

# Python Benchmark Task

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## Task Details

You were appointed as a data scientist to visualize the data from a statistical research on the effects of mental health on student's cgpa data set. This data was collected by a survey conducted by Google forms from University student in order to examine their current academic situation and mental health.

Please write down the start time and end time for each task and sub-task.

### Task 1 : Import Python Libraries relevant for data visualisation

Description: Please import relevant packages for python data visualization as below :

- Pandas
- matplotlib pyplot
- matplotlib
- seaborn

Task	Start Time	End Time
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TASK 1 : UNDERSTAND DATA

### Task 2 : Loading the data

Description: Please load the data given from the file or GitHub data source.

- Data : Student Mental Health  
([https://github.com/arifjamal89/data\\_visualization\\_tools/blob/main/Student%20Mental%20Ohealth.csv](https://github.com/arifjamal89/data_visualization_tools/blob/main/Student%20Mental%20Ohealth.csv))

Task	Start Time	End Time
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TASK 2 : LOAD DATA

### Task 3 : Understanding the data

Description: In this task you will explore the data to understand more before analyzing it.

- T1 - Print top 5 Data from the data set
- T2 - Display all the column from the data set
- T3 - Rename the columns with a suitable name
- T4 - Display data type for each column
- T5 - Find the number of null value for each column

Task/ Sub-Task	Start Time	End Time
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TASK 3 : Understanding the data

### Task 4 : Visualize the data

Description: In this task you will visualize the data based on the scenario given.

- Q1 - What was the depression rate in a bar plot.
- Q2 - What was the anxiety rate by gender in bar plot.
- Q3 - What was the depression rate by courses in bar plot form.
- Q4 - What is the distribution of student ages using distribution plot.
- Q5 - What are the panic attack rates by age using distribution plot.
- Q6 - Use a box plot to display depression rate by age
- Q7 - Use bar plot to display depression rate by cgpa
- Q8 - Use bar plot to display anxiety rate by cgpa
- Q9 - Use bar plot to display depression rate by current year study
- Q10 - What was the treatment rate by depression rate and gender? Understanding those student who have depression are seeking help for specialist treatment.

Deliverables	Start Time	End Time
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TASK 4

THANK YOU