The focus of this assignment is to learn to create data analytics using Python pandas library. Please install pandas if needed. Use command pip (for Windows) or pip3 (for MacOS) to install Pandas.

Question 1

Write a program on the following two questions. Both Sections A and B should be written in one program.

A (PANDAS: SERIES) Perform the following tasks with pandas Series:

a. Create a Series from the list [7, 11, 13, 17].
b. Create a Series with five elements that are all 100.0.
c. Create a Series with 20 elements that are all random numbers in the range 0 to 100. Use method describe to produce the Series' basic descriptive statistics.
d. Create a Series called temperatures of the floating-point values 98.6, 98.9, 100.2 and 97.9. Using the index keyword argument, specify the custom indices 'Julie', 'Charlie', 'Sam' and 'Andrea'.
e. Form a dictionary from the names and values in Part (d), then use it to initialize a Series.

B (PANDAS: DATAFRAMES) Perform the following tasks with pandas DataFrames:

f. Create a DataFrame named temperatures from a dictionary of three temperature readings each for 'Maxine', 'James' and 'Amanda'.
g. Recreate the DataFrame temperatures in Part (a) with custom indices using the index keyword argument and a list containing 'Morning', 'Afternoon' and 'Evening'.
h. Select from temperatures the column of temperature readings for 'Maxine'.
i. Select from temperatures the row of 'Morning' temperature readings.
j. Select from temperatures the rows for 'Morning' and 'Evening'temperature readings.
k. Select from temperatures the columns of temperature readings for 'Amanda' and 'Maxine'.
l. Select from temperatures the elements for 'Amanda' and 'Maxine' in the 'Morning' and 'Afternoon'.
m. Use the describe method to produce temperatures' descriptive statistics.
n. Transpose temperatures.
o. Sort temperatures so that its column names are in alphabetical order.

Question 2

Using the *titanic.csv* dataset, write a program to explore and mine the following information:

a) How many passengers were in the titanic?
b) How many male and female passengers were in the titanic?
c) What was the average age of all passengers?
d) How many passengers under 21 years of age?
e) How many survived and how many did not? How many males and how many females?
f) What was the youngest age that survived, and the oldest age? What were their names.
g) Display the name of all passengers that survived.

Write a Learning Report Summary (LRS)

Using Microsoft Word, write a summary report (not a bullet items) with a minimum of 100 words explaining how you completed your assignment. *Please describe your responses, not just yes/no answers.*

1. Did you successfully get your assignment done? Did it run? Any error? Did you get the correct result? Did you test your program thoroughly?
2. How much time did you spend to complete your assignment?
3. Did you find the assignment easy or challenging for you?
4. Did you write the program yourself? Did you get any help from anyone?
5. When you encountered obstacles to complete your program, how did you resolve the issues? Did you use Google to get help? Describe how Google was abled or not able to assist you?
6. What did you learn from doing this assignment?
7. Any other information you would like to share with your instructor? Make sure you provide program output on each option.

What to submit on blackboard

Your program source code.
Your program output.
Your LRS.