

Sales Report Generator

Overview

The Sales Report Generator is a Python application that reads data from three input files (**TeamMap.csv**, **ProductMaster.csv**, and **Sales.csv**) and generates two output files (**TeamReport.csv** and **ProductReport.csv**). The application calculates total gross revenues for each sales team and summarizes sales of each product.

Input Files

Team Map

The **TeamMap.csv** file is a comma-separated text file containing information about sales teams. Each line consists of two values: an integer representing the team's unique identifier (TeamId) and a string representing the team's name (Name). The file includes a header with the field names.

Product Master

The **ProductMaster.csv** file is a comma-separated text file containing information about products. Each line consists of four values: an integer representing the product's unique identifier (ProductId), a string representing the product's name (Name), a floating-point value representing the product's price (Price per unit), and an integer representing the product's lot size (LotSize). The file does not contain a header.

Sales

The **Sales.csv** file is a comma-separated text file containing information about sales. Each line consists of five values: an integer representing the sale's unique identifier (SaleId), an integer representing the product's unique identifier (ProductId) from the Product Master, an integer representing the sales team's unique identifier (TeamId) from the Team Map, an integer representing the quantity sold (Quantity), and a floating-point value representing the discount percentage (Discount). The file does not contain a header.

Output Files

Team Report

The **TeamReport.csv** file is a comma-separated text file containing the sales team names and their total gross revenues. The file includes a header with the field names, and the teams are listed in descending order by their gross revenue.

Product Report

The **ProductReport.csv** file is a comma-separated text file summarizing the sales of each product. Each line consists of four values: the product's name, the gross revenue of sales, the total number of units sold, and the total cost of all discounts provided on sales of the product. The file includes a header with the field names, and the products are listed in descending order of their gross revenue.

Usage

To run the Sales Report Generator, execute the following command in the command-line interface:

```
python report.py -t TeamMap.csv -p ProductMaster.csv -s Sales.csv --team-report=TeamReport.csv --product-report=ProductReport.csv
```

Make sure to provide the correct file paths for the input and output files. The application will read the data from the input files, perform the necessary calculations, and generate the team and product reports in the specified output files.

[Additional Notes on code](#)

Using a list instead of a dictionary for Sales file

As per its definition, dictionaries are used when you have a set of unique keys and their corresponding values, while lists are used for ordered collections of elements.

In this project, dictionaries are used to store product information and lists are used to store sale records.