

HEARTLEAF BOUTIQUE

MARCH 10TH, 2022

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HIGH LEVEL VIEW: E-COMMERCE APPLICATION



SECURITY



CART



ORDER
HISTORY/DETAILS



PAYMENT



PRODUCT
INVENTORY

SOLUTION OVERVIEW – PRODUCTS

HeartLeaf

HomeProductsOrdersMy Cart

Hello kim@kikim.com!Logout

HeartLeaf Boutique

Search plants here...


Search Category

Price From

Price To

Search

Reset



Peace Lily
white flowering plan ...


Category: Tropical

Price: \$30.00

Quantity: 17

★★★★☆ (16)

Details



Calathea Vittata
jungle plant, water ...


Category: Succulent

Price: \$50.00

Quantity: 24

★★★★☆ (7)

Details



Aloe Vera
From Mexico


Category: Succulent

Price: \$30.00

Sold Out

★★★★☆ (0)

Details



Begonia Maculata
need wamrth, strong ...

Category: Tropical

Price: \$25.00

Quantity: 38

★★★★☆ (0)

Details

Previous

1

2

Next

© 2022 - HeartLeaf - Privacy

HeartLeaf

HomeProductsUsersOrders

Add a new product

Name

Monstera

Description

A genus of 45 species of flowering plants in the arum family, native to tropical regions of the Americas.

Quantity

10

Price

100

Category

Tropical

Upload

Browse...

monstera.jpg


Add Product

Back to List

HeartLeaf

HomeProductsUsersOrders

Edit Product



Name

Calathea Vittata

Description

jungle plant, water 3 times/week.

Quantity

24

Price

50.00

Category

Succulent

Upload


Browse...

No file selected.

Save

Back to List

Are you sure you want to delete this?



Name

Begonia Maculata

Description

need wamrth, strong light

Quantity

38

Price


25.00

Category

Tropical

Delete

Back to List



Name

Calathea Vittata

Description

jungle plant, water 3 times/week.

Quantity

24

Unit Price (\$CAD)

50.00

Category

Succulent

Subtotal (\$CAD)

100.00

★★★★☆ (7)

Quantity

2

Add To Cart

HeartLeaf Boutique

Search plants here...


Tropical

Price From

Price To

Search

Reset



Peace Lily
white flowering plan ...


Category: Tropical

Price: \$30.00

Quantity: 17

★★★★☆ (16)

Details



Begonia Maculata
need wamrth, strong ...

Category: Tropical

Price: \$25.00

Quantity: 38

★★★★☆ (0)

Details

SOLUTION OVERVIEW – REVIEWS & COMMENT

HeartLeaf

Products

My Cart

Hello bahar@bahar.com!Logout


HeartLeaf

Products

Register

Login

Calathea Vittata Details



★★★★☆ (7)

Name

Description

Quantity

Unit Price (\$CAD)

Category

Subtotal (\$CAD)

Calathea Vittata

jungle plant. water 3 times/week.

22

50.00

Succulent

50.00

Quantity

1

Add To Cart

Back to List

Comments & Reviews

★★★★☆

Great plant

By: bahar@bahar.com

★★★★☆

Not bad

By: bahar@bahar.com

★★★★☆

not good

By: bahar@bahar.com

Previous

1

2


3

Next

Add Comment

Welcome to

HeartLeaf Boutique



Snake Plant

Dracaena trifasciata...


Category: Succulent

Price: \$80.00

Quantity: 60

★★★★☆ (0)

Details



Scindapsus

Scindapsus is a genu...


Category: Succulent

Price: \$4.49

Quantity: 23

★★★★☆ (1)

Details



Serene Spaces

REAL LOOKING PLANT: ...


Category: Other

Price: \$71.00

Quantity: 40

★★★★☆ (5)

Details



Test2

hjkhlh

Category: Succulent

Price: \$30.00

Quantity: 4

★★★★☆ (1)

Details

★★★★☆

Nice Plant!


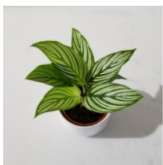
Add Comment

SOLUTION OVERVIEW – CART/CHECKOUT/ORDERS

Cart Details

Total (\$CAD): 130.00

Checkout

Image	Name	Category	Quantity	Unit Price (\$CAD)	Subtotal (\$CAD)	Amount in Stock	
	Peace Lily	Tropical	1	30.00	30.00	17	Edit Delete
	Calathea Vittata	Succulent	2	50.00	100.00	24	Edit Delete


Checkout Details

UserName kim@kim.com
Shipping Address 3840 SAINT-KEVIN AVE, MONTREAL QC, H3T 1H7
Total (\$CAD) 130.00

Pay with Card

Image	Name	Category	Quantity	Unit Price (\$CAD)	Subtotal (\$CAD)
	Peace Lily	Tropical	1	30.00	30.00
	Calathea Vittata	Succulent	2	50.00	100.00

Sample Charge



Pay

HB

HeartLeaf Boutique

Order Confirmation

To: Aly Westwood

Inbox

Gmail

10:43 AM


Thank you for your order

These are the details of your order

Order Date
3/9/2022 3:43:00 PM

Status
Pending

Grand Total
50.00

Image	Product Name	Quantity	Unit Price	Subtotal (\$CAD)
	Calathea Vittata	1	50.00	50.00



Orders

Your order has been completed!

DateTime	Delivery Status	Shipping address	Total (\$CAD)	
2022-03-06 11:16:23 AM	Shipped	3840 SAINT-KEVIN AVE, MONTREAL QC, H3T 1H7	30.00	Order Details
2022-03-07 9:22:54 AM	Pending	3840 SAINT-KEVIN AVE, MONTREAL QC, H3T 1H7	60.00	Cancel Order Details
2022-03-08 9:19:19 PM	Pending	3840 SAINT-KEVIN AVE, MONTREAL QC, H3T 1H7	100.00	Cancel Order Details
2022-03-09 7:06:51 PM	Pending	3840 SAINT-KEVIN AVE, MONTREAL QC, H3T 1H7	130.00	Cancel Order Details

Order Details

Total (\$CAD): 130.00

Image	Product Name	Quantity	Unit Price	Subtotal (\$CAD)	
	Peace Lily	1	30.00	30.00	Product Details
	Calathea Vittata	2	50.00	100.00	Product Details

SOLUTION OVERVIEW

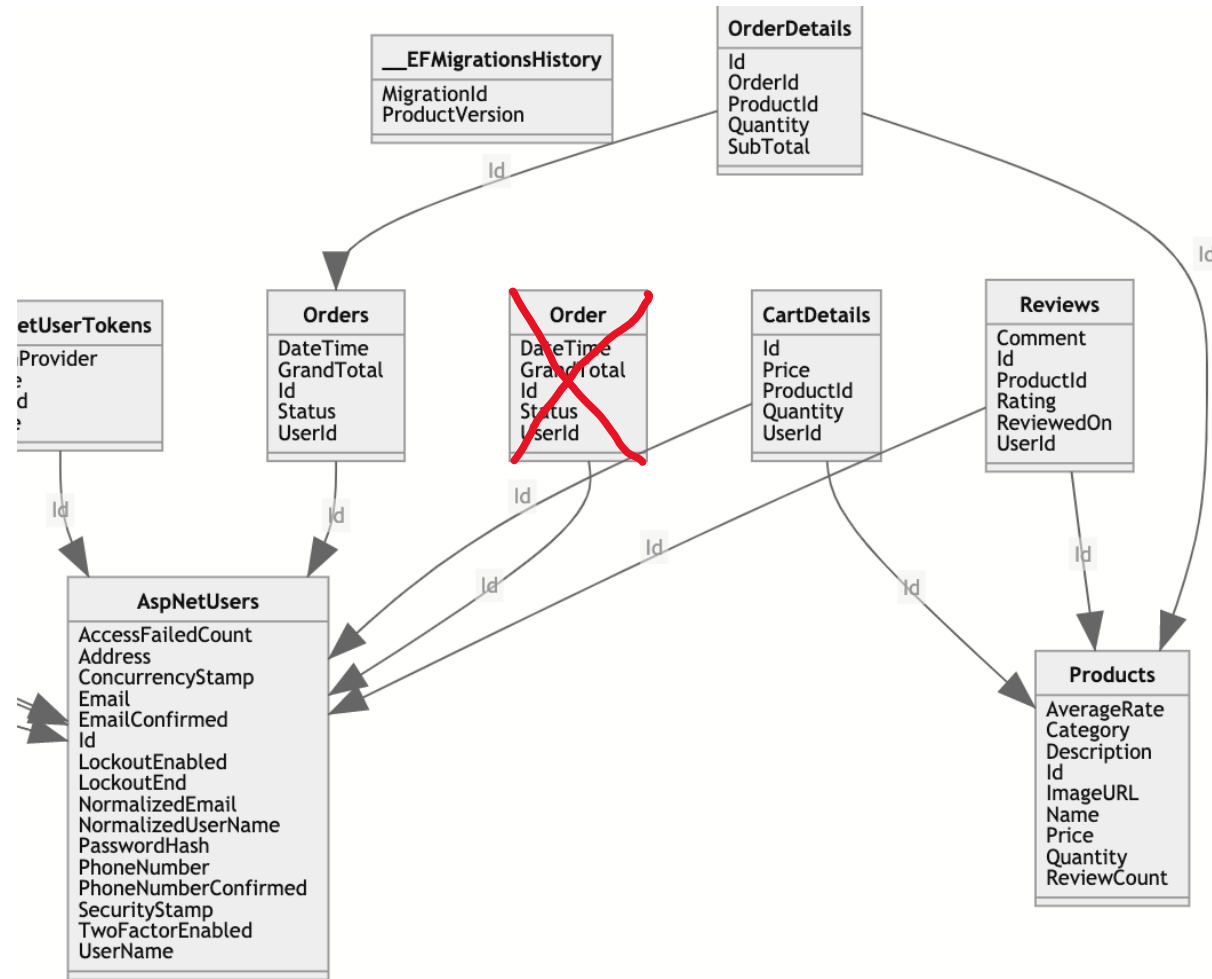
Manage Users

[Create New](#)

User Information		Security		Location		Status		Access	
UserName	Email (confirmed)	Phone (confirmed)	2FA	Address	2FA	Lockout (ends)	Access Failed Count		
ADMIN@ADMIN.COM	ADMIN@ADMIN.COM	<input checked="" type="checkbox"/>	<input type="checkbox"/>	22-20 BAY ST FLOOR	<input type="checkbox"/>	<input checked="" type="checkbox"/>	0	Edit	Delete

- Most relevant pages linked in nav bar.

DATABASE



CHALLENGES & SOLUTIONS

- Database/Migrations: deleting tables / columns directly from the database messed up our migrations
- Solution: Delete the entire migrations folder and all database tables 😊
- Future solution: remove migrations one by one using command `dotnet ef migrations remove` until the point where the problem table was created.
 - Do not delete migrations files, do not alter the database directly

CHALLENGES & SOLUTIONS- SECURE PASSWORD STORAGE

Challenge: Setting Admin Password in a Secure way?

Solution:

Safe storage of app secrets in development

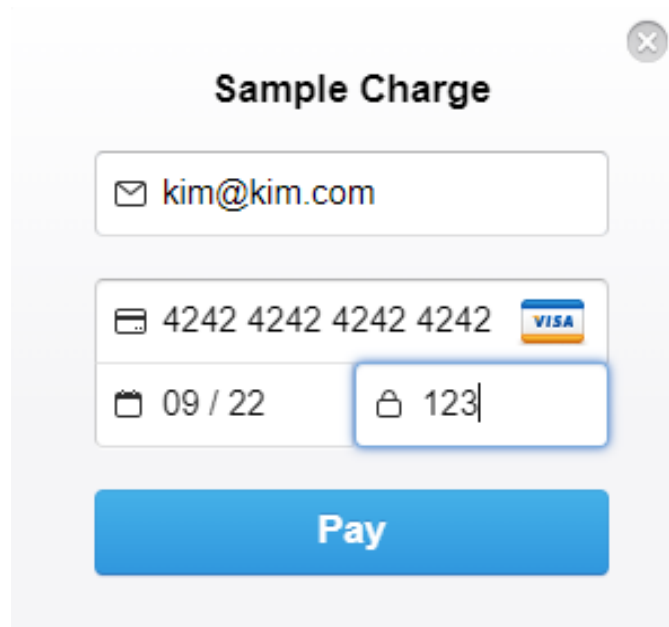
in ASP.NET Core through Command line

```
dotnet user-secrets set "AdminPassword" "SecurePass123456"
```

```
string adminPass = builder.Configuration["AdminPassword"];
```

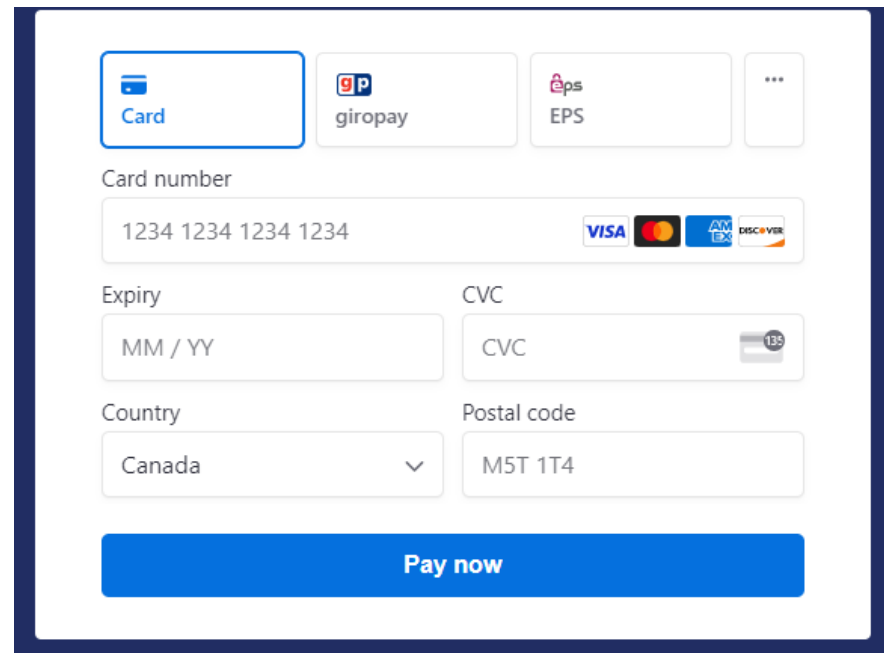
CHALLENGES & SOLUTIONS – STRIPE API

Legacy version of Stripe



A screenshot of a legacy Stripe payment form titled "Sample Charge". It features a close button (X) in the top right corner. The form includes a text input for an email address (kim@kim.com), a card number input (4242 4242 4242 4242) with a Visa logo, an expiry date input (09 / 22), and a CVC input (123). A blue "Pay" button is at the bottom.

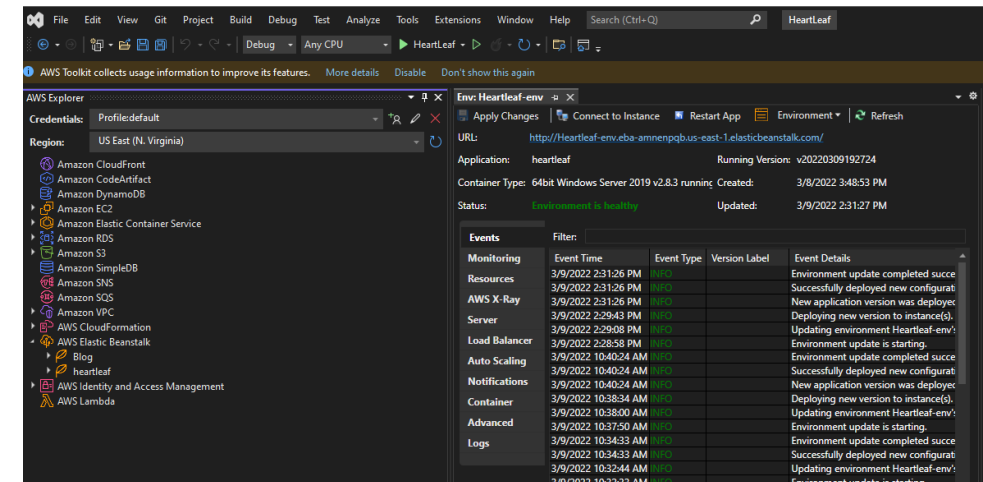
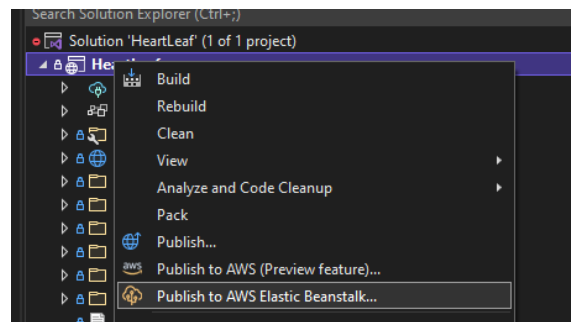
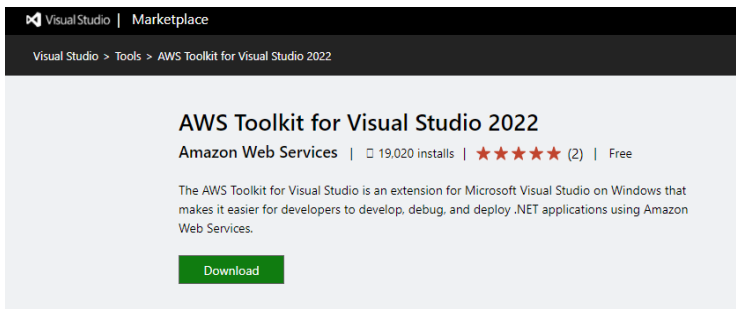
Current version of Stripe



A screenshot of the current Stripe payment form. It features a dark blue border and a "Pay now" button at the bottom. The form includes a payment method selector with options: Card, giropay, EPS, and a more options menu (three dots). Below the selector, there are fields for Card number (1234 1234 1234 1234) with logos for Visa, Mastercard, American Express, and Discover; Expiry (MM / YY); CVC (with a card icon); Country (Canada); and Postal code (M5T 1T4).

CHALLENGES & SOLUTIONS - DEPLOYMENT

- Deploying with AWS Elastic Beanstalk
- AWS Toolkit for Visual Studio



CHALLENGES & SOLUTIONS – AWS S3

- Install AWS SDK packages

```
<PackageReference Include="AWSSDK.Extensions.NETCore.Setup" Version="3.7.1" />
<PackageReference Include="AWSSDK.S3" Version="3.7.8.3" />
```

- Dependency injection

```
// Get the AWS profile information from configuration providers
AWSOptions awsOptions = builder.Configuration.GetAWSOptions();

// Configure AWS service clients to use these credentials
builder.Services.AddDefaultAWSOptions(awsOptions);

// These AWS service clients will be singleton by default
builder.Services.AddAWSService<IAmazonS3>();
```

- Uploading a file

```
var putRequest = new PutObjectRequest()
{
    BucketName = "hearleafbucket",
    Key = Input.Upload.FileName,
    InputStream = Input.Upload.OpenReadStream(),
    ContentType = Input.Upload.ContentType
};

var result = await _s3Client.PutObjectAsync(putRequest);
```

SCAFFOLDING IDENTITY PAGES

- Razor uses a “dictionary” of identity pages
- Scaffolding gives us access to pages from the dictionary

List all files available:

```
dotnet aspnet-codegenerator identity -dc MyApp.Data.AppDbContext --listFiles
```

Scaffold the files specified in the list:

```
dotnet aspnet-codegenerator identity -dc MyApp.Data.AppDbContext --files  
“Account.ConfirmEmail;Account.ConfirmEmailChange”
```

Scaffold all files available:

```
dotnet aspnet-codegenerator identity -dc MyApp.Data.AppDbContext
```

HEARTLEAF

@ _StatusMessage.cshtml

@ _ViewImports.cshtml

@ AccessDenied.cshtml

C# AccessDenied.cshtml.cs

@ ConfirmEmail.cshtml

C# ConfirmEmail.cshtml.cs

@ ConfirmEmailChange.cshtml

C# ConfirmEmailChange.cshtml.cs

@ ExternalLogin.cshtml

C# ExternalLogin.cshtml.cs

@ ForgotPassword.cshtml

C# ForgotPassword.cshtml.cs

@ ForgotPasswordConfirmation.cshtml

C# ForgotPasswordConfirmation.cshtml.cs

@ Lockout.cshtml

C# Lockout.cshtml.cs

@ Login.cshtml

C# Login.cshtml.cs

@ LoginWith2fa.cshtml

C# LoginWith2fa.cshtml.cs

@ LoginWithRecoveryCode.cshtml

C# LoginWithRecoveryCode.cshtml.cs

@ Logout.cshtml

C# Logout.cshtml.cs

@ Register.cshtml

C# Register.cshtml.cs

@ RegisterConfirmation.cshtml

C# RegisterConfirmation.cshtml.cs

@ ResendEmailConfirmation.cshtml

C# ResendEmailConfirmation.cshtml.cs

@ ResetPassword.cshtml

C# ResetPassword.cshtml.cs

@ ResetPasswordConfirmation.cshtml

C# ResetPasswordConfirmation.cshtml.cs

@ _ValidationScriptsPartial.cshtml

@ ViewImports.cshtml

OUTLINE

Account.AccessDenied
Account.ConfirmEmail
Account.ConfirmEmailChange
Account.ExternalLogin
Account.ForgotPassword
Account.ForgotPasswordConfirmation
Account.Lockout
Account.Login
Account.LoginWith2fa
Account.LoginWithRecoveryCode
Account.Logout
Account.Manage._Layout
Account.Manage._ManageNav
Account.Manage._StatusMessage
Account.Manage.ChangePassword
Account.Manage.DeletePersonalData
Account.Manage.Disable2fa
Account.Manage.DownloadPersonalData
Account.Manage.Email
Account.Manage.EnableAuthenticator
Account.Manage.ExternalLogins
Account.Manage.GenerateRecoveryCodes
Account.Manage.Index
Account.Manage.PersonalData
Account.Manage.ResetAuthenticator
Account.Manage.SetPassword
Account.Manage.ShowRecoveryCodes
Account.Manage.TwoFactorAuthentication
Account.Register
Account.RegisterConfirmation
Account.ResendEmailConfirmation
Account.ResetPassword
Account.ResetPasswordConfirmation

CHALLENGES & SOLUTIONS

```
{  
  "address": "9 rue des test, QC J7C5X4"  
}
```

```
{  
  "status": "success",  
  "message": "Address verification processed.",  
  "data": {  
    "city": "BLAINVILLE",  
    "country": "ca",  
    "countryName": "CANADA",  
    "errors": {  
      "line 1": [  
        "Incorrect Value: Street name"  
      ]  
    },  
    "line 1": "9 RUE DES TEST",  
    "postalOrZip": "J7C 5X4",  
    "provinceOrState": "QC",  
    "status": "failed"  
  }  
}
```

CHALLENGES & SOLUTIONS

```
using static HeartLeaf.Services.ConfigHelper;
```

```
namespace HeartLeaf.Services
```

```
{
```

```
    0 references
```

```
    public static class UserManagerExtensions
```

```
    {
```

```
        2 references
```

```
        public static async Task<IdentityResult> SetAddressAsync(this UserManager<User> userManager, User user, string address)
```

```
        {  
            HttpClient client = new HttpClient();
```

```
            EditUserAddress = user.ToEditAddress, {  
                var result = await _userManager.SetAddressAsync(UserToEdit, EditUser.Address);
```

```
            Address addr = new Address(address);
```

```
            JsonConvert addrJson = JsonConvert.Create(addr);
```

```
            client.DefaultRequestHeaders.Add("x-api-key", Config["PostGrid:APIKey"]);
```

```
            HttpResponseMessage response = await client.PostAsync(  
                "https://api.postgrid.com/v1/addver/verifications", addrJson
```

```
namespace HeartLeaf.Services
```

```
{
```

```
    2 references
```

```
    public class ConfigHelper
```

```
    {
```

```
        2 references
```

```
        public static IConfiguration Config {get;set;}
```

```
    }
```

Program.cs

```
// allow configuration access to static classes
```

```
ConfigHelper.Config = builder.Configuration;
```

UserManagerExtensions.cs

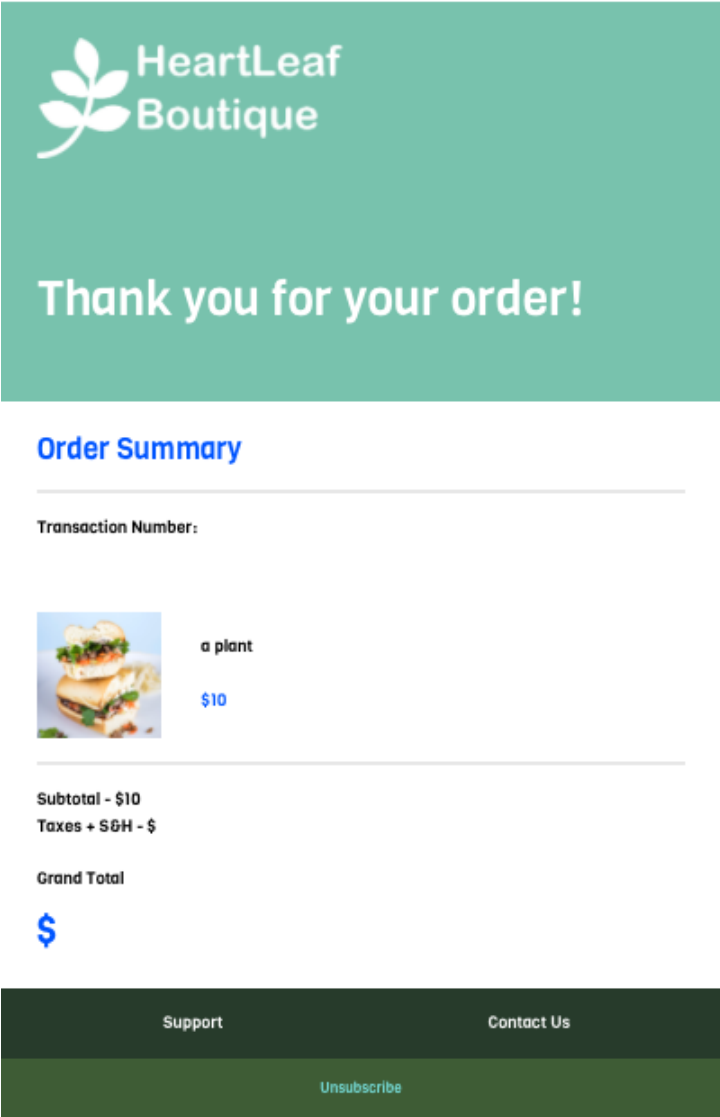
```
client.DefaultRequestHeaders.Add("x-api-key", Config["PostGrid:APIKey"]);
```

```
HttpResponseMessage response = await client.PostAsync(  
    "https://api.postgrid.com/v1/addver/verifications", addrJson
```

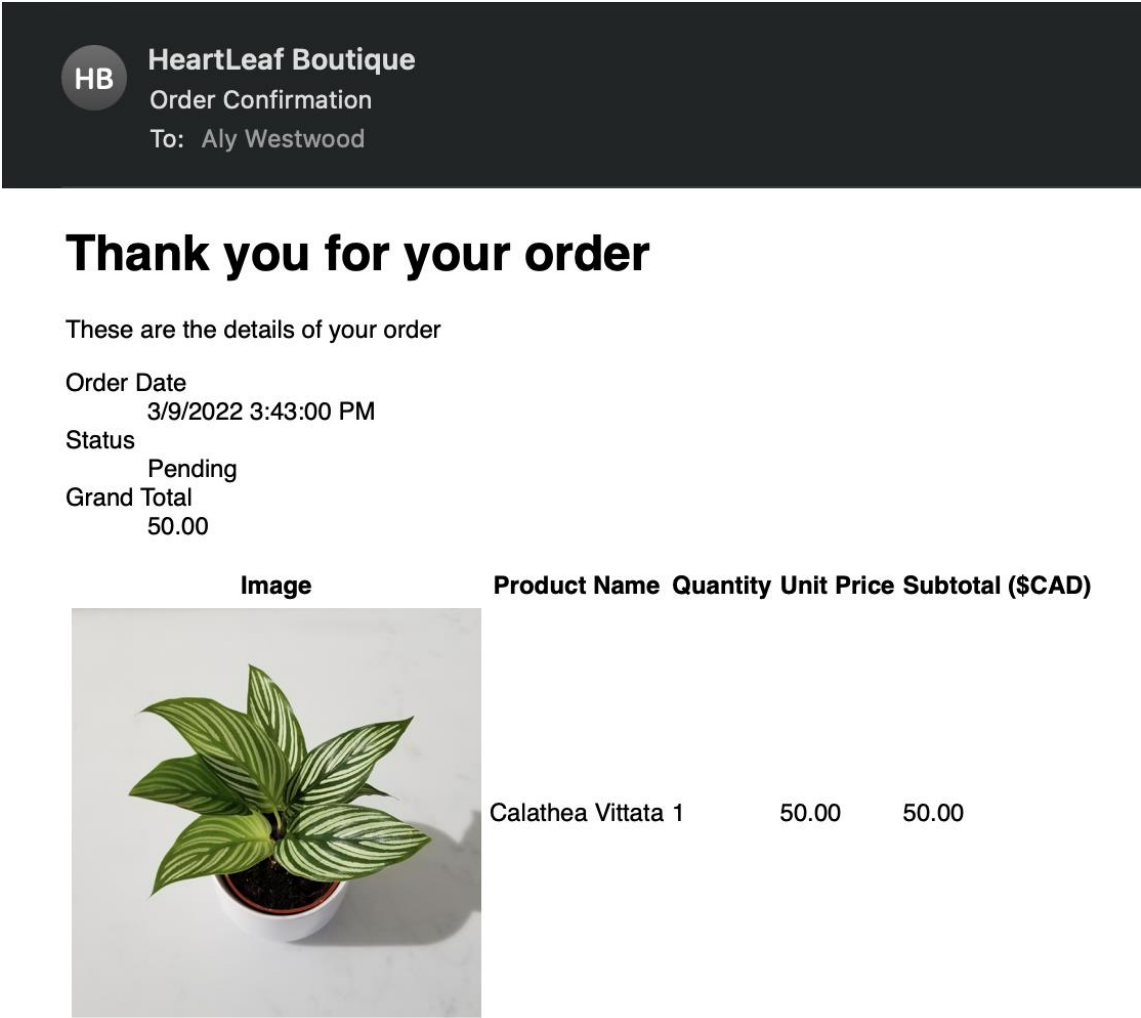
```
);
```


SENDGRID EMAILS

EXPECTATIONS VS. REALITY



Template



Actual Email

CHALLENGES & SOLUTIONS

■ Layouts

```
@inject Microsoft.AspNetCore.Http.IHttpContextAccessor Http

@{
    if (ViewData.TryGetValue("ParentLayout", out var parentLayout))
    {
        Layout = (string)parentLayout;
    }
    else
    {
        Layout = "/Pages/Shared/_Layout.cshtml";
    }

    bool isAdmin = (await userManager.IsInRoleAsync((await userManager.GetUserAsync(User)), "Admin"));
}

@if(isAdmin){
    <h1>Manage Users</h1>

    <div>
        <h2>@ViewData["Title"]</h2>
        <div>
            @RenderBody()
        </div>
    </div>
} else {
    IgnoreBody();
    Http.HttpContext.Response.Redirect("/Error");
    <div>Not Found</div>
}

@section Scripts {
    @RenderSection("Scripts", required: false)
}
```

CHALLENGES & SOLUTIONS

- Search Based on multiple fields
- Using Search Model

```
public class ProductSearchModel
{
    11 references
    public int? SearchCategory { get; set; }
    8 references
    public string? SearchItem { get; set; }
    7 references
    public decimal? PriceFrom { get; set; }
    7 references
    public decimal? PriceTo { get; set; }
}
```

```
public IQueryable<Product> GetProducts(ProductSearchModel searchModel)
```

```
if (!string.IsNullOrEmpty(searchModel.SearchItem))
    result = result.Where(x => x.Name.Contains(searchModel.SearchItem) || x.Description.Contains(searchModel.SearchItem));
if (searchModel.PriceFrom.HasValue)
    result = result.Where(x => x.Price >= searchModel.PriceFrom);
if (searchModel.PriceTo.HasValue)
    result = result.Where(x => x.Price <= searchModel.PriceTo);
if (searchModel.SearchCategory == 1 || searchModel.SearchCategory == 2 || searchModel.SearchCategory == 3 || searchModel.SearchCategory == 4)
    result = result.Where(x => (int)x.Category == searchModel.SearchCategory);
```

```
PaginatedProductList = await PaginatedList<Product>.CreateAsync(GetProducts(SearchModel).AsNoTracking(), pageIndex ?? 1, pageSize);
```

HeartLeaf Boutique

Search plants here...

Succulent

30

60

Search

Reset



Calathea Vittata

jungle plant. water ...

Category: Succulent

Price: \$50.00

Quantity: 22

★★★★☆ (7)

Details



Aloe Vera

From Mexico

Category: Succulent

Price: \$30.00

Sold Out

★★★★☆ (0)

Details



Test2

hjkhlh

Category: Succulent

Price: \$30.00

Quantity: 4

★★★★☆ (1)

Details

Previous

1

Next

HeartLeaf Boutique

Alo

Succulent

30

60

Search

Reset



Aloe Vera

From Mexico

Category: Succulent

Price: \$30.00

Sold Out

★★★★☆ (0)

Details

Previous

1

Next

CHALLENGES & SOLUTIONS

- Getting page numbers in pagination as well as previous and next button



- Losing Search Result in pagination

```
@for (int k = 1; k <= @Model.PaginatedOrderList.TotalPages; k++)
{
    @if (@k == @Model.PaginatedOrderList.PageIndex)
    {
        <a asp-page="/Orders/Index" asp-route-pageIndex="@k" class="btn btn-primary btn-pagination">
            @k
        </a>
    }
    else
    {
        <a asp-page="/Orders/Index" asp-route-pageIndex="@k" class="btn btn-primary btn-pagination">
            @k
        </a>
    }
}
```

```
<a asp-page="./Details" asp-route-pageIndex="@((Model.PaginatedProductList.PageIndex-1))"
    asp-route-SearchModel.SearchCategory="@Model.SearchModel.SearchCategory"
    asp-route-SearchModel.SearchItem="@Model.SearchModel.SearchItem"
    asp-route-SearchModel.PriceFrom="@Model.SearchModel.PriceFrom"
    asp-route-SearchModel.PriceTo="@Model.SearchModel.PriceTo"
    class="btn btn-primary btn-pagination @prevDisabled ">
    Previous
</a>
```

FUTURE WORK

Get new version of stripe working

Wishlists

Tax calculations

Returns

Blog / informational section

SUMMARY

- Accomplished almost all the goals in our proposal
- Successfully combined different technologies
- Created a functional Plants Store

