	INNOVATIVE PEDAGOGICAL PRACTICES - REPORT	Doc No:	CAHCET/AD/MCA/CF-04A
		Rev. No & Issue No	00 & 01
		Rev Date:	03.01.2025

Name of Subject & Code: Data Mining and Data Warehousing MC4020

Year-II / Sem-III

Topic: Apriori Algorithm for Association Rule Mining.

Activity: Flipped Class room

1. Objective

- To understand the working principles of the **Apriori Algorithm** for association rule mining.
- To explain **candidate generation, frequent itemset identification, support, and confidence**.
- To relate theoretical concepts to real-world **e-commerce applications**.
- To develop students' ability to identify applications of association mining across different domains.

2. Description of the Activity

Students were guided through the step-by-step working of the **Apriori Algorithm**, covering candidate generation, frequent itemset identification, and the calculation of support and confidence measures.

A real-time case study based on **Amazon's e-commerce platform** was presented to demonstrate how association mining can be used for product recommendations, identifying frequently purchased product combinations, and improving cross-selling strategies. Students participated in an interactive discussion and explored how Apriori-based insights could be applied in domains such as healthcare, retail, and finance.

3. Outcome

- Students understood the fundamental concepts and working procedure of the **Apriori Algorithm**.
- Students were able to differentiate between **frequent itemsets and association rules**.
- Students gained practical understanding of **support and confidence measures**.
- Students were able to identify real-world applications of association mining in e-commerce and other domains.
- Students developed an understanding of how data-driven patterns can support **business decision-making and recommendation systems**.

4. Student Feedback

Students found the activity **interesting and relevant**, particularly the Amazon case study, as it helped them connect the Apriori Algorithm with a familiar real-world application. The step-by-step explanation improved their understanding of candidate generation and frequent itemset mining. Students also expressed interest in exploring association mining applications in other domains.

5. Conclusion

The activity successfully connected the **theoretical concepts of the Apriori Algorithm with practical real-world applications**. The Amazon case study and interactive discussion enhanced students' understanding of association mining and its role in discovering meaningful relationships within transactional data. Overall, the session improved students' conceptual knowledge and encouraged them to explore data mining techniques across multiple application domains.

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