**Eclat Intuition**

* Eclat is kind of a simplified version of Apriori model.
* It also talks about “people who bought also bought…”.
* Similar to what we had in Apriori model, we also have the same movie recommendation – if someone watched movie 1, will watch movie 2 and so on.

Table

Description automatically generated

* We won’t be talking about rules per se, because Eclat model is different to Apriori model – in Apriori model we came up with rules towards the end, it was the output, and based on the lift, we judged the strength of each rule. Whereas here, we will be talking about sets.

Table

Description automatically generated

* Here, we have got the market basket – people who buy burgers also buy French fries, people who buy vegetables are likely to buy fruits, and so on.
* These are some potential rules, we are not saying they are strong, and the Eclat model is responsible for going through all these combinations and telling us what we should focus on.
* In Eclat model, just like the Apriori model, we have the support factor. But as compared to Apriori, where we had Support, Confidence and Lift, in Eclat model we only have Support Model.

**Support – Eclat** –

* Movie recommendation system
* Market Basket Optimization
* Here, M doesn’t mean just one movie, and it was the same for Apriori. We considered one movie to understand the intuition.
* M and I here stand for a set of movies or set of items in a transaction.
* And specifically, in Eclat model it doesn’t make sense to look at an item by itself because we don’t have confidence or lift factor, we are only looking at the support.
* So, we are just looking at the support – how frequently does this set of items occur.
* And if we are looking at the set of 1 item, then we are just looking at what is the popularity of the set – the frequency of the set – and that is very trivial.
* We are aiming at least two items in a set. Thus, the movie M, or item I, stands for a set of two movies or more.
* We are calculating how often how often two items occur together in a set – what percentage of list of items, or movies, that people bought together or liked, contain those two items or movies together.
* Hypothetically, if 100% of items you had in a list in a large dataset contain both the items together, would imply that anybody who got item 1 will get item 2.
* So, the higher the occurrence of any two items in a list together in a dataset, the higher the likelihood that they come in pairs.
* It is much faster, and the steps involved are simple as well.

**Eclat Algorithm** –

**Step 1** – Set a minimum support.

**Step 2** – Take all the subsets in a transaction having higher support than minimum support.

**Step 3** – Sort these subsets by minimum support.