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| **BE** **services** | **Requests** | **Responses** |
| Gestão de Autenticação | **GET /users/{user\_id}**  "/users/{user\_id}": {  "get": {  "tags": ["user management"],  "summary": "Retrieve user details",  "parameters": [  {  "name": "user\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  },  "description": "User ID"  }  ],  }  **POST /users/register**  "/users/register": {  "post": {  "tags": ["authentication"],  "summary": "Register a new user",  "requestBody": {  "description": "User object to be added",  "required": true,  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/User"  }  }  }  }  **POST /users/login**  "/users/login": {  "post": {  "tags": ["authentication"],  "summary": "Login a user",  "requestBody": {  "description": "User credentials",  "required": true,  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/UserCredentials"  }  }  }  }  **PUT /users/{user\_id}**  "/users/{user\_id}": {  "put": {  "tags": ["user management"],  "summary": "Update user details",  "parameters": [  {  "name": "user\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ],  "requestBody": {  "description": "User object that needs to be updated",  "required": true,  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/User"  }  }  }  }  }  **DELETE /users/{user\_id}**  "/users/{user\_id}": {  "delete": {  "tags": ["user management"],  "summary": "Delete a user",  "parameters": [  {  "name": "user\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ],  }  } | **GET /users/{user\_id}**  "responses": {  "200": {  "description": "User details retrieved successfully",  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/User"  }  }  }  },  "404": {  "description": "User not found"  }  }  **POST /users/register**  "responses": {  "201": {  "description": "User registered successfully"  },  "400": {  "description": "Bad request, missing fields or validation error"  }  }  **POST /users/login**  "responses": {  "200": {  "description": "User logged in successfully"  },  "401": {  "description": "Unauthorized, credentials incorrect"  }  **PUT /users/{user\_id}**  "responses": {  "200": {  "description": "User updated successfully"  },  "404": {  "description": "User not found"  }  }  }  **DELETE /users/{user\_id}**  "responses": {  "204": {  "description": "User deleted successfully"  },  "404": {  "description": "User not found"  }  } |
| Catálogo de Produtos | **GET /products**  "/products": {  "get": {  "tags": ["product"],  "summary": "Retrieve all products",  "responses": {  "200": {  "description": "List of products",  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/ProductList"  }  }  }  }  }  }  }  **GET /products/{product\_id}**  "/products/{product\_id}": {  "get": {  "tags": ["product"],  "summary": "Retrieve a specific product by ID",  "parameters": [  {  "name": "id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  },  "description": "Product ID"  }  ],  }  }  **POST/products**  "/products": {  "post": {  "tags": ["product management"],  "summary": "Add a new product",  "requestBody": {  "description": "Product to be added",  "required": true,  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/Product"  }  }  }  },  }  }  **PUT /products/{product\_id}**  "/products/{product\_id}": {  "put": {  "tags": ["product management"],  "summary": "Update an existing product",  "parameters": [  {  "name": "product\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ],  "requestBody": {  "description": "Product data that needs to be updated",  "required": true,  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/Product"  }  }  }  },  }  **DELETE /products/{product\_id}**  "/products/{product\_id}": {  "delete": {  "tags": ["product management"],  "summary": "Delete a product",  "parameters": [  {  "name": "product\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ]  }  } | **GET /products**  **GET /products/{product\_id}**  "responses": {  "200": {  "description": "Detailed product info",  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/Product"  }  }  }  },  "404": {  "description": "Product not found"  }  }  **POST/products**  "responses": {  "201": {  "description": "Product added successfully"  }  }  **PUT /products/{product\_id}**  "responses": {  "200": {  "description": "Product updated successfully"  },  "404": {  "description": "Product not found"  }  }  **DELETE /products/{product\_id}**  "responses": {  "204": {  "description": "Product deleted successfully"  },  "404": {  "description": "Product not found"  }  } |
| Gestão de Favoritos | **GET /users/{user\_id}/favorites**  "/users/{user\_id}/favorites": {  "get": {  "tags": ["favorites management"],  "summary": "List all favorite products for a user",  "parameters": [  {  "name": "user\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ],  }  }  **POST /users/{user\_id}/favorites**  "/users/{user\_id}/favorites": {  "post": {  "tags": ["favorites management"],  "summary": "Add a product to user favorites",  "parameters": [  {  "name": "user\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ],  "requestBody": {  "description": "Product ID to add to favorites",  "required": true,  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/Product"  }  }  }  }  }  **DELETE /users/{user\_id}/favorites/{product\_id}**  "/users/{user\_id}/favorites/{product\_id}": {  "delete": {  "tags": ["favorites management"],  "summary": "Remove a product from user favorites",  "parameters": [  {  "name": "user\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  },  {  "name": "product\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ],  }  } | **GET /users/{user\_id}/favorites**  "responses": {  "200": {  "description": "List of favorite products",  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/FavoritesList"  }  }  }  }  }  **POST /users/{user\_id}/favorites**  "responses": {  "201": {  "description": "Product added to favorites"  }  }  **DELETE**  **/users/{user\_id}/favorites/{product\_id}**  "responses": {  "204": {  "description": "Product removed from favorites"  }  } |
| Feedback | **GET /feedback/{feedback\_id}**  "/feedback/{feedback\_id}": {  "get": {  "tags": ["feedback management"],  "summary": "Retrieve all feedback",  "parameters": [  {  "name": "feedback\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ],  }  }  **POST /feedback/{feedback\_id}**  /feedback/{feedback\_id}": {  "post": {  "tags": ["feedback management"],  "summary": "Submit new feedback",  "parameters": [  {  "name": " feedback \_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ],  "requestBody": {  "description": "Feedback ID to add to feedback",  "required": true,  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/Product"  }  }  }  }  }  **DELETE /feedback /{feedback \_id}**  "/feedback/{feedback\_id}": {  "delete": {  "tags": ["feedback management"],  "summary": "Delete feedback",  "parameters": [  {  "name": "feedback\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ]  }  } | **GET /feedback/{feedback\_id}**  "responses": {  "200": {  "description": "List of all feedback entries",  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/FeedbackList"  }  }  }  }  }  **POST /feedback/{feedback\_id}**  "responses": {  "201": {  "description": "Feedback submitted successfully"  }  }  **DELETE / feedback /{feedback \_id}**  "responses": {  "204": {  "description": "Feedback deleted successfully"  }  } |
| Notícias e Atualizações | **GET /news**  "/news": {  "get": {  "tags": ["news management"],  "summary": "Retrieve all news"  }  }  **POST /news**  "/news": {  "post": {  "tags": ["news management"],  "summary": "Submit a new news article",  "requestBody": {  "description": "News data to be added",  "required": true,  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/News"  }  }  }  }  }  **DELETE /news /{news \_id}**  "/news/{news\_id}": {  "delete": {  "tags": ["news management"],  "summary": "Delete a news article",  "parameters": [  {  "name": "news\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ]  }  } | **GET /news**  "responses": {  "200": {  "description": "List of all news articles",  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/NewsList"  }  }  }  }  }  **POST /news**  "responses": {  "201": {  "description": "News article submitted successfully"  }  }  **DELETE /news /{ news \_id}**  "responses": {  "204": {  "description": "News article deleted successfully"  }  } |
| Análise de Estatísticas | **GET /statistics**  "/statistics": {  "get": {  "tags": ["statistics management"],  "summary": "Retrieve all statistics",  }  }  **POST /statistics**  "/statistics": {  "post": {  "tags": ["statistics management"],  "summary": "Submit new statistics data",  "requestBody": {  "description": "Statistics data to be added",  "required": true,  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/Statistics"  }  }  }  }} | **GET /statistics**  "responses": {  "200": {  "description": "List of all statistics data",  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/Statistics"  }  }  }  }  }  **POST /statistics**  "responses": {  "201": {  "description": "Statistics data submitted successfully"  }  } |
| Destaques de Produtos | **GET /highlights**  "/highlights": {  "get": {  "tags": ["highlights management"],  "summary": "Retrieve all highlighted products"  }  }  **POST /highlights**  "/highlights": {  "post": {  "tags": ["highlights management"],  "summary": "Add a product to highlights",  "requestBody": {  "description": "Product data to be highlighted",  "required": true,  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/Product"  }  }  }  **DELETE /highlights/{product\_id}**  "/highlights/{product\_id}": {  "delete": {  "tags": ["highlights management"],  "summary": "Remove a product from highlights",  "parameters": [  {  "name": "product\_id",  "in": "path",  "required": true,  "schema": {  "type": "integer"  }  }  ]  } | **GET /highlights**  "responses": {  "200": {  "description": "List of all highlighted products",  "content": {  "application/json": {  "schema": {  "$ref": "#/components/schemas/HighlightsList"  }  }  }  }  }  **POST /highlights**  "responses": {  "201": {  "description": "Product added to highlights successfully"  }  }  **DELETE /highlights/{product\_id}**  "responses": {  "204": {  "description": "Product removed from highlights successfully"  }  } |
| Auth | **GET /authentication/{auth\_key}**  "/authentication/{auth\_key}": {  "get": {  "tags": ["Authentication"],  "summary": "Validate auth token",  "parameters": [  {  "name": "auth\_key",  "in": "path",  "required": true,  "schema": {  "type": "string"  }  }  ]  }  }  **POST /authentication**  "/authentication": {  "post": {  "tags": ["Authentication"],  "summary": "User login",  "requestBody": {  "description": "User login credentials",  "required": true,  "content": {  "application/json": {  "schema": {  "type": "object",  "properties": {  "username": {  "type": "string"  },  "password": {  "type": "string"  }  }  }  }  }  }  **PUT /authentication/{auth\_key}**  "/authentication/{auth\_key}": {  "put": {  "tags": ["Authentication"],  "summary": "Update password",  "parameters": [  {  "name": "auth\_key",  "in": "path",  "required": true,  "schema": {  "type": "string"  }  }  ],  "requestBody": {  "description": "New password",  "required": true,  "content": {  "application/json": {  "schema": {  "type": "object",  "properties": {  "password": {  "type": "string"  }  }  }  }  }  }  **DELETE /authentication/{auth\_key}**  "/authentication/{auth\_key}": {  "delete": {  "tags": ["Authentication"],  "summary": "Delete authentication",  "parameters": [  {  "name": "auth\_key",  "in": "path",  "required": true,  "schema": {  "type": "string"  }  }  ],  }  } | **GET /authentication/{auth\_key}**  "responses": {  "200": {  "description": "Token is valid",  "content": {  "application/json": {  "schema": {  "type": "object",  "properties": {  "auth\_valid": {  "type": "boolean"  }  }  }  }  }  }  **POST /authentication**  "responses": {  "200": {  "description": "Authentication successful",  "content": {  "application/json": {  "schema": {  "type": "object",  "properties": {  "auth\_key": {  "type": "string"  }  }  }  }  }  }  }  **PUT /authentication/{auth\_key}**  responses:  '200':  description: Password updated successfully  content:  application/json:  schema:  type: object  properties:  auth\_token:  type: string  **DELETE /authentication/{auth\_key}**  "responses": {  "204": {  "description": "Authentication deleted successfully"  }  } |