

# Backend Requirements Specification

Vitor Gouvea, Karen Cinca, Leonardo Luz

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## Functional Requirements

ID	Name	Priority
FR-01	Login with credentials	high
<b>Description:</b> The system shall allow users to log in using a username and password or Google account.		

ID	Name	Priority
FR-02	Reset password	High
<b>Description:</b> The system shall allow authenticated users to reset their password via email.		

ID	Name	Priority
FR-03	Edit profile	Medium
<b>Description:</b> The system shall allow authenticated users to edit their profiles, excluding credentials.		

ID	Name	Priority
FR-04	Delete profile	Medium
<b>Description:</b> The system shall allow authenticated users to delete their profiles, should validate exclusion via email.		

ID	Name	Priority
FR-05	Add product to cart	High
<b>Description:</b> The system shall allow authenticated users to add products to their shopping cart.		

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ID	Name	Priority
FR-06	Remove product from cart	High
<b>Description:</b> The system shall allow authenticated users to remove products from their shopping cart.		

ID	Name	Priority
FR-07	Process Payment	High
<b>Description:</b> The system shall allow authenticated users to submit payment information to initiate payments through supported payment gateways.		

ID	Name	Priority
FR-08	Payment Validation	High
<b>Description:</b> The system shall validate and confirm payment status before order completion.		

ID	Name	Priority
FR-09	Order Tracking	Medium
<b>Description:</b> The system shall allow authenticated users to view the status and details of their currently active orders.		

ID	Name	Priority
FR-10	Orders History	Low
<b>Description:</b> The system shall allow authenticated users to view their purchase history.		

ID	Name	Priority
FR-11	Cancel Order	Medium
<b>Description:</b> The system shall allow authenticated users to cancel their currently active orders.		

ID	Name	Priority
FR-12	Register products	High

<b>Description:</b> The system shall allow administrators to register products.
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ID	Name	Priority
FR-13	Edit products	High
<b>Description:</b> The system shall allow administrators to edit products.		

ID	Name	Priority
FR-14	Delete products	High
<b>Description:</b> The system shall allow administrators to delete products.		

ID	Name	Priority
FR-15	Register stores	High
<b>Description:</b> The system shall allow administrators to register stores.		

ID	Name	Priority
FR-16	Edit stores	High
<b>Description:</b> The system shall allow administrators to edit stores.		

ID	Name	Priority
FR-17	Delete stores	High
<b>Description:</b> The system shall allow administrators to delete stores.		

ID	Name	Priority
FR-18	Register categories	High
<b>Description:</b> The system shall allow administrators to register categories.		

ID	Name	Priority
FR-19	Edit categories	High
<b>Description:</b> The system shall allow administrators to edit categories.		

ID	Name	Priority
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FR-20	Delete categories	High
<b>Description:</b> The system shall allow administrators to delete categories.		

ID	Name	Priority
FR-21	Register product sale	Medium
<b>Description:</b> The system shall allow administrators to register product sales with an optional discount value.		

ID	Name	Priority
FR-22	Remove product sale	Medium
<b>Description:</b> The system shall allow administrators to remove product sales, which will remove all associated links from products, even if the expiration date has not passed.		

ID	Name	Priority
FR-23	Link product sales	Medium
<b>Description:</b> The system will allow administrators to link product sales to products via registration or edit forms, and to add a custom expiration date for each.		

## Non-Functional Requirements

ID	Name	Category
NFR-01	Response time under load	Performance
<b>Description:</b> The system shall respond to user actions within 2 seconds under normal load.		

ID	Name	Category
NFR-02	Request rate limit	Security
<b>Description:</b> The system shall incorporate a rate limiting mechanism to protect against DoS attacks. This mechanism shall restrict each user to a maximum of 2 requests per second. Exceeding this limit shall result in temporary block.		

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ID	Name	Category
NFR-03	CORS Policy	Security
<b>Description:</b> The system shall enforce a strict CORS policy, permitting access only from a predefined whitelist of domains and only for specified HTTP methods. Any requests originating from domains outside the whitelist or using unauthorized methods will be rejected.		

ID	Name	Category
NFR-04	Data encryption	Security
<b>Description:</b> The system shall encrypt any sensitive data, such as addresses, CPF, cellphone numbers or payment info, to comply with legal requirements.		

ID	Name	Category
NFR-05	Data Sanitization	Security
<b>Description:</b> The system shall validate and sanitize any external data to prevent injection attacks.		

ID	Name	Category
NFR-06	HTTPS endpoints	Security
<b>Description:</b> The system shall secure all endpoints using HTTPS.		

ID	Name	Category
NFR-07	JWT Authentication	Security
<b>Description:</b> The system shall use JWT-based authentication for protected endpoints.		

ID	Name	Category
NFR-08	JWT expiration	Security
<b>Description:</b> The system shall ensure JWT tokens expire properly and cannot be reused after logout.		

ID	Name	Category
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NFR-09	Logging	Maintainability
<b>Description:</b> The system shall log all API requests and errors.		

ID	Name	Category
NFR-10	Notification	Maintainability
<b>Description:</b> The system shall notify administrator of critical failures or abnormal behaviors.		

ID	Name	Category
NFR-11	RESTful design	Maintainability
<b>Description:</b> The system should follow RESTful design principles.		

ID	Name	Category
NFR-12	Documentation	Maintainability
<b>Description:</b> The system should document all endpoints using Swagger.		