*Session 6: Assignment 1*

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1. Introduction

This assignment will help you to consolidate the concepts learnt in the session.

1. Problem Statement

Consider a DataFrame df where there is an integer column 'X':

df = pd.DataFrame({'X': [7, 2, 0, 3, 4, 2, 5, 0, 3, 4]})

For each value, count the difference back to the previous zero (or the start of the Series, whichever is closer).

These values should therefore be [1, 2, 0, 1, 2, 3, 4, 0, 1, 2]. Make this a new column 'Y'.

**Note: Solution submitted via github must contain all the detailed steps.**

**3. Solution:**

**Input**

***import pandas as pd***

***df = pd.DataFrame({'X': [7, 2, 0, 3, 4, 2, 5, 0, 3, 4]})***

***A =[]***

***r=0***

***for B in df['X']:***

***if B> 0:***

***r+=1***

***else:***

***r=0***

***A.append(r)***

***df['Y'] = A***

***print("df Table with additional column is\n", df)***

**Output df Table with additional column is**

**X Y**

**0 7 1**

**1 2 2**

**2 0 0**

**3 3 1**

**4 4 2**

**5 2 3**

**6 5 4**

**7 0 0**

**8 3 1**

**9 4 2**

**Screen Shot:**

