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Roll no: CO3A09. ASSIGNMENT NO:- 9 BATCH:B1

Q. Data Visualization II

1. Use the inbuilt dataset 'titanic' as used in the above problem. Plot a box plot for distribution
of age with respect to each gender along with the information about whether they survived
or not. (Column names : 'sex' and 'age')

2. Write observations on the inference from the above statistics.

CODE:-

[1]:-

```
import seaborn as sns
import matplotlib.pyplot as plt
```

[2]:-

```
titanic = sns.load_dataset("titanic")
titanic
```

out[2]:-

survived	pclass	sex	age	sibsp	parch	fare	embarked	class	who	adult_male	deck	embark_town	alive	alone	
0	0	3	male	22.0	1	0	7.2500	S	Third	man	True	NaN	Southampton	no	False
1	1	1	female	38.0	1	0	71.2833	C	First	woman	False	C	Cherbourg	yes	False
2	1	3	female	26.0	0	0	7.9250	S	Third	woman	False	NaN	Southampton	yes	True
3	1	1	female	35.0	1	0	53.1000	S	First	woman	False	C	Southampton	yes	False
4	0	3	male	35.0	0	0	8.0500	S	Third	man	True	NaN	Southampton	no	True
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
886	0	2	male	27.0	0	0	13.0000	S	Second	man	True	NaN	Southampton	no	True
887	1	1	female	19.0	0	0	30.0000	S	First	woman	False	B	Southampton	yes	True
888	0	3	female	NaN	1	2	23.4500	S	Third	woman	False	NaN	Southampton	no	False
889	1	1	male	26.0	0	0	30.0000	C	First	man	True	C	Cherbourg	yes	True
890	0	3	male	32.0	0	0	7.7500	Q	Third	man	True	NaN	Queenstown	no	True

891 rows × 15 columns

[3]:-

```
titanic.isnull().sum()
```

out[3]:-

survived	0
pclass	0
sex	0
age	177
sibsp	0
parch	0
fare	0
embarked	2
class	0
who	0
adult_male	0
deck	688
embark_town	2
alive	0
alone	0

dtype: int64

[4]:-

```
plt.figure(figsize=(20,15))
sns.boxplot(data=titanic , x="sex" , y="age" , hue="alive")
```

out[4]:-

<Axes: xlabel='sex', ylabel='age'>