



```
In [11]: import pandas as pd
df=pd.read_csv("titanic (2).csv")
df.head()
```

```
Out[11]:
```

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	A/5 21171
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	PC 17599
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/O2. 3101282
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373450

```
In [13]: df.tail()
```

```
Out[13]:
```

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticke
886	887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	21153
887	888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	11205
888	889	0	3	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	1	2	W./C 660
889	890	1	1	Behr, Mr. Karl Howell	male	26.0	0	0	11136
890	891	0	3	Dooley, Mr. Patrick	male	32.0	0	0	37037

In [14]: df

Out[14]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	211536
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Thayer)	female	38.0	1	0	17557
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/OJ. 310128
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373451
...	...	...	...	...	...	...	...	...	...
886	887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	211536
887	888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	112052
888	889	0	3	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	1	2	W/ 6616
889	890	1	1	Behr, Mr. Karl Howell	male	26.0	0	0	111369
890	891	0	3	Dooley, Mr. Patrick	male	32.0	0	0	370371

891 rows × 12 columns

In [17]: df.dtypes

```
Out[17]: PassengerId      int64
Survived      int64
Pclass        int64
Name          object
Sex           object
Age           float64
SibSp         int64
Parch         int64
Ticket        object
Fare          float64
Cabin         object
Embarked      object
dtype: object
```

```
In [18]: df.describe()
```

```
Out[18]:
```

	PassengerId	Survived	Pclass	Age	SibSp	Parch
count	891.000000	891.000000	891.000000	714.000000	891.000000	891.000000
mean	446.000000	0.383838	2.308642	29.699118	0.523008	0.381594
std	257.353842	0.486592	0.836071	14.526497	1.102743	0.806057
min	1.000000	0.000000	1.000000	0.420000	0.000000	0.000000
25%	223.500000	0.000000	2.000000	20.125000	0.000000	0.000000
50%	446.000000	0.000000	3.000000	28.000000	0.000000	0.000000
75%	668.500000	1.000000	3.000000	38.000000	1.000000	0.000000
max	891.000000	1.000000	3.000000	80.000000	8.000000	6.000000

```
In [21]: df[["Name", "Sex", "Ticket", "Cabin", "Embarked"]]
```

Out[21]:

	Name	Sex	Ticket	Cabin	Embarked
0	Braund, Mr. Owen Harris	male	A/5 21171	NaN	S
1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	PC 17599	C85	C
2	Heikkinen, Miss. Laina	female	STON/O2. 3101282	NaN	S
3	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	113803	C123	S
4	Allen, Mr. William Henry	male	373450	NaN	S
...	...	...	...	...	...
886	Montvila, Rev. Juozas	male	211536	NaN	S
887	Graham, Miss. Margaret Edith	female	112053	B42	S
888	Johnston, Miss. Catherine Helen "Carrie"	female	W./C. 6607	NaN	S
889	Behr, Mr. Karl Howell	male	111369	C148	C
890	Dooley, Mr. Patrick	male	370376	NaN	Q

891 rows × 5 columns

In [23]: `df.dtypes=="object"`

Out[23]:

PassengerId	False
Survived	False
Pclass	False
Name	True
Sex	True
Age	False
SibSp	False
Parch	False
Ticket	True
Fare	False
Cabin	True
Embarked	True

dtype: bool

In [24]: `df.dtypes=="int"`

```
Out[24]: PassengerId      True
Survived      True
Pclass        True
Name          False
Sex           False
Age           False
SibSp         True
Parch         True
Ticket        False
Fare          False
Cabin         False
Embarked      False
dtype: bool
```

```
In [35]: df.dtypes=="float"
```

```
Out[35]: PassengerId      False
Survived      False
Pclass        False
Name          False
Sex           False
Age           True
SibSp         False
Parch         False
Ticket        False
Fare          True
Cabin         False
Embarked      False
dtype: bool
```

```
In [36]: df[df.dtypes.index]
```

Out[36]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	210151
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...)	female	38.0	1	0	17566
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/OJ 310129
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373451
...	...	...	...	...	...	...	...	...	...
886	887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	211536
887	888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	112052
888	889	0	3	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	1	2	W 6616
889	890	1	1	Behr, Mr. Karl Howell	male	26.0	0	0	111369
890	891	0	3	Dooley, Mr. Patrick	male	32.0	0	0	370376

891 rows × 12 columns

In [37]: `df[df.dtypes[df.dtypes=="float64"].index]`

```
Out[37]:
```

	Age	Fare
0	22.0	7.2500
1	38.0	71.2833
2	26.0	7.9250
3	35.0	53.1000
4	35.0	8.0500
...	...	...
886	27.0	13.0000
887	19.0	30.0000
888	NaN	23.4500
889	26.0	30.0000
890	32.0	7.7500

891 rows × 2 columns

```
In [40]: df.columns
```

```
Out[40]: Index(['PassengerId', 'Survived', 'Pclass', 'Name', 'Sex', 'Age', 'SibSp',
               'Parch', 'Ticket', 'Fare', 'Cabin', 'Embarked'],
              dtype='object')
```

```
In [45]: df[df.dtypes[df.dtypes=='int'].index]
```

```
Out[45]:
```

	PassengerId	Survived	Pclass	SibSp	Parch
0	1	0	3	1	0
1	2	1	1	1	0
2	3	1	3	0	0
3	4	1	1	1	0
4	5	0	3	0	0
...	...	...	...	...	...
886	887	0	2	0	0
887	888	1	1	0	0
888	889	0	3	1	2
889	890	1	1	0	0
890	891	0	3	0	0

891 rows × 5 columns

```
In [46]: df[["Ticket"]]
```

```
Out[46]:
```

	Ticket
--	---------------

0	A/5 21171
1	PC 17599
2	STON/O2. 3101282
3	113803
4	373450
...	...
886	211536
887	112053
888	W./C. 6607
889	111369
890	370376

891 rows × 1 columns

```
In [50]: df[["Ticket"]][4:16]
```

```
Out[50]:
```

	Ticket
--	---------------

4	373450
5	330877
6	17463
7	349909
8	347742
9	237736
10	PP 9549
11	113783
12	A/5. 2151
13	347082
14	350406
15	248706

```
In [51]: df[["Ticket", "Cabin"]][4:20]
```

Out[51]:

	Ticket	Cabin
4	373450	NaN
5	330877	NaN
6	17463	E46
7	349909	NaN
8	347742	NaN
9	237736	NaN
10	PP 9549	G6
11	113783	C103
12	A/5. 2151	NaN
13	347082	NaN
14	350406	NaN
15	248706	NaN
16	382652	NaN
17	244373	NaN
18	345763	NaN
19	2649	NaN

In [53]: `df[["Ticket", "Sex", "Age"]][10:30]`

Out[53]:

	Ticket	Sex	Age
10	PP 9549	female	4.0
11	113783	female	58.0
12	A/5. 2151	male	20.0
13	347082	male	39.0
14	350406	female	14.0
15	248706	female	55.0
16	382652	male	2.0
17	244373	male	NaN
18	345763	female	31.0
19	2649	female	NaN
20	239865	male	35.0
21	248698	male	34.0
22	330923	female	15.0
23	113788	male	28.0
24	349909	female	8.0
25	347077	female	38.0
26	2631	male	NaN
27	19950	male	19.0
28	330959	female	NaN
29	349216	male	NaN

In [54]:

df

Out[54]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket
0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	211
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	1	0	175
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STC 31012
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	1138
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	3734
...	...	...	...	...	...	...	...	...	...
886	887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	2115
887	888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	1120
888	889	0	3	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	1	2	W 66
889	890	1	1	Behr, Mr. Karl Howell	male	26.0	0	0	1113
890	891	0	3	Dooley, Mr. Patrick	male	32.0	0	0	3703

891 rows × 12 columns

In [59]: `df["voting_system"]=1`

In [56]: `df`

Out[56]:

	PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket
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0	1	0	3	Braund, Mr. Owen Harris	male	22.0	1	0	210151
1	2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...)	female	38.0	1	0	17566
2	3	1	3	Heikkinen, Miss. Laina	female	26.0	0	0	STON/OJ 310129
3	4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	1	0	113803
4	5	0	3	Allen, Mr. William Henry	male	35.0	0	0	373451
...	...	...	...	...	...	...	...	...	...
886	887	0	2	Montvila, Rev. Juozas	male	27.0	0	0	211536
887	888	1	1	Graham, Miss. Margaret Edith	female	19.0	0	0	112042
888	889	0	3	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	1	2	W/ 6616
889	890	1	1	Behr, Mr. Karl Howell	male	26.0	0	0	111369
890	891	0	3	Dooley, Mr. Patrick	male	32.0	0	0	370371

891 rows × 13 columns

In [71]: df

Out[71]:	PassengerId	Survived	Pclass	Skin_clour	Skin	Name	Sex	Age	S
0	1	0	3	White	White	Braund, Mr. Owen Harris	male	22.0	
1	2	1	1	White	White	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	
2	3	1	3	White	White	Heikkinen, Miss. Laina	female	26.0	
3	4	1	1	White	White	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	
4	5	0	3	White	White	Allen, Mr. William Henry	male	35.0	
...	...	...	...	...	...	...	...	...	
886	887	0	2	White	White	Montvila, Rev. Juozas	male	27.0	
887	888	1	1	White	White	Graham, Miss. Margaret Edith	female	19.0	
888	889	0	3	White	White	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	
889	890	1	1	White	White	Behr, Mr. Karl Howell	male	26.0	
890	891	0	3	White	White	Dooley, Mr. Patrick	male	32.0	

891 rows × 15 columns

```
In [68]: df.insert(loc=3,column="Skin_clour",value="White")
```

```
In [69]: df
```

Out[69]:

	PassengerId	Survived	Pclass	Skin_clour	Skin	Name	Sex	Age	S
0	1	0	3	White	White	Braund, Mr. Owen Harris	male	22.0	
1	2	1	1	White	White	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38.0	
2	3	1	3	White	White	Heikkinen, Miss. Laina	female	26.0	
3	4	1	1	White	White	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35.0	
4	5	0	3	White	White	Allen, Mr. William Henry	male	35.0	
...	...	...	...	...	...	...	...	...	
886	887	0	2	White	White	Montvila, Rev. Juozas	male	27.0	
887	888	1	1	White	White	Graham, Miss. Margaret Edith	female	19.0	
888	889	0	3	White	White	Johnston, Miss. Catherine Helen "Carrie"	female	NaN	
889	890	1	1	White	White	Behr, Mr. Karl Howell	male	26.0	
890	891	0	3	White	White	Dooley, Mr. Patrick	male	32.0	

891 rows × 15 columns

In []: