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| 9 | **Data Visualization II** 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'). |

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| 1 | **import** pandas **as** pd  **import** numpy **as** np  **import** matplotlib.pyplot **as** plt  **import** seaborn **as** sns  **import** warningswarnings.filterwarnings('ignore')  dataset **=** sns.load\_dataset('titanic')  dataset.head() |
| 2 | dataset.shape |
| 3 | dataset.info() |
| 4 | dataset.describe() |
| 5 | dataset.describe(include**=**'object') |
| 6 | dataset.isnull().sum() |
| 7 | dataset['age']**=**dataset['age'].fillna(np.mean(dataset['age'])) |
| 8 | dataset['embarked']**=**dataset['embarked'].fillna(dataset['embarked'].mode()[0]) |
| 9 | dataset['deck']**=**dataset['deck'].fillna(dataset['deck'].mode()[0]) |
| 10 | dataset['embark\_town']**=**dataset['embark\_town'].fillna(dataset['embark\_town'].mode()[0]) |
| 11 | dataset.isnull().sum() |
| 12 | sns.boxplot(x**=**'sex', y**=**'age', data**=**dataset, hue**=**"survived") |
| 13 | If we want to see the box plots of forage of passengers of both genders, along with the information about whether or not they survived, wecan pass the survived as value to the hue parameter.  We can also see the distribution of the passengers who survived. For instance, we can see that among the male passengers, on averagemore younger people survived as compared to the older ones. Similarly, we can see that the variation among the age of femalepassengers who did not survive is much greater than the age of the surviving female passengers. |