CATBOOST REGRESSION

This code uses CatBoost Regressor to train a model for the task of predicting the PRODUCT_LENGTH feature based on the PRODUCT_TYPE_ID feature. Here's how the code works:

- The necessary libraries are imported: pandas for data manipulation, CatBoostRegressor for building the regression model, and mean_absolute_percentage_error from sklearn.metrics to evaluate the model's performance.

- The train and test datasets are loaded using pandas.The train and test datasets are combined into a full dataset, which is used to replace any NaN values with 0.

- The PRODUCT_TYPE_ID feature is selected as the input (X) for the model, while the PRODUCT_LENGTH feature is selected as the output (y).

- A CatBoostRegressor model is created and trained on the training data.The trained model is used to make predictions on the test data.

- The mean absolute percentage error (MAPE) between the true y values and the predicted y values is calculated and used to evaluate the model's performance.

- The predicted y values are saved to a submission file with the corresponding PRODUCT_ID values.

Overall, this code demonstrates how to use CatBoostRegressor to train a regression model and make predictions on new data.