miss. Elisabeth Walton  211.3375
1      Allison, Master. Hudson Trevor    151.5500
2          Allison, Miss. Helen Loraine    151.5500
3      Allison, Mr. Hudson Joshua Creighton  151.5500
4  Allison, Mrs. Hudson J C (Bessie Waldo Daniels)  151.5500
...
1304                                Zabour, Miss. Hileni    14.4542
1305                                Zabour, Miss. Thamine    14.4542
1306                                Zakarian, Mr. Mapriededer    7.2250
1307                                Zakarian, Mr. Ortin    7.2250
1308                                Zimmerman, Mr. Leo    7.8750

```

```
[1309 rows x 2 columns]
```

```
titanic.loc[[50,25,15],['pclass','fare','age']]
```

```

    pclass      fare      age
50        1  512.3292   58.0
25        1   26.0000   25.0
15        1   25.9250    NaN

```

```
titanic.iloc[[50,25,15],[0,8,4]]
```

| | pclass | fare | age |
|----|--------|----------|------|
| 50 | 1 | 512.3292 | 58.0 |
| 25 | 1 | 26.0000 | 25.0 |
| 15 | 1 | 25.9250 | NaN |

```
titanic.loc[10:25,['pclass','fare','age']]
```

| | pclass | fare | age |
|----|--------|----------|------|
| 10 | 1 | 227.5250 | 47.0 |
| 11 | 1 | 227.5250 | 18.0 |
| 12 | 1 | 69.3000 | 24.0 |
| 13 | 1 | 78.8500 | 26.0 |
| 14 | 1 | 30.0000 | 80.0 |
| 15 | 1 | 25.9250 | NaN |
| 16 | 1 | 247.5208 | 24.0 |
| 17 | 1 | 247.5208 | 50.0 |
| 18 | 1 | 76.2917 | 32.0 |
| 19 | 1 | 75.2417 | 36.0 |
| 20 | 1 | 52.5542 | 37.0 |
| 21 | 1 | 52.5542 | 47.0 |
| 22 | 1 | 30.0000 | 26.0 |
| 23 | 1 | 227.5250 | 42.0 |
| 24 | 1 | 221.7792 | 29.0 |
| 25 | 1 | 26.0000 | 25.0 |

```
titanic.iloc[10:26,[0,8,4]]
```

| | pclass | fare | age |
|----|--------|----------|------|
| 10 | 1 | 227.5250 | 47.0 |
| 11 | 1 | 227.5250 | 18.0 |
| 12 | 1 | 69.3000 | 24.0 |
| 13 | 1 | 78.8500 | 26.0 |
| 14 | 1 | 30.0000 | 80.0 |
| 15 | 1 | 25.9250 | NaN |
| 16 | 1 | 247.5208 | 24.0 |
| 17 | 1 | 247.5208 | 50.0 |
| 18 | 1 | 76.2917 | 32.0 |
| 19 | 1 | 75.2417 | 36.0 |
| 20 | 1 | 52.5542 | 37.0 |
| 21 | 1 | 52.5542 | 47.0 |
| 22 | 1 | 30.0000 | 26.0 |
| 23 | 1 | 227.5250 | 42.0 |
| 24 | 1 | 221.7792 | 29.0 |
| 25 | 1 | 26.0000 | 25.0 |

```
titanic.loc[10:15,'pclass':'age']
```

| | pclass | survived |
|--------|--------|----------|
| name \ | | |
| 10 | 1 | 0 |

Astor, Col. John

| | | | |
|----------|---|---|---|
| Jacob | | | |
| 11 | 1 | 1 | Astor, Mrs. John Jacob (Madeleine Talmadge Force) |
| 12 | 1 | 1 | Aubart, Mme. Leontine |
| Pauline | | | |
| 13 | 1 | 1 | Barber, Miss. Ellen |
| "Nellie" | | | |
| 14 | 1 | 1 | Barkworth, Mr. Algernon Henry |
| Wilson | | | |
| 15 | 1 | 0 | Baumann, Mr. John |
| D | | | |

| | | |
|----|--------|------|
| | sex | age |
| 10 | male | 47.0 |
| 11 | female | 18.0 |
| 12 | female | 24.0 |
| 13 | female | 26.0 |
| 14 | male | 80.0 |
| 15 | male | NaN |

titanic.iloc[10:16,0:5]

| | | | |
|----------|--------|----------|---|
| | pclass | survived | |
| name \ | | | |
| 10 | 1 | 0 | Astor, Col. John |
| Jacob | | | |
| 11 | 1 | 1 | Astor, Mrs. John Jacob (Madeleine Talmadge Force) |
| 12 | 1 | 1 | Aubart, Mme. Leontine |
| Pauline | | | |
| 13 | 1 | 1 | Barber, Miss. Ellen |
| "Nellie" | | | |
| 14 | 1 | 1 | Barkworth, Mr. Algernon Henry |
| Wilson | | | |
| 15 | 1 | 0 | Baumann, Mr. John |
| D | | | |

| | | |
|----|--------|------|
| | sex | age |
| 10 | male | 47.0 |
| 11 | female | 18.0 |
| 12 | female | 24.0 |
| 13 | female | 26.0 |
| 14 | male | 80.0 |
| 15 | male | NaN |

titanic[titanic['age']>=35]

| | | | |
|--------|--------|----------|---------------|
| | pclass | survived | |
| name \ | | | |
| 5 | 1 | 1 | Anderson, Mr. |
| Harry | | | |

| | | | |
|-----------|-----|-----|--|
| 6 | 1 | 1 | Andrews, Miss. Kornelia |
| Theodosia | | | |
| 7 | 1 | 0 | Andrews, Mr. Thomas |
| Jr | | | |
| 8 | 1 | 1 | Appleton, Mrs. Edward Dale (Charlotte |
| Lamson) | | | |
| 9 | 1 | 0 | Artagaveytia, Mr. |
| Ramon | | | |
| ... | ... | ... | .. |
| . | | | |
| 1286 | 3 | 1 | Whabee, Mrs. George Joseph (Shawneene Abi- |
| Saab) | | | |
| 1287 | 3 | 0 | Widegren, Mr. Carl/Charles |
| Peter | | | |
| 1290 | 3 | 1 | Wilkes, Mrs. James (Ellen |
| Needs) | | | |
| 1298 | 3 | 0 | Wittevrongel, Mr. |
| Camille | | | |
| 1301 | 3 | 0 | Youseff, Mr. |
| Gerious | | | |

| boat | sex | age | sibsp | parch | ticket | fare | cabin | embarked |
|------|--------|------|-------|-------|----------|---------|-------|----------|
| 5 | male | 48.0 | 0 | 0 | 19952 | 26.5500 | E12 | S |
| 3 | | | | | | | | |
| 6 | female | 63.0 | 1 | 0 | 13502 | 77.9583 | D7 | S |
| 10 | | | | | | | | |
| 7 | male | 39.0 | 0 | 0 | 112050 | 0.0000 | A36 | S |
| NaN | | | | | | | | |
| 8 | female | 53.0 | 2 | 0 | 11769 | 51.4792 | C101 | S |
| D | | | | | | | | |
| 9 | male | 71.0 | 0 | 0 | PC 17609 | 49.5042 | NaN | C |
| NaN | | | | | | | | |
| ... | ... | ... | ... | ... | ... | ... | ... | ... |
| . | | | | | | | | |
| 1286 | female | 38.0 | 0 | 0 | 2688 | 7.2292 | NaN | C |
| C | | | | | | | | |
| 1287 | male | 51.0 | 0 | 0 | 347064 | 7.7500 | NaN | S |
| NaN | | | | | | | | |
| 1290 | female | 47.0 | 1 | 0 | 363272 | 7.0000 | NaN | S |
| NaN | | | | | | | | |
| 1298 | male | 36.0 | 0 | 0 | 345771 | 9.5000 | NaN | S |
| NaN | | | | | | | | |
| 1301 | male | 45.5 | 0 | 0 | 2628 | 7.2250 | NaN | C |
| NaN | | | | | | | | |

| | body | home.dest |
|---|------|--------------|
| 5 | NaN | New York, NY |
| 6 | NaN | Hudson, NY |
| 7 | NaN | Belfast, NI |

```

8      NaN Bayside, Queens, NY
9      22.0 Montevideo, Uruguay
...
1286   NaN
1287   NaN
1290   NaN
1298   NaN
1301   312.0

```

[345 rows x 14 columns]

```
titanic.loc[(titanic['age']>=35), 'pclass':'age']
```

```

      pclass  survived
name \
5         1         1      Anderson, Mr.
Harry
6         1         1      Andrews, Miss. Kornelia
Theodosia
7         1         0      Andrews, Mr. Thomas
Jr
8         1         1      Appleton, Mrs. Edward Dale (Charlotte
Lamson)
9         1         0      Artagaveytia, Mr.
Ramon
...
1286      3         1      Whabee, Mrs. George Joseph (Shawneene Abi-
Saab)
1287      3         0      Widegren, Mr. Carl/Charles
Peter
1290      3         1      Wilkes, Mrs. James (Ellen
Needs)
1298      3         0      Wittevrongel, Mr.
Camille
1301      3         0      Youseff, Mr.
Gerious

```

```

      sex  age
5     male 48.0
6  female 63.0
7     male 39.0
8  female 53.0
9     male 71.0
...
1286 female 38.0
1287   male 51.0
1290 female 47.0
1298   male 36.0
1301   male 45.5

```



```
titanic.loc[(titanic['age']>=35 ) & (titanic['sex']=='female')]
```

| | sex | age | sibsp | parch | ticket | fare | cabin | embarked |
|-----------------------|----------|------|-------|-------|----------|----------|---------|----------|
| boat 6 108D 176 | \ female | 63.0 | 1 | 0 | 13502 | 77.9583 | D7 | S |
| 215 | female | 53.0 | 2 | 0 | 11769 | 51.4792 | C101 | S |
| 234 | female | 50.0 | 0 | 1 | PC 17558 | 247.5208 | B58 B60 | C |
| ... | female | 47.0 | 1 | 1 | 11751 | 52.5542 | D35 | S |
| ... | female | 42.0 | 0 | 0 | PC 17757 | 227.5250 | NaN | C |
| ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 1158 NaN | female | 41.0 | 0 | 2 | 370129 | 20.2125 | NaN | S |
| 1211 NaN | female | 45.0 | 1 | 4 | 347088 | 27.9000 | NaN | S |
| 1261 15 | female | 63.0 | 0 | 0 | 4134 | 9.5875 | NaN | S |

| | | | | | | | | |
|------|--------|------|---|---|--------|--------|-----|---|
| 1286 | female | 38.0 | 0 | 0 | 2688 | 7.2292 | NaN | C |
| C | | | | | | | | |
| 1290 | female | 47.0 | 1 | 0 | 363272 | 7.0000 | NaN | S |
| NaN | | | | | | | | |

| | | | |
|------|------|---------------------|--------------|
| | body | | home.dest |
| 6 | NaN | | Hudson, NY |
| 8 | NaN | Bayside, Queens, NY | |
| 17 | NaN | | Montreal, PQ |
| 21 | NaN | | New York, NY |
| 23 | NaN | | NaN |
| ... | ... | | ... |
| 1158 | NaN | | NaN |
| 1211 | NaN | | NaN |
| 1261 | NaN | | NaN |
| 1286 | NaN | | NaN |
| 1290 | NaN | | NaN |

[125 rows x 14 columns]