**EXERCISE (SET 2)**

**DATA ANALYSIS WITH PANDAS**

**SERIES**

1. Write a Pandas program to compare the elements of two Pandas series.

Sample Series [4,65,436,3,9], [7,0,3,897,9]

1. Write a Pandas program to add, subtract, multiply and divide two Pandas series.

Sample Series: [2,4,6,8,14], [1,3,5,7,9]

1. Write a Pandas program to convert a dictionary to a Pandas series.

Sample dictionary: dictionary1 = {‘Josh’: 24, ‘Sam’: 36, ‘Peace’: 19, ‘Charles’: 65, ‘Tom’: 44}

1. Write a Pandas program to convert a given series to an array.

Sample series: [‘Love’, 800, ‘Joy’, 789.9, ‘Peace’, True]

1. Write a Pandas program to display the most frequent value in the given series and replace everything else as ‘Other’ in the series. (Use the ‘HomeTeamGoals’ column in the dataset provided)

**DATAFRAMES**

***(For this section, you will use the ‘AfricaCupOfNations’ dataset provided to you)***

1. Write a Pandas program to read the given csv file.
2. Write a Pandas program to get the first 7 rows of your data frame.
3. Write a Pandas program to select the ‘HomeTeam’, ‘AwayTeam’, ‘HomeTeamGoals’ and ‘AwayTeamGoals’ columns from your data frame.
4. Write a Pandas program to select the rows where Egypt appears.
5. Write a Pandas program to count the number of rows and columns of your data frame.
6. Write a Pandas program to select the rows where the ‘Attendance’ is missing.
7. Write a Pandas program to select the rows where the ‘HomeTeamGoals’ are between 3 and 6 inclusive.
8. Write a Pandas program to change the “AwayTeamGoals” in the 3rd row to 10.
9. Write a Pandas program to sort the DataFrame first by ‘HomeTeam’ in ascending order, then by ‘HomeTeamScores’ in descending order.
10. Write a Pandas program to get list from DataFrame column headers.
11. Write a Pandas program to append a column of your choice to your DataFrame.
12. Write a Pandas program to add 2 rows to your DataFrame.
13. Write a Pandas program to change the country ‘Uganda’ to ‘China’ in the ‘AwayTeam’ column of the DataFrame.
14. Write a Pandas program to reset index in your DataFrame.
15. Write a Pandas program to check whether the ‘Stadium’ column is present in your DataFrame or not.
16. Write a Pandas program to convert the datatype of the ‘AwayTeamGoals’. (int to float)
17. Write a Pandas program to remove the last 10 rows from your DataFrame.
18. Write a Pandas program to iterate over rows in your DataFrame.
19. Write a Pandas program to change the order of your DataFrame columns.
20. Write a Pandas program to delete DataFrame row(s) whose value is 0 in the ‘HomeTeamGoals’ columns.

***NOTE:*** *This exercise is compulsory for every individual and should be done using the Jupyter Notebook. More marks will be awarded for students that try to use the various Notebook features exhaustively for example* ***Markdown****.*