**Introduction**

The aim of this exercise is to test your programming ability in Scala. It is a take home assignment which has been sent to you before the 1st round interview. During your interview we will discuss your solution to the problem, and your results.

Please send the code and results prior to the interview.

**Assignment:**

ABC corporation is a financial institution helping business and individuals performing trades transactions using its payment platform i.e. any company or individual can make or receive payment using this payment platform as part of trade done with other counterparties.

To understand the engagement of the customer with the platform, ABC corporation would like you to help them understand through three different task listed below,

1. Total number of transactions carried out by customers. i.e. Identify each of the individual transactions and group them into a list by customer id.
2. Total number of counterparties involved in the transactions with the customers. i.e. Identify each of the individual counterparties and group them into a list by customer id.
3. Create a summary table highlighting “total number of transactions”, “average number of transactions” and any other information which you think would be useful.

To help you with the analysis, ABC corporation is providing you with the sample dataset named Transactions.xlsx. Link to the dataset -- [Assignment\_Dataset | Kaggle](https://www.kaggle.com/datasets/munavar/assignment-dataset)

Transactions.xlsx file contains details of transactions executed by customers and their details.

Structure of Transactions.xlsx:

1. TransactionID – unique field to identify each unique customer and counterparty pair
2. Sender – unique id to identify each transaction
3. Receiver – total value of a transaction in USD
4. TransactionAmount – Date when transaction was executed
5. Date – Date when transaction was executed

Output dataset should have:

1. Total number of transactions and list of transaction ids of the sender.
2. Total number of recipient’s and list of transaction id’s associated with recipient.
3. List “total number of transactions”, “average number of transactions” across all customers.