TASK – 04

1. **Data Set Selection**: You start by selecting a data set that includes information about items sold, along with various features that might influence sales quantities. This could include attributes like product category, price, customer reviews, ratings, etc.
2. **Response Variable Selection**: Since a time index is not given in the data set, you decide to use the count of items sold as the response variable for your regression model. This means you're trying to predict the quantity of items sold based on the other features in the data set.
3. **Regression Modeling**: You then build a regression model using techniques such as linear regression, decision trees, random forests, or other suitable methods. The goal is to identify the determining factors (or predictors) of sales quantity for each category of products.
4. **Feature Importance Analysis**: After fitting the regression model, you perform a feature importance analysis. This step involves evaluating the impact or importance of each feature on the sales quantity. Different models may have different ways of calculating feature importance, such as Gini importance in decision trees or coefficient magnitudes in linear regression.
5. **Identifying Important Factors**: From the feature importance analysis, you identify that the "Rating Count" feature has a higher importance value compared to other features. This suggests that the number of ratings a product has received plays a significant role in determining its sales quantity.
6. **Implications and Recommendations**: Based on these findings, you draw several conclusions:
    - It's crucial to pay attention to both the ratings and rating count of products. Higher ratings and a greater number of ratings can positively impact sales.
    - Products with higher ratings and more ratings are likely to have slightly higher demand in the future. Customers tend to trust products with positive reviews and high ratings, leading to increased sales over time.

By following this procedure, you've gained insights into the factors influencing sales quantity and can make informed decisions or recommendations regarding product ratings, customer reviews, and future demand.