```
import pandas as pd
import numpy as np

df = pd.read_csv("Students.csv")

print(df, "\n")

print(df.describe(include='all'),"\n")

print(df['age'],"\n")

df.rename(columns={'age': 'student_age'}, inplace=True)
print(df.columns,"\n")

df['marks'] = pd.to_numeric(df['marks'], errors='coerce')

mean_marks = df['marks'].mean()
df['marks'] = df['marks'].fillna(mean_marks)

median_age = df['student_age'].median()
df['student_age'] = df['student_age'].fillna(median_age)

df = df.drop_duplicates()
print(df, "\n")

print(df.head(5),"\n")

print(df.tail(5),"\n")

print(df.sample(3),"\n")

df_cleaned = df.dropna()

print(df_cleaned, "\n")
df_cleaned.to_csv("Cleaned_Students.csv", index=False)
```

Outputs:

```
PS D:\Internship\Day16> python task.py
   id   name   age marks       city
0   1   Asha  21.0    85     Mysore
1   2   Ravi  22.0    90  Bangalore
2   3   John   NaN    78  Mangalore
3   4  Meena  21.0   abc      Delhi
4   5  Kiran  23.0    88    Chennai
5   6   Ravi  22.0    90  Bangalore
6   7  Pooja   NaN    95     Mysore
7   8   Arun  24.0    70  Hyderabad
8   3   John   NaN    78  Mangalore

              id  name        age marks    city
count   9.000000     9   6.000000     9       9
unique       NaN     7        NaN     7       6
top          NaN  Ravi        NaN    90  Mysore
freq         NaN     2        NaN     2       2
mean    4.333333   NaN  22.166667   NaN     NaN
std     2.345208   NaN   1.169045   NaN     NaN
min     1.000000   NaN  21.000000   NaN     NaN
25%     3.000000   NaN  21.250000   NaN     NaN
50%     4.000000   NaN  22.000000   NaN     NaN
75%     6.000000   NaN  22.750000   NaN     NaN
max     8.000000   NaN  24.000000   NaN     NaN

0    21.0
1    22.0
2     NaN
3    21.0
4    23.0
5    22.0
6     NaN
7    24.0
8     NaN
Name: age, dtype: float64
```

```
Index(['id', 'name', 'student_age', 'marks', 'city'], dtype='object')

   id   name  student_age  marks       city
0   1   Asha         21.0  85.00     Mysore
1   2   Ravi         22.0  90.00  Bangalore
2   3   John         22.0  78.00  Mangalore
3   4  Meena         21.0  84.25      Delhi
4   5  Kiran         23.0  88.00    Chennai
5   6   Ravi         22.0  90.00  Bangalore
6   7  Pooja         22.0  95.00     Mysore
7   8   Arun         24.0  70.00  Hyderabad

   id   name  student_age  marks       city
0   1   Asha         21.0  85.00     Mysore
1   2   Ravi         22.0  90.00  Bangalore
2   3   John         22.0  78.00  Mangalore
3   4  Meena         21.0  84.25      Delhi
4   5  Kiran         23.0  88.00    Chennai

   id   name  student_age  marks       city
3   4  Meena         21.0  84.25      Delhi
4   5  Kiran         23.0  88.00    Chennai
5   6   Ravi         22.0  90.00  Bangalore
6   7  Pooja         22.0  95.00     Mysore
7   8   Arun         24.0  70.00  Hyderabad
```

	id	name	student_age	marks	city
2	3	John	22.0	78.0	Mangalore
4	5	Kiran	23.0	88.0	Chennai
0	1	Asha	21.0	85.0	Mysore

	id	name	student_age	marks	city
0	1	Asha	21.0	85.00	Mysore
1	2	Ravi	22.0	90.00	Bangalore
2	3	John	22.0	78.00	Mangalore
3	4	Meena	21.0	84.25	Delhi
4	5	Kiran	23.0	88.00	Chennai
5	6	Ravi	22.0	90.00	Bangalore
6	7	Pooja	22.0	95.00	Mysore
7	8	Arun	24.0	70.00	Hyderabad

Day16 > Cleaned_Students.csv > data

```
1   id,name,student_age,marks,city
2   1,Asha,21.0,85.0,Mysore
3   2,Ravi,22.0,90.0,Bangalore
4   3,John,22.0,78.0,Mangalore
5   4,Meena,21.0,84.25,Delhi
6   5,Kiran,23.0,88.0,Chennai
7   6,Ravi,22.0,90.0,Bangalore
8   7,Pooja,22.0,95.0,Mysore
9   8,Arun,24.0,70.0,Hyderabad
10
```