

Project description

Project goal is to implement a web application for retail purposes. Using this application you can sell offerings such as merchandise or services at affordable prices. Application has functionality to view, search or purchase offerings.

Following project functionality is described

- Data management
- Reporting
- Security

Data Management

Entities

Application has three types of users: administrators, sellers and buyers.

User has following attributes

- First name
- Last name
- Username
- Password
- Email
- Role (*ROLE_ADMIN*, *ROLE_SELLER* and *ROLE_CUSTOMER*)

In addition to user, we have additional entities:

- Category
- Offering
- Receipt
- Coupon

Category entity represents type of offering and it is defined with following attributes:

- Name
- Description

Offering entity next to type has following attributes:

- Name
- Date of creation
- Expiration date
- Retail price
- Discounted price
- Product image (path to the image)
- Number of offerings in stock
- Number of offerings sold

Receipt entity has following attributes

- Receipt creation date
- Proof that receipt is paid
- Proof that purchase is cancelled

Coupon has following attributes

- Expiration date
- Redemption status

Entity relationships

Seller can create multiple offerings while each offering can be created by single seller. Offering can have only one category while one category can have multiple offerings. Receipt represents purchase of one offering from one seller. One offering can be on multiple receipts. Buyer can have multiple receipts. Voucher represents purchase of one offering from one seller. One offering can have multiple coupons and similarly one buyer can have multiple coupons to his name.

Reporting

Application is allowing both administrators and buyers to generate report. There are two types of report:

1. Total sales per date report– administrator needs to specify time period for which he wants to see report (example of the report can be seen in figure 1). Report consist out of following data :

- Date
- Total revenue per date
- Total revenue per time period

Date	Income
2018-03-27	0.0
2018-03-28	4000.0
2018-03-29	2000.0
Sum of incomes	6000.0

Figure 1. Total sales by date report

2. Total sales per category report – administrator enters the category for which he wants to get the report, as well as the period (example of the report can be seen in figure 2). Report consist out of following data:

- Category name
- Date
- Sold offers of that category for that date (additional task),
- Revenue per date
- Total revenue per time period and category as well as total number of sold offerings per category.

music		
Date	Income	Number of sold offers
2018-03-27	0.0	0
2018-03-28	4000.0	2
2018-03-29	2000.0	1
Sum of incomes		6000.0
Total number of sold offers		3

Figure 2. Total sales per category report

Security

Applications supports both users(buyers, sellers, administrators) who signed in as well as users who did not. Each user has access to only functionality specific to that user.