

# Guided Rose Boutique Project

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# Project Assessment

## THE GILDED ROSE ONLINE STORE

The Gilded Rose is small boutique inn on the outskirts of a prominent city that buys and sells items of the finest quality. The manager of the gift shop, Allison, is looking to create an online store that allows people from afar to purchase her wares.

### Create a simple proof-of-concept e-commerce site

- Lists the items for sale
- Allows an authenticated user to purchase them.
  - Purchase only 1 item at a time by clicking a “Purchase” button.
  - Depletes the stock of that item by 1.
  - Not need to implement a shopping cart or use any payment providers.

### Deliverable

- A system that displays a listing of items and allows authenticated users to purchase them one at a time.

### Technical Requirements

- Use either ASP.NET Core Razor Pages / MVC or ASP.NET MVC 5
- Web app that can run/tested locally on Windows, Mac, or Linux
- Use of a database is optional

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# Application architecture decisions

## 1. Project implemented using ASP.NET Core 3.1 Web Application with Razor Pages

- Clean architecture
- Open-source with a big community contributing and Flexible deployment
- Multiplatform: runs on macOS, Linux, Windows, and Docker
- Performance: It's faster than other popular web frameworks
- Modern & innovative: allow runtime components, APIs, compilers and languages evolve quickly, provide a stable and supported platform to keep apps running.

## 2. MVC:

- Application logic is divided into three components on the basis of functionality: Models, Views and Controllers.
- CRUD-based Regular Application

## 3. Monolithic applications

- Initially the requirements are simple and the application expect to handle a limited amount of traffic
- The idea is starting with a monolithic architecture and then later scale out into a microservice architecture if it is necessary.

## 4. SQL database:

- Need to store a lot of relationships
- Transactions & Data Consistency

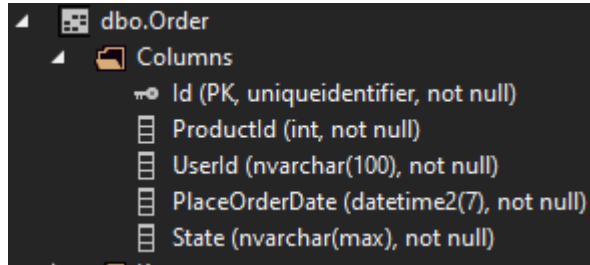
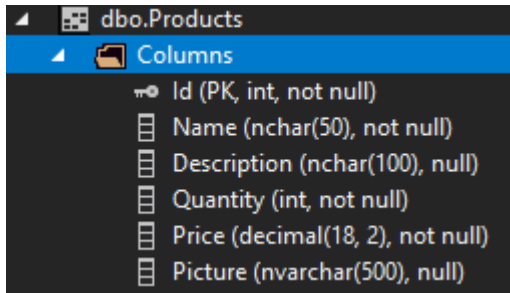
## 5. Libraries:

- Bootstrap (responsiveness and aesthetics or user interface “look and feel”)
- Entity Framework (object-database mapper that supports LINQ queries, change tracking, updates, and schema migrations)
- SendGrid (world's largest cloud-based email delivery platform)

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# Requirements and Decisions

Created a Table to manage the products of the store with the following fields:



## Considerations:

- Is not possible to buy a product if it is out of stock (the quantity is equal 0)
- The user has to be authenticated to purchase an item.
- If a user is navigating the site anonymously and click the button of purchase, will we automatically redirected to the login page, after login the purchase will be effective.
- If the product is out of stock, there will be a sign with that message and no button for purchase
- When an authenticated user clicks the purchase link or put the URL for purchase on the browser, the system will first check if there is availability of the product requested, if there is no items, the system will alert that. If the product is available the system will place the order, notify the user by email about the purchase and deplete the amount of product in the Quantity field of the Product table.

With the use of the following keywords we will guarantee that the controller and the actions are accessed by the correct user:

- [Authorize] – The user has to be authenticated to access this resource. **Purchase**
- [Authorize (Roles = "Administrator")] – The user has to belong to the Administrator group to access the **Update, Create or Delete** actions
- [AllowAnonymous] – Anyone could see this options, Index, Details, Blog, About

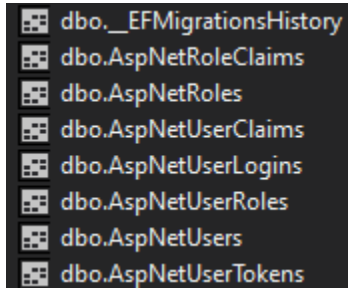
Publish the web app as Portable Runtime-dependent applications for cross-platform.

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# Shortcuts

## ASP.NET Core Identity:

- Facilitates the user management, authentication and authorization.

A screenshot of a database table list, likely from SQL Server Enterprise Manager. It shows a list of tables in the 'dbo' schema. The tables are: \_\_EFMigrationsHistory,AspNetRoleClaims,AspNetRoles,AspNetUserClaims,AspNetUserLogins,AspNetUserRoles,AspNetUsers, and AspNetUserTokens. Each table name is preceded by a small icon representing a table.

dbo.__EFMigrationsHistory
dbo.AspNetRoleClaims
dbo.AspNetRoles
dbo.AspNetUserClaims
dbo.AspNetUserLogins
dbo.AspNetUserRoles
dbo.AspNetUsers
dbo.AspNetUserTokens

## SendGrid:

- Facilitates the process of sending emails.

## Entity Framework Core Scaffold-DbContext:

- Helps to create models, controllers and views for CRUD using an existing Database structure

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# Authentication mechanism

## ASP.NET Core Identity:

- Is an API that supports user interface (UI) login functionality.
- Manages users, passwords, profile data, roles, claims, tokens, email confirmation, and more.
- Users can create an account with the login information stored in Identity
- They can use an external login provider: Facebook and Google.

**Using OAuth and token-based security can help build a better permission checking across the user base.**

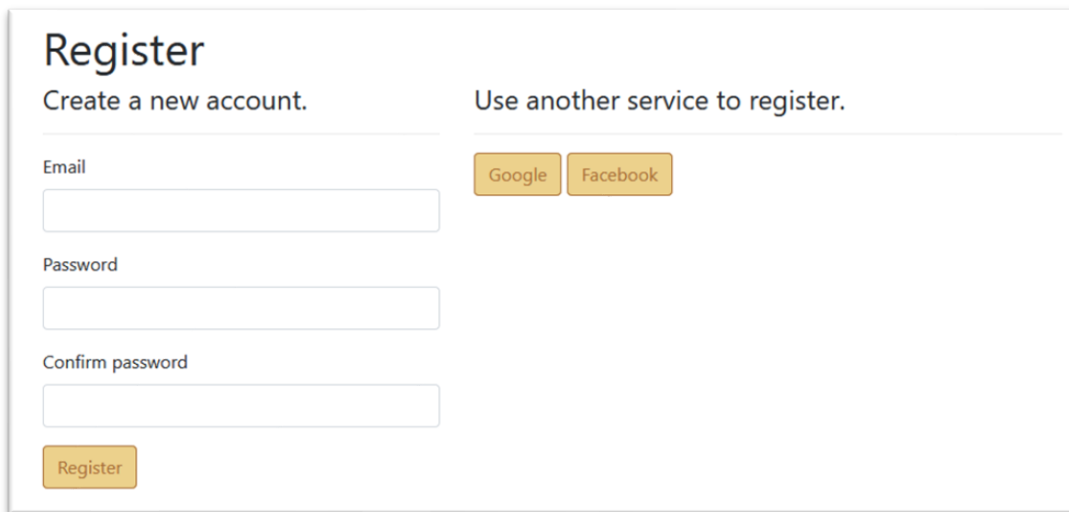
**It facilitates the registration process for the users, helping to maximize the user acquisition.**

# Test Performed

## Authentication:

The user have the following options for create an account in the website:

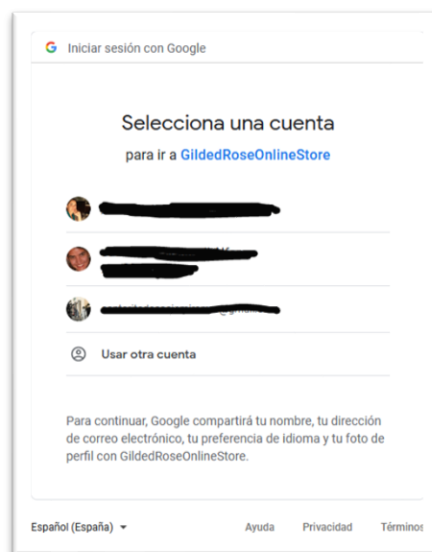
1. Register creating a new account, providing an email and password
2. Using OAuth authentication through Facebook or Google



The screenshot shows a 'Register' form with two main sections. The left section, titled 'Create a new account.', contains three input fields: 'Email', 'Password', and 'Confirm password', followed by a 'Register' button. The right section, titled 'Use another service to register.', contains two buttons: 'Google' and 'Facebook'.

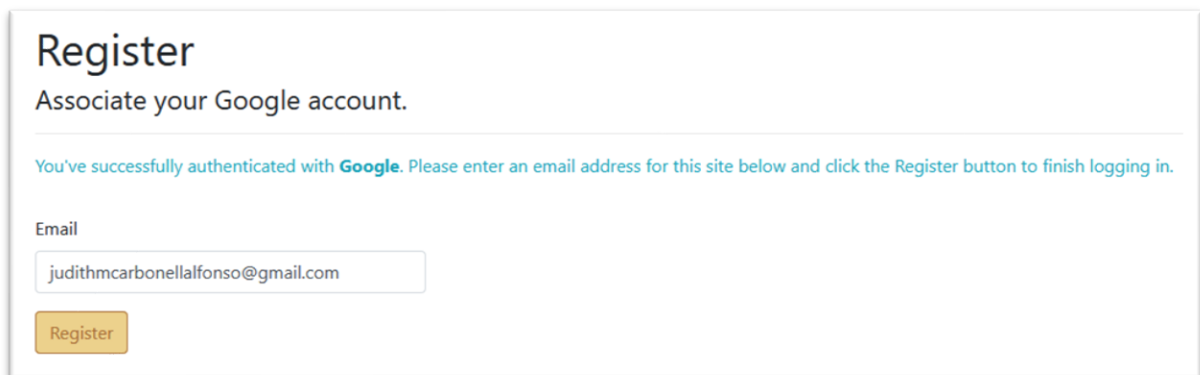
### Google registration:

- Click on Google Button and shows next screen to choose which Google account the user wants to link to Guilded Rose Boutique



The screenshot shows a Google account selection screen. At the top, it says 'Iniciar sesión con Google'. Below that, it says 'Selecciona una cuenta para ir a [GuildedRoseOnlineStore](#)'. There are three account options, each with a profile picture and a name. Below these options is a link that says 'Usar otra cuenta'. At the bottom, there is a disclaimer: 'Para continuar, Google compartirá tu nombre, tu dirección de correo electrónico, tu preferencia de idioma y tu foto de perfil con GuildedRoseOnlineStore.' At the very bottom, there are links for 'Español (España)', 'Ayuda', 'Privacidad', and 'Términos'.

- After choosing the account, the user has to click on Register to confirm that wants to link his account to the website.

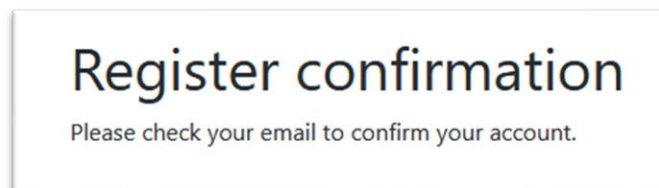


**Register**  
Associate your Google account.

You've successfully authenticated with **Google**. Please enter an email address for this site below and click the Register button to finish logging in.

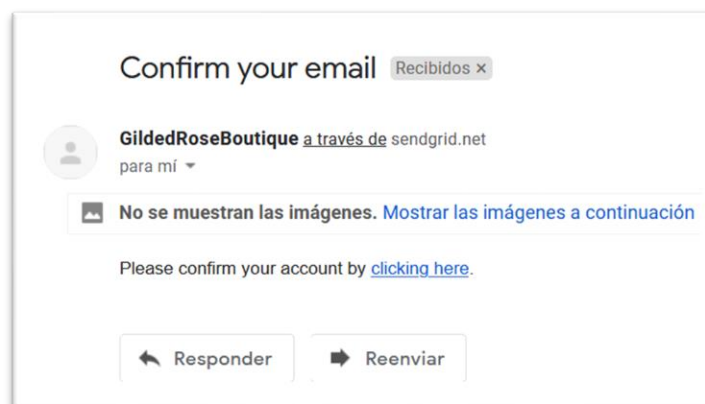
Email

- After clicking on the Register button, the next screen ask to check email an confirm registration:





**Register confirmation**  
Please check your email to confirm your account.

- The email has a very basic structure, and could be improve in the future to better fits to the corporative identity of the client.



**Confirm your email** Recibidos x

 **GildedRoseBoutique** a través de sendgrid.net  
para mí ▼

 No se muestran las imágenes. [Mostrar las imágenes a continuación](#)

Please confirm your account by [clicking here](#).

- Token based link has an structure similar than the following:

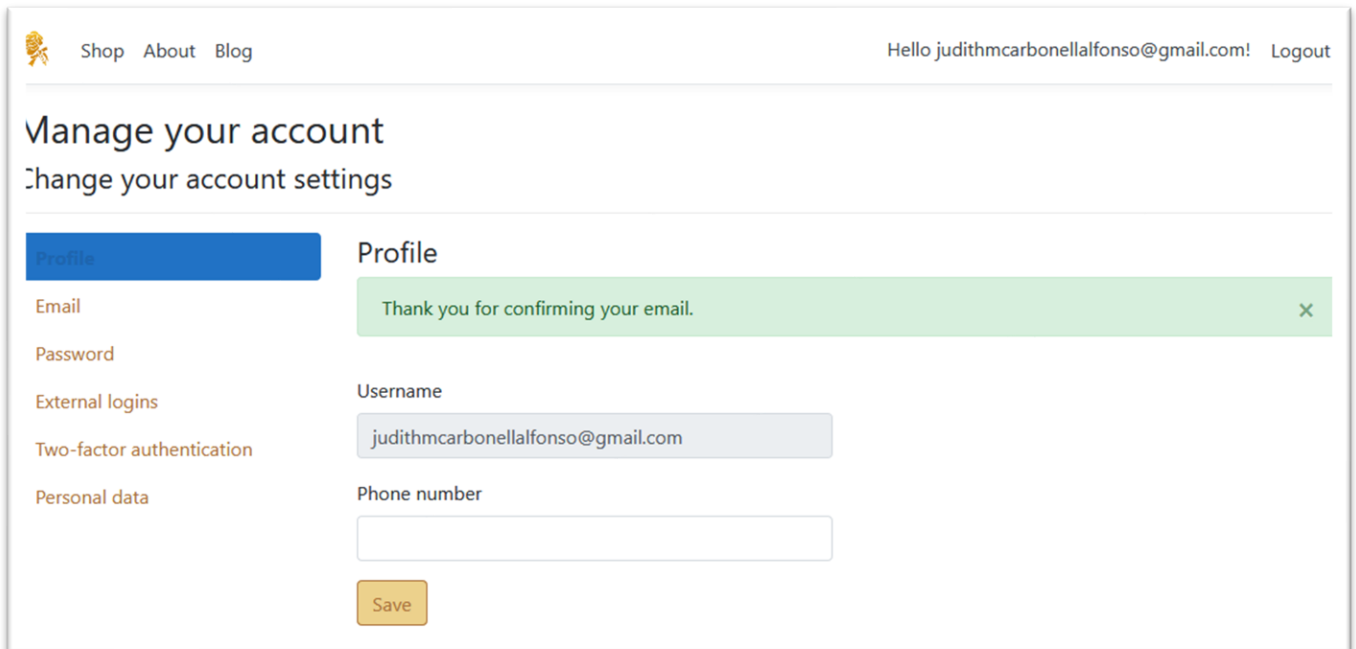
<https://localhost:44370/Identity/Account/ConfirmEmail?userId=5cd6a963-9100-47f4-b286-341a1881d6c3&code=Q2ZESjhHRHBCWEFiK3JwUGtUSldnRjgrT05WZEFTbUZTbk42L3pxSks4b09kSGIU NzBJR1UrMkl6NDZESTJicUZ2Z1RXeGZET2ROQkZHVhYjY2pyNmFwSVUwRkdQSDdEQW03SThNTXNCa2p4TIBIV1ZoQkU3aG5tQ25nNFp3VIVNc09PL1FnK0RuLzY4MVhsWkNqc3c4WTYzSzF6aUd6VxqaWpHU Fc1bUYyek9CUmM1TmZpVGdsQWVHV1pqcWcwNmwxS2NITVN4K3cxYkZGtXQ1ZJcUpiNHMyRTZHR1dyZXROZXlIZkVQk5hNnVGc2huYkpsZHY0TUxpNE9OeVRWVFZ2UT09>



- After confirming the link, is possible to Login to the website using the same method of registration:



- Is possible to Manage your using account if you click on the username besides the Hello and Logout links



Is this view, it is possible to set or change password, configure other elements of the account or even delete it.

# Display a listing of Products






Created 5 products to populate the list and see the system in action:



[Shop](#) [About](#) [Blog](#)

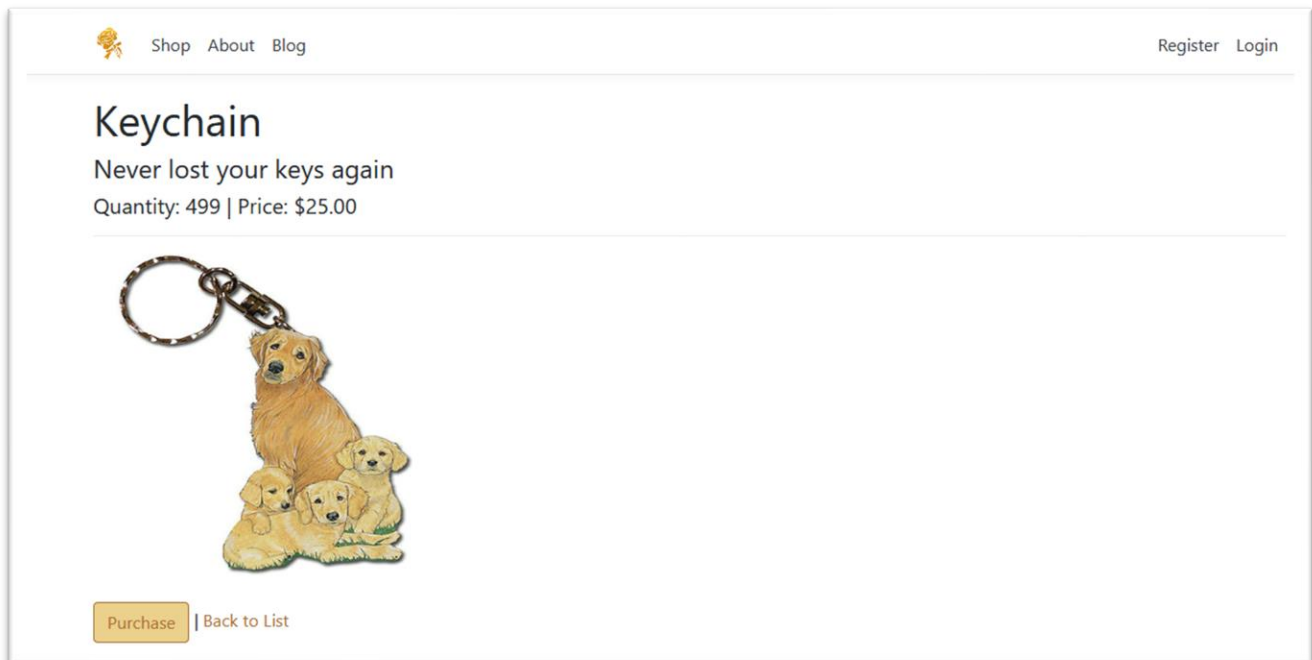
[Register](#) [Login](#)



<b>Chandelier</b> \$ 500.00  <a href="#">Purchase</a>	<b>Bracelet</b> \$ 59.50  <a href="#">Purchase</a>	<b>Keychain</b> \$ 25.00  <a href="#">Purchase</a>	<b>Flowers</b> \$ 34.60  <a href="#">Purchase</a>	<b>Necklace</b> \$ 500.00  <a href="#">Purchase</a>
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## Detail of Product:

It is possible to click on every box to see details of the product. In this space in the future and if the requirements ask it, you can see different variants of the product and all its properties.



# Purchase:

It is possible to click the purchase button from the Details window or from the Home page. If the user is not authenticated it will redirect to the next window:

 [Shop](#) [About](#) [Blog](#) [Register](#) [Login](#)

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## Log in

Use a local account to log in.

Email

Password

☐ Remember me?

Log in

[Forgot your password?](#)


[Register as a new user](#)

Use another service to log in.

Google

Facebook

After login, it is possible to Purchase the button:

 [Shop](#) [About](#) [Blog](#) Hello judithmcarbonellalfonso@gmail.com!


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## Purchase

You purchased this product

Product

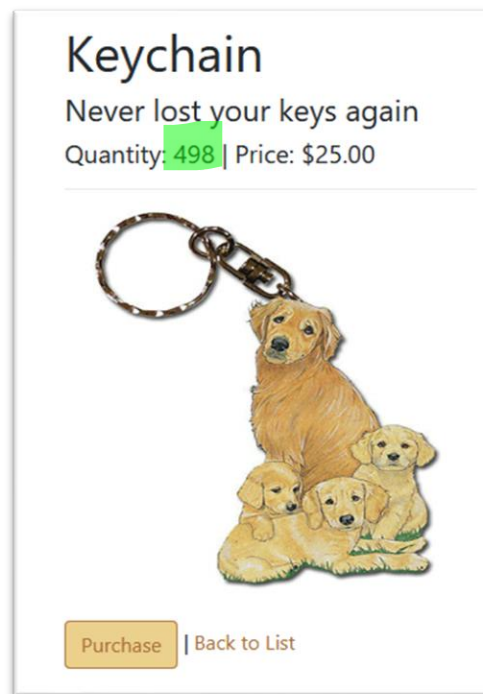
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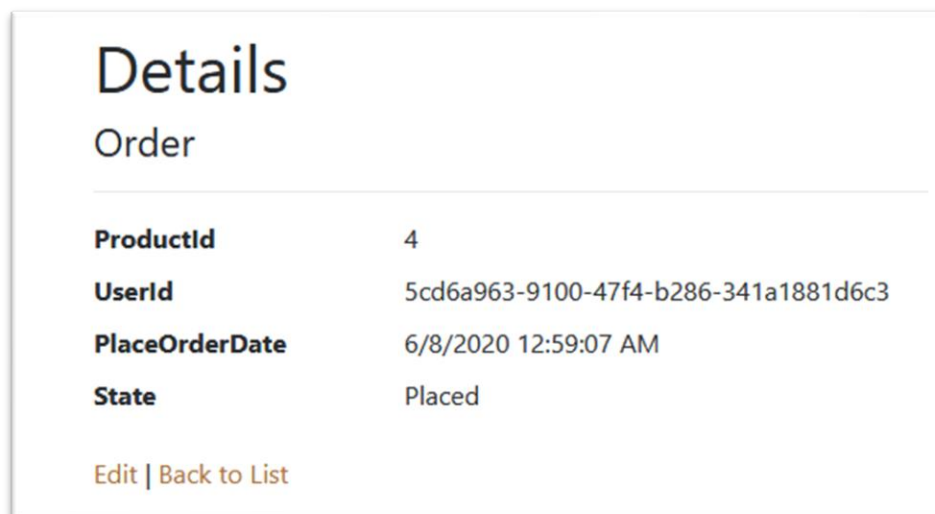
<b>Name</b>	Keychain
<b>Description</b>	Never lost your keys again
<b>Price</b>	\$25.00

[Back to List](#)

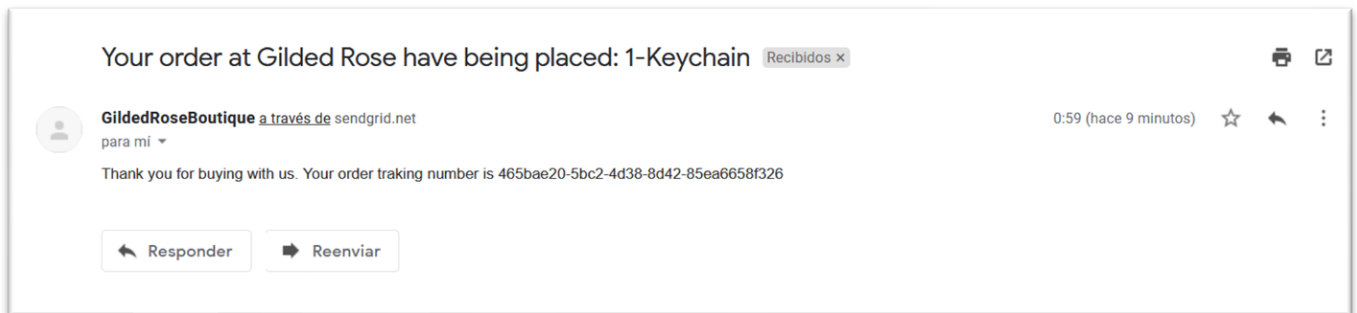
If you enter the detail of the product will see that the quantity depleted by one, There are 498 Keychains now:



It is possible to check the Order state. In future implementations it is necessary to link this view with more meaningful information related to the order, the user and the product:



The user receives an email with details regarding the order and its different states. In the future this email must use a pretty template with all the required information:



## Purchasing the last item of a product

In the next picture we can see that the Quantity of the bracelet is 1. This means that after purchasing this item, the quantity will be 0 and will be not possible to buy it any more until it is restocked:




The purchase was effective, the item was depleted and as we can see in the right picture, the quantity is 0 now and is not possible to buy the item, because it does not have a button for triggering that action:

### Purchase

You purchased this product

Product




Name	Bracelet
Description	Sunshine Bracelet, White, Rose-gold tone plated
Price	\$59.50

[Back to List](#)

### Bracelet

Sunshine Bracelet, White, Rose-gold tone plated

Quantity: 0 | Price: \$59.50




Item out of stock.

[Back to List](#)

In the home page we can also notice that the Item out of stock sign is on the bracelet and there is no button for purchasing:

#### Chandelier


\$ 500.00



Purchase

#### Bracelet

\$ 59.50




Sunshine Bracelet, White, Rose-gold tone plated

Item out of stock.

#### Keychain


\$ 25.00



Purchase

#### Flowers


\$ 34.60



Purchase

#### Necklace

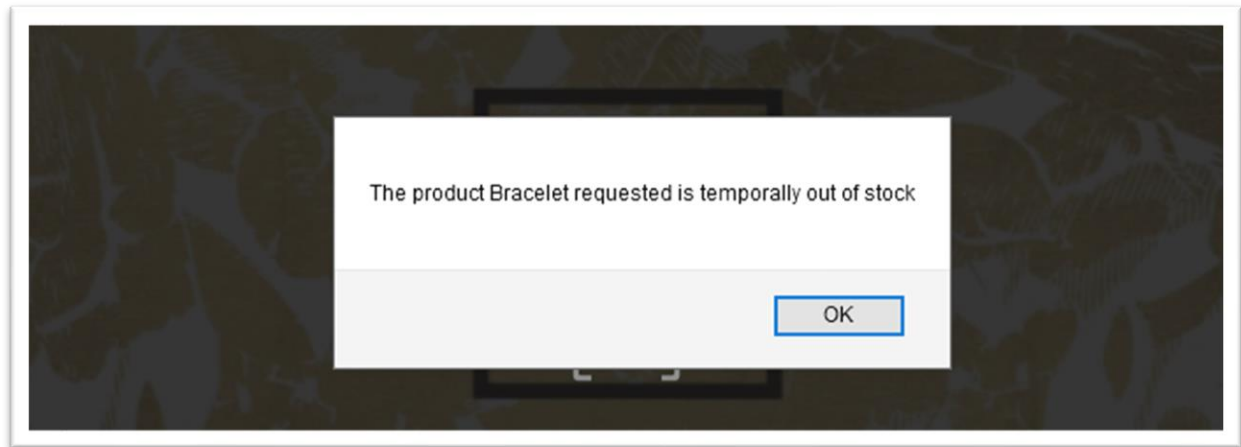
\$ 500.00



Purchase



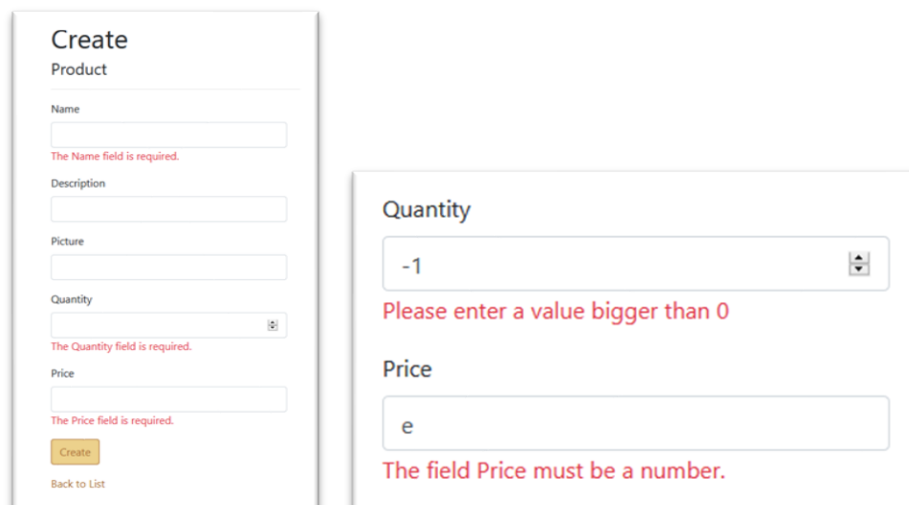
Just in case some user hard code the URL for purchasing the item with no need of clicking on a button, there is the next validation, with the corresponding alert:



In the future this alert will be using Bootstrap style or something else to make it looks more appealing to the user.

## Create product

The Create Product form has different validations implemented for the Required fields, for the numeric fields type and range, as it shows in the next pictures:

Two screenshots of a web form titled "Create Product". The left screenshot shows the full form with several fields: "Name", "Description", "Picture", "Quantity", and "Price". Each of these fields has a red error message below it: "The Name field is required.", "The Quantity field is required.", and "The Price field is required.". At the bottom are "Create" and "Back to List" buttons. The right screenshot is a close-up of the "Quantity" and "Price" fields. The "Quantity" field contains the value "-1" and has a red error message "Please enter a value bigger than 0". The "Price" field contains the value "e" and has a red error message "The field Price must be a number.".

In the future it is necessary to modify the Picture field to an upload file input to be able to upload the pictures and linked it to the model.