RAMAIAH
Institute of Technology

Ramaiah Institute of Technology
(Autonomous Institute, Affiliated to VTU)
Department of Computer Science & Engineering

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.)*