

**Probability and Statistics Assignment**

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**Instructions for the Assignment**

1. Use a single file in Jupyter Notebook or Goggle collab for the entire assignment.
2. Download the Assignment file (File> Download > Download as .ipynb), compress it in a Zip folder and submit through LMS only.
3. Use the given dataset (Tips.csv) for this Assignment.
4. Submit the Assignment by 9th February 2022 without fail.
5. This Assignment is an Exam kind and is considered for the evaluation and certification. No support is provided by our technical team.
6. If you have any doubts how to work on this assignment (No technical support), please drop an email to [support@intellipaat.com](mailto:support@intellipaat.com)

**FINAL ASSIGNMENT**

1. There are 3 arrangements of the word DAD, namely DAD, ADD, and DDA. How many arrangements are there of the word ENDURINGLY?
2. There are 13 men and 12 women in a ballroom dancing class. If 6 men and 6 women are chosen and paired off, how many pairings are possible?
3. Suppose you are taking a multiple-choice test with 4 choices for each question. In answering a question on this test, the probability that you know the answer is 0.33. If you don’t know the answer, you choose one at random. What is the probability that you knew the answer to a question, given that you answered it correctly?
4. Read the given data ‘**TIPS.csv**’ as a dataframe named Tips and answer the following question.

a) In the tips dataframe, for the variable “total bill” what is the 3rd quartile and maximum value?

b) The range of the variable “**TotalBill**”?

Note: Please download the dataset TIPS.csv attached in the shared files section for attending the assignment.

1. A normal distribution which has a mean of 50 and standard deviation of 7 is taken into consideration.

68% of the distribution can be found between what two numbers?

1. 40 and 60
2. 0 and 43
3. 0 and 68
4. 43 and 57
5. Consider the data X = (58,59,63,60,60,63,60,57,58,59). An unbiased estimation for population variance would be \_\_\_\_
6. From the given below boxplot identify the median value and the outlier.



