**Name: Nikhil Jadhav**

**Student ID: 801075504**

**Cloud Computing for Data Analysis**

**VIDEO CASE 07 : Association Rules Market Basket Analysis**

Watch following videos:

**Video 1:** <https://youtu.be/GqwrAJPP4mk>

**Video 2:** <https://www.youtube.com/watch?v=TcUlzuQ27iQ>

**Video Case Questions:**

1. What is Market Basket Analysis?
2. Mention some disadvantages of Apriori algorithm for longer transactions.
3. In what other domains Market Basket Analysis can be applied?

Answers:

1. Market Basket Analysis is a technique which identifies the strength of association between pairs of products purchased together and identify patterns of co-occurrence. A co-occurrence is when two or more things take place together. Market Basket Analysis creates If-Then scenario rules, for example, if item A is purchased then item B is likely to be purchased. The rules are probabilistic in nature or, in other words, they are derived from the frequencies of co-occurrence in the observations. Frequency is the proportion of baskets that contain the items of interest. The rules can be used in pricing strategies, product placement, and various types of cross-selling strategies.
2. During the candidate generation a large number of subsets are returned, the Apriori algorithm tries to load maximum number of candidate sets possible before scan, this with bottom-up subset exploration gets a maximal subset S, which makes it slow which might turn out to be the issue for longer transaction.
3. Market Based Analysis can be applied for following domains:
   1. IT operation Analytics
   2. Finding pattern in biological databases.
   3. To study protein composition.
   4. To study population and economic census.