

Data Visualization with Python Lab(CSL48)

USN:

Week #: 07

Semester:

Section:

Date:

Instructions:

- Implement the following programs using python language.

Topic: Introduction to Pandas- Series

Programs:

Use the dataset: `ds_salaries.csv`

https://drive.google.com/file/d/1SA5vxyjlYRIxAoNkkqrV6QubStFw8_R6/view?usp=drive_link

1. Which method is used to display basic information about a pandas Series?
 - A) `describe()`
 - B) `info()`
 - C) `head()`
 - D) `summary()`
2. Assign the `employee_residence` column to the `employee_residence_series` variable as a Series.
3. Create a Series from the `experience_level` column and store the first 10 elements in the `experience_level_series_10` variable. (*Write the required code.*)
4. What does the `len()` function return when applied to a Series?
 - A) The total number of elements
 - B) The number of unique values
 - C) The number of non-null values
 - D) The memory size of the Series
5. Find the unique values in `company_size_series` along with their counts, and store the results in the `company_size_counts_series` variable. (*Write the required code.*)
6. Which method calculates the average value of a Series?
 - A) `median()`
 - B) `average()`
 - C) `mean()`
 - D) `mode()`

7. Calculate the mean, median, and standard deviation of salary_usd_series, and store these values as a Series in the salary_details variable. *(Write the required code.)*

```
Hint: salary_usd_series = df['salary_in_usd']
```

8. What method would you use to count unique values in a Series?
- A) nunique()
 - B) unique()
 - C) count_values()
 - D) value_counts()
9. Identify the top 5 most frequent job titles and store them in the top_5_job_titles variable. *(Write the required code.)*

```
job_title_series = ... # Enter your code here  
top_5_job_titles = ... # Enter your code here
```

10. Which method would you use to find the most frequent value in a Series?
- A) mode()
 - B) frequent()
 - C) top()
 - D) most_common()
11. Calculate the 25th, 50th, and 75th percentiles of salary_usd_series and store these values as a Series in the salary_quartiles variable. *(Write the required code.)*
12. Which method is used to apply a function to every element in a Series?
- A) transform()
 - B) map()
 - C) Both map() and apply()
 - D) apply()
12. Create a new Series, increased_salary, by applying a 10% increase to each salary in the salary_usd_series Series. *(Write the required code.)*
13. What does the operation series1 > series2 return?
- A) A Series of boolean values
 - B) None of the above
 - C) An error
 - D) A single boolean value
14. Compare the increased_salary Series with the salary_usd_series element-wise to check for equality. Store the resultant boolean Series in a new Series called salary_compare_series. *(Write the required code.)*