

Assignment-7

Question 1: Create a Pandas Series with values [100, 200, 300, 400, 500] and index labels ['a', 'b', 'c', 'd', 'e'].

- a) Find its index and values attributes.
- b) Check its dtype and size.

Question 2: Create a Pandas Series with values [10.5, 20.7, 30.2, 40.9]. Convert the Series to integers and display the result.

Question 3: Create a Pandas Series with values [10, None, 30, None, 50].

- a) Identify the missing values using `.isnull()`.
- b) Count the total number of missing values using `.sum()`.

Question 4: Create a Pandas Series with values ranging from 1 to 20. Use `.head()` to retrieve the first 5 elements and `.tail()` to retrieve the last 5 elements.

Question 5: Create a Pandas Series with values [5, 10, 15, 20] and index ['a', 'b', 'c', 'd'].

- a) Retrieve the value corresponding to index 'c'.
- b) Use `.iloc` to get the third element.

Question 6: Create a Pandas Series with values [100, 200, 300, 400] and index ['x', 'y', 'z', 'w']. Change all index labels to uppercase and display the modified Series.

Question 7: Create a Pandas Series with random integers between 1 and 100 (size: 10).

- a) Find the `.mean()`, `.median()`, `.std()`, and `.sum()` of the Series.
- b) Use `.describe()` to get a summary of the Series.

Question 8: Create a Pandas Series with values [1, 2, 3, 4, 5]. Apply a lambda function to compute the square of each element and display the new Series.

Question 9: Create a Pandas Series with values [10, 20, 30, 40] and index ['a', 'b', 'c', 'd'].

- a) Reindex the Series to ['a', 'b', 'c', 'e', 'f'].
- b) Fill the missing values with 0.

Question 10: Create a Pandas Series with index as country names and values as populations (e.g., {'India': 1380, 'China': 1440, 'USA': 331, 'Brazil': 213}).

- a) Use `.loc` to retrieve the population of 'India'.
- b) Filter and display countries with populations greater than 500.