



# Retail: Loyalty Program Analysis

## Task

Analyze the store's loyalty program.

- Carry out exploratory data analysis
- Analyze the loyalty program
- Formulate and test statistical hypotheses

## Description of the data

The dataset contains data on purchases made at the building-material retailer Home World. All of its customers have membership cards. Moreover, they can become members of the store's loyalty program for \$20 per month. The program includes discounts, information on special offers, and gifts.

`retail_dataset_us.csv` contains:

- `purchaseId`
- `item_ID`
- `purchasedate`
- `Quantity` — the number of items in the purchase
- `CustomerID`
- `ShopID`
- `loyalty_program` — whether the customer is a member of the loyalty program

`product_codes_us.csv` contains:

- `productID`
- `price_per_one`

Make a list of 5-10 sources (documentation, articles) that you used while working on the project. Provide brief explanations about the questions each source helped you answer. Prepare a presentation with your findings. You can use any tool you want to make the presentation, but you must send it as a PDF. Put the link in the body of the main project.

## Dashboards

### 1. Suggestion 1

- a. Plot a diagram showing the number of purchases per day
- b. Add an indicator for the number of customers
- c. Add a store ID filter

### 2. Suggestion 2

- a. Plot a histogram showing the number of purchases per customer
- b. Plot a pie chart showing the shares of purchases in different stores
- c. Add a purchase date filter

## Datasets (23.10.2020)

 retail\_dataset\_us.csv 5155.3KB

 product\_codes\_us.csv 37.5KB

