MARIS STELLA COLLEGE (AUTONOMOUS), VIJAYAWADA-8
(Affiliated to Krishna University, Machilipatnam)
SYLLABUS

Subject: Computer Science **Semester: V/VI**
Course Title: Data Science-Practical **Course Code: 20CSP631DS2**
No. of Hours: 45 **LTP: 003** **Credits: 2**

Objectives
- To practice the python syntax and write programs.
- To identify and implement the python concepts and techniques.

Course Outcomes
CO1: Apply data science solutions to real world problems.
CO2: Implement the programs to get the required data, process it and present the outputs using Python language.
CO3: Execute statistical analyses with Open source Python software.
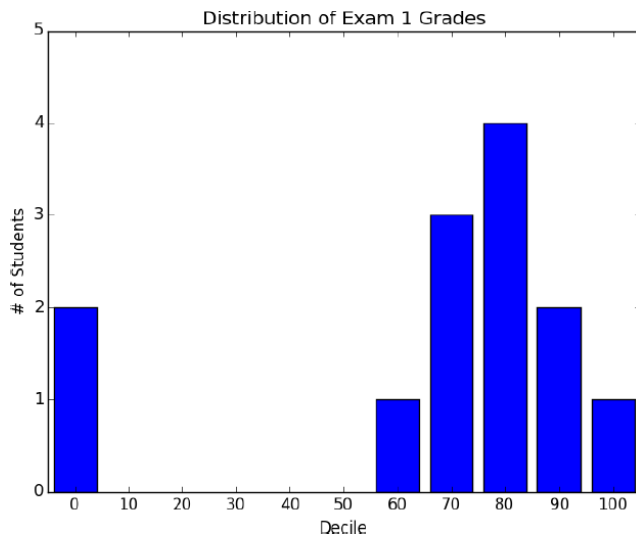
List of Practicals: **(30 Hrs.)**
1. Write a Python program to create a line chart for values of year and GDP as given below.

2. Write a Python program to create a bar chart to display number of students secured different grading as given below.

Distribution of Exam 1 Grades

3. Write a Python program to create a time series chart by taking one year month wise stock data in a CSV file.
4. Write a Python program to plot distribution curve.
5. Import a CSV file and perform various Statistical and Comparison operations on rows/columns. Write a python program to plot a graph of people with pulse rate p vs. height h. The values of P and H are to be entered by the user.
6. Import rainfall data of some location with the help of packages available in R Studio and plot a chart of your choice.

Skill/Hands-on: Field Work/Mini Project   (15 Hrs.)
1. search online and visit any of the agencies like Statistical cell, weather forecasting centers, pollution control boards, manufacturing industries, agriculture departments, etc. to observe the manual process going on to collect the data, maintain the data, present the data and to predict the data for future instances.

Prescribed Text Book
1. Data Science from Scratch by Joel Grus O'Reilly Media

Reference Text Book
1. Wes McKinney, "Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython", O'Reilly, 2nd Edition, 2018.

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Practical-Scheme of Valuation

Time: 3 Hrs.   **Max. Marks: 50**

Practical	Marks
Program Writing	15 M
Program Execution	15 M
Viva	10 M
Practical Record	10 M
Total	**50 M**