# Retail Store System requirements specification

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# Contents

# 1  Business description

The store application provides users with a smooth and secure shopping experience while offering administrators robust tools for effective store management. Initially designed to operate in Poland, the application aims to support a thriving online and in-store retail business by covering essential aspects such as product management, order processing, and payment handling.

The application allows administrators to manage products seamlessly, from adding new items to updating existing details and tracking inventory levels in real-time. This ensures that stock availability is always up-to-date, enabling timely restocking and efficient inventory control.

User management is another critical component, with features that enable easy registration, login, and profile management. Users can create accounts using various methods, manage their personal information and payment methods, and view their order history and tracking information. This enhances the overall user experience, making it convenient for customers to shop and manage their interactions with the store.

Order processing is streamlined to ensure efficiency and accuracy. The shopping cart allows users to add or remove items with real-time updates on totals, discounts, and shipping fees. The checkout process is designed to be flexible, supporting multiple shipping options and payment methods. Validation of shipping addresses and payment details before order finalization minimizes errors and enhances the user experience.

Payment handling integrates with multiple payment gateways, ensuring secure transactions through encryption and compliance with industry standards. The system also supports the creation and management of discounts, which can be applied during checkout to provide users with the best possible deals.

Customer service and feedback mechanisms are integrated into the application, allowing users to easily reach out for support and leave reviews and ratings for products. This helps build trust and improve the store's reputation through transparent customer interactions.

The application includes robust analytics and reporting tools, generating detailed sales reports and customer insights. These tools help administrators understand customer behavior, identify trends, and plan marketing strategies effectively.

Scalability is a key consideration, with the application designed to handle increasing traffic and data load efficiently. Future plans include expanding the application's reach beyond Poland to international markets, allowing it to support a global customer base. Integration with various third-party services and the provision of API endpoints enable custom integrations and extended functionalities, ensuring the application remains versatile and adaptable.

Overall, the store application is well-positioned to support a thriving online retail business, offering a secure and user-friendly shopping experience while providing administrators with the tools needed for effective management and growth.

# 2 Functional requirements

Table 1: User account requirements

| Requirement | Comment | MoSCoW |
|---|---|---|
| create an account | user can create 1 account for each email address<br>user needs to provide his name and password | M |
| create an account via gmail | user can create an account using gmail | S |
| password security | password needs to be secure - has at least 8 signs, 1 digit and 1 special character | M |
| password reset | user can reset his password through email link | M |
| login with credentials | User can login to his account using valid credentials | M |
| login via gmail | user can login to his account using gmail, if his account is connected | S |
| view own profile | user can view his account details | M |
| edit own profile | user can edit his account details | M |
| add address | user can add shipping address | M |
| add payment method | user can add payment method | M |
| view purchase history | user can view a history of his purchases | M |
| view purchase details | user can view details of his purchase | M |

Table 2: Product requirements

| Requirement | Comment | MoSCoW |
|---|---|---|
| view products | user can view a list of products | M |
| view product details | user can view product details | M |
| add product comment | logged in user can rate product and leave a comment | S |
| view product comments | user can view comments about product | S |
| filter by categories | user can filter products by existing categories | M |
| filter by text | user can search products by text filter | M |
| sort | user can sort products by following options: date, price | M |
| sort | user can sort products by following options: popularity, discount | S |
| featured products | administrator can highlight products (e.g., Valentine's Day products) | C |
| discounted product | administrator can discount product for a certain period of time | C |
| favourites | user can add products to his favourites | C |
| availability in local stores | user can find the location of local stores and check the availability of the selected product at a specific store | W |

Table 3: Shopping cart requirements

| Requirement | Comment | MoSCoW |
|---|---|---|
| add product | user can add available product to the basket | M |
| product quantity | user can select available quantity of each product (max 5 of the same items per purchase) | M |
| remove product | user can remove product from the basket | M |
| add discounts | user can add multiple discouts to the shopping cart, assuming that they are not mutually exclusive | S |
| remove discounts | user can remove discounts before they are used | S |
| own shipping address | user can use one of his shipping addresses | M |
| one-time shipping address | user can use unique address for one-time purchase | M |
| shipping method | user can select available method of shipping | S |
| estimated shipping time | user can view estimated shipping time for each shipping method | W |
| payment method | user can choose a payment method between paypal, credit card and in-store payment. | M |
| payment currency | user can select available payment currency | M |
| invoice | user can request an invoice on top of regular bill | S |

Table 4: Notification requirements

| Requirement | Comment | MoSCoW |
|---|---|---|
| bill | user will get an email with all purchase information | S |
| delivery | user will get emails about new delivery step | C |
| feedback | user can leave feedback | C |
| email marketing | user can allow personalized emails with ads | C |
| app marketing | user can allow personalized push notifications from the app with ads | C |

Table 5: Employee requirements

| Requirement | Comment | MoSCoW |
|---|---|---|
| user actions | employee supersets user account | M |
| sell | employee can sell available product | M |
| discount | employee can accept purchase discount | S |
| return | employee can accept product return | S |
| complaint | employee can accept product complaint | C |
| order products | employee can order additional products to the store | c |

Table 6: Administrator requirements

| Requirement | Comment | MoSCoW |
|---|---|---|
| add product | admin can add new product | M |
| import products | admin can import products from CSV files | M |
| edit product | admin can edit product details | M |
| delete product | admin can delete products | M |
| add discount | admin can add discount | M |
| edit discount | admin can edit discount | M |
| delete discount | admin can delete discount | M |
| add employee | Super admin can create new employee account | M |
| delete employee | Super admin can delete employee account | M |
| add admin | Master admin can add new admin account | M |
| delete admin | Master admin can delete admin account | M |

Table 7: Chat requirements

| Requirement | Comment | MoSCoW |
|---|---|---|
| create chat | user can start a chat session with bot | W |
| request a worker | user can request a live representative during the chat session | W |
| send message | user can send messages on chat | W |
| popular questions | user can select one of the listed questions and receive a pre-written answer | W |
| close chat | user can close chat | W |
| chat history | admin can view chat histories | W |

# 3  Nonfunctional requirements

Table 8: Nonfunctional requirements

| Requirement | Comment |
|---|---|
| availability | system must ensure 99% uptime |
| browsers compatibility | ensure compatibility with all major browsers (Chrome, Firefox, Safari, Edge) and their latest versions. |
| devices compatibility | ensure compatibility with latest versions of Android devices. |
| functionality | system validation detects 98% of errors before submission |
| security | only verified admin users can add, edit and delete products and discounts |
| data protection | all user data must be encrypted |
| accessibility | application provides comprehensive accessibility features to support users with disabilities |
| response time | average response time should be under 2 seconds and it must not exceed 4 seconds even during peak hours |
| throughput | system can handle 8,000 GET requests and 1,000 PUT/POST requests per minute under average load system can handle 40,000 GET requests and 5,000 PUT/POST requests per minute during peak traffic periods |
| user capacity | supports at least 50,000 concurrent users under normal conditions, with the ability to scale up to 200,000 concurrent users during peak events |
| scalability | system must handle an increase of 1,000 active users per minute |
| localization | supports multiple languages and currencies, initially focusing on Polish and English but scalable for internationalization. |