Assignment 4
[20 points]

Instructions

1. You may use python or R. If you are using Python, use Jupyter notebook. If you are using R, use the R notebook by R studio. Both are equivalent.
2. Create a Github private repo where all your assignments and projects would be stored. At an opportune time, you would be asked to share your repo with our evaluation team.
3. Your submission should be sufficiently original to be considered for evaluation.
4. **Submission would include source code, data availability at Github as well as Google classroom submission of the markdown pdf (do not submit any other format on Google classroom).**

Submission date and time

Nov 8, 2019, by 6 PM.

Q1. Given survival information of multiple groups of subjects, write functions (without using any survival specific library) for drawing KM survival plot and performing a log-rank test. Also, report the median survival for each group. [10 points]

Q2. Use exponential distribution with varying parameter values to simulate events of deaths for 2 groups (100 observations each). Censoring of the data can be performed randomly with 0.1 probability (this means - each data point has a 0.1 probability of being censored. The solution has to account for the stochasticity. It cannot be deterministic). Use your custom function to draw a KM chart and perform a statistical significance test. [10 points]