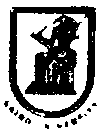
****Data Mining**

**Information Systems Department**

**Faculty of Computers and Artificial Intelligence**

###### **Cairo University**

Assignment 1

Association Rules

**Instructions:**

* This assignment should be performed individually, copies will be graded -5.
* The assignment total grade is 5.
* The assignment should be submitted before 25/11/2020 at 11pm on blackboard.
* You should choose 1 problem only to apply any of the studied association algorithms using any programming language.
* Minimum support and minimum confidence should be entered during runtime, not from the code.

**Problem 1:**

* Consider the set of transactions in the attached file "RetailDataSet.txt".

<RetailDataSet.txt>

* + The file contains transactions of items.
  + Each row represents a transaction.
  + Each transaction contains a set of items defined with their numbers.
  + Item numbers are separated through spaces.
* Write a program in any programming language that implements one of the association algorithms on this set of transactions.
* Minimum support & minimum confidence should be variable as per user input during runtime.
* Then generate all association rules which can be mined from the transactions.
* The final output of your program should show the frequent item sets and association rules with their confidence.

**Problem 2:**

* Consider the sets of transactions for a coffee shop in the attached file "CoffeeShopTransactions.xlsx".

<CoffeeShopTransactions.xlsx>

* + The file contains transactions of items for a coffeeshop.
  + Each row represents a transaction at a specific time.
  + Each transaction contains a set of items defined with their names.
  + Each item is in a separate column.
* Write a program in any programming language that implements one of the association algorithms on this set of transactions.
* Minimum support & minimum confidence should be variable as per user input during runtime.
* Then generate all association rules which can be mined from the transactions.
* The final output of your program should show the frequent item sets and association rules with their confidence.