**ANSWERS:**

1. **1.**Nowadays, the 3D is a highly expanding media. More particularly with the emergence of dedicated standards such as VRML and X3D, 3D animations are widely used on the Web. The continuous evolution of computing capabilities of desktop computers is also a factor that facilitates the large deployment of 3D information contents. At the same time the demand in term of 3D information is becoming more and more sustained in various domains such as spatial planning, risks management, telecommunications, transports, defense, and tourism.
2. **2.**A Series is a one-dimensional object that can hold any data type such as integers, floats and strings. Let’s take a list of items as an input argument and create a Series object for that list.
3. A DataFrame is a two dimensional object that can have columns with potential different types. Different kind of inputs include dictionaries, lists, series, and even another DataFrame.
4. It is the most commonly used pandas object.

Differences between series and data frame

Series is a type of list in pandas which can take integer values, string values, double values and more. ... Series can only contain single list with index, whereas dataframe can be made of more than one series or we can say that a dataframe is a collection of series that can be used to analyse the data.

# **3.** Pandas offer a diverse range of built-in functions that can be used to clean and manipulate datasets prior to analysis. It can allow you to drop incomplete rows and columns, fill missing values and improve the readability of the dataset through category renaming.

# It is the method of analyzing, distinguishing, and correcting untidy, raw data. Data cleaning involves filling in missing values, distinguish and fix errors present in the dataset. Whereas the techniques used for data cleaning might vary in step with different types of datasets

# **4.** As Pandas dataframe objects already are 2-dimensional data structures, it is of course quite easy to create a dataframe from a 2-dimensional array. Much like when converting a dictionary, to convert a NumPy array we use the pd.DataFrame() constructor

# In this section, we will have a look at the syntax, as well as the parameters, of the DataFrame() constructor. As you may be aware, right now, this is the method we will use to create a dataframe from a NumPy array.

# **5.**matplotilb is a python plotting package that makes a simple to create two dimensional plots from data stored in a variety a data structure including lists ,numpy arrays ,and pandas data frames