

**Riphah International University**  
**I-14 Main Campus**  
**Faculty of Computing**

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**Association Rules Mining Assignment**

Association rules analysis is a technique to uncover how items are associated with each other. One of association rule based algorithm is Apriori Algorithm. It is a Machine Learning algorithm which is used to gain insight into the structured relationships between different items involved. The most prominent practical application of the algorithm is to recommend products based on the products already present in the user's cart. Walmart especially has made great use of the algorithm in suggesting products to its users.

Your task is to implement an Apriori algorithm on GroceryStoreDataSet.

- Download the dataset from <https://www.kaggle.com/datasets/shazadudwadia/supermarket>
- Load dataset using pandas library.
- Convert pandas's dataframe into the list.
- Do one-hot encoding of the data.
- Import Apriori algorithm and implement it with the minimum support of 0.3.
- Determine association rules which have 50% confidence.
- Print all the association rules that apriori algorithm builds.