ST10445601

CLDV6212

POE Part 2

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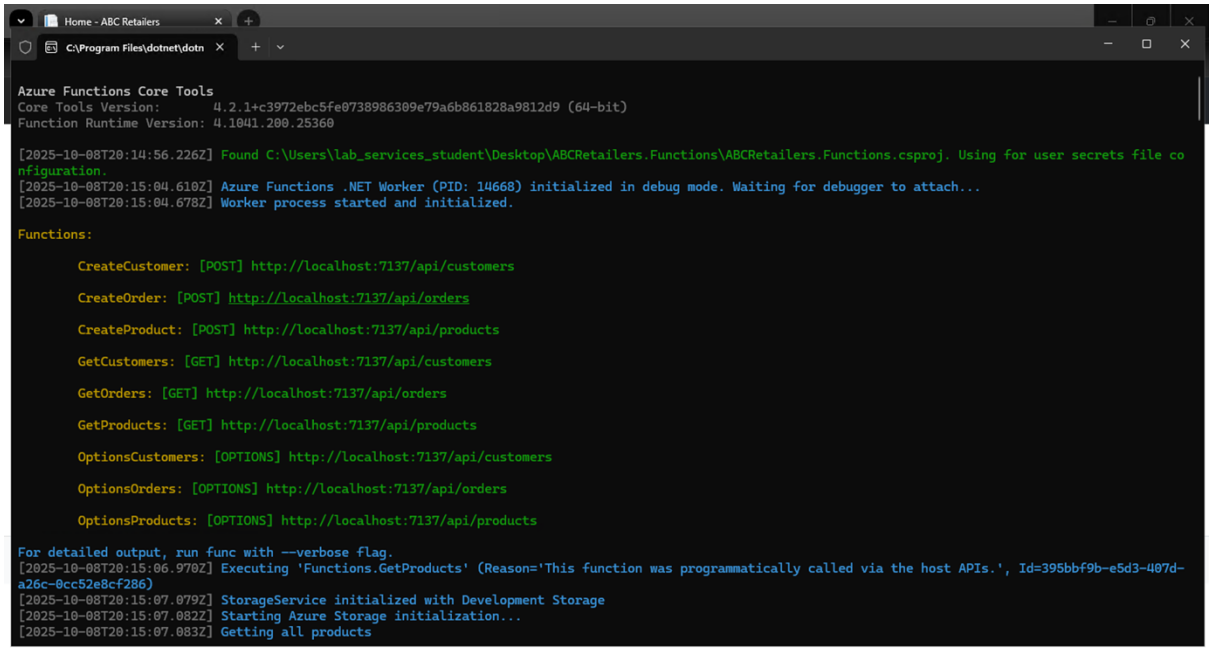
Youtube Link:

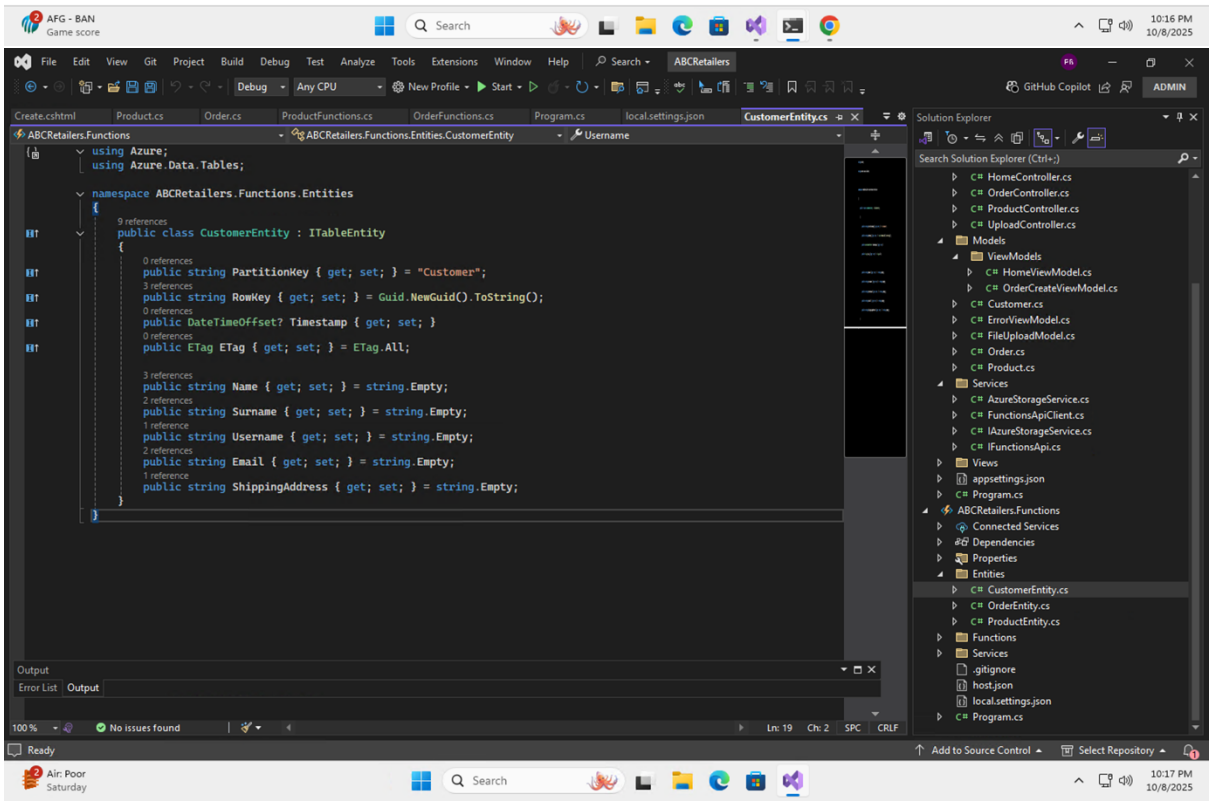
https://youtu.be/zdUm9_RAcwY?si=pIZJuG4M_jTgwxHf

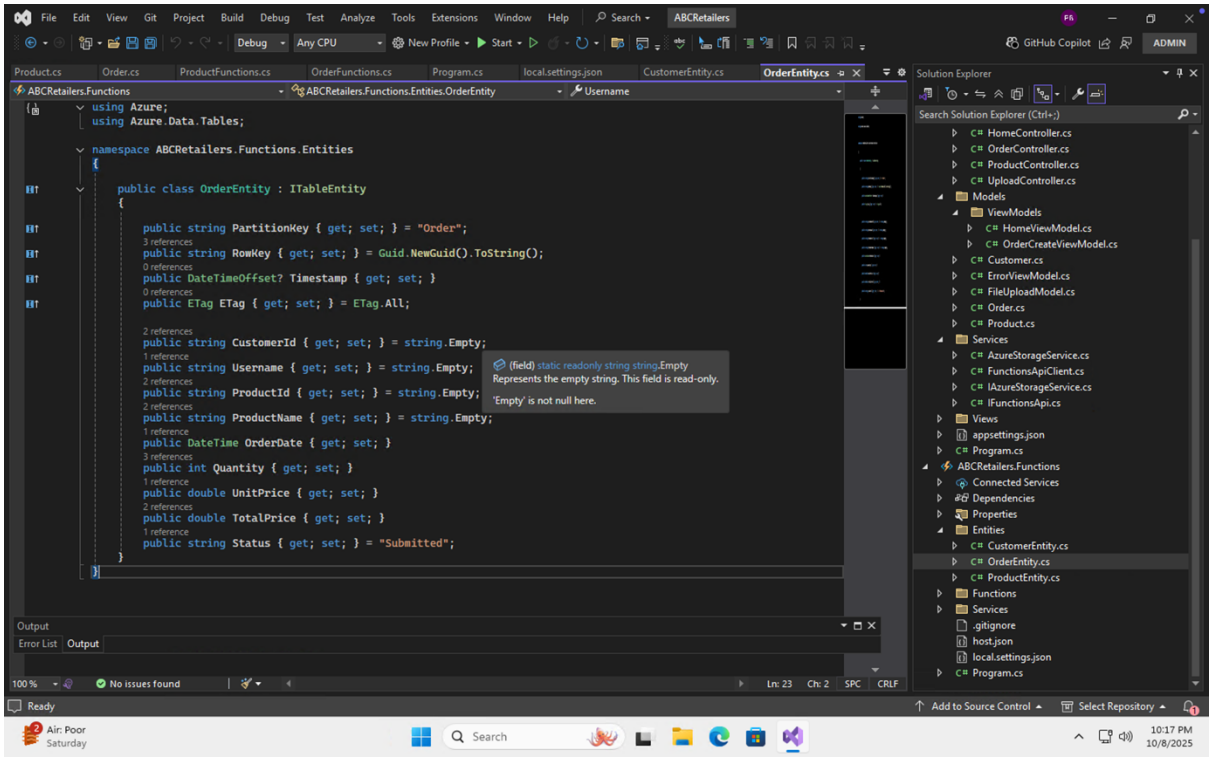
GITHub Link:

https://github.com/BritoPaulo/cldvpoepart2.git

Screenshots:



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Username
using Azure;
using Azure.Data.Tables;
namespace ABCRetailers.Functions.Entities
{
public class OrderEntity : ITableEntity
{
public string PartitionKey { get; set; } = "Order";
3 references
public string RowKey { get; set; } = Guid.NewGuid().ToString();
0 references
public DateTimeOffset? Timestamp { get; set; }
0 references
public ETag ETag { get; set; } = ETag.All;
2 references
public string CustomerId { get; set; } = string.Empty;
1 reference
public string Username { get; set; } = string.Empty;
2 references
public string ProductId { get; set; } = string.Empty;
2 references
public string ProductName { get; set; } = string.Empty;
1 reference
public DateTime OrderDate { get; set; }
3 references
public int Quantity { get; set; }
1 reference
public double UnitPrice { get; set; }
2 references
public double TotalPrice { get; set; }
1 reference
public string Status { get; set; } = "Submitted";
}
}
(field) static readonly string string.Empty
Represents the empty string. This field is read-only.
'Empty' is not null here.
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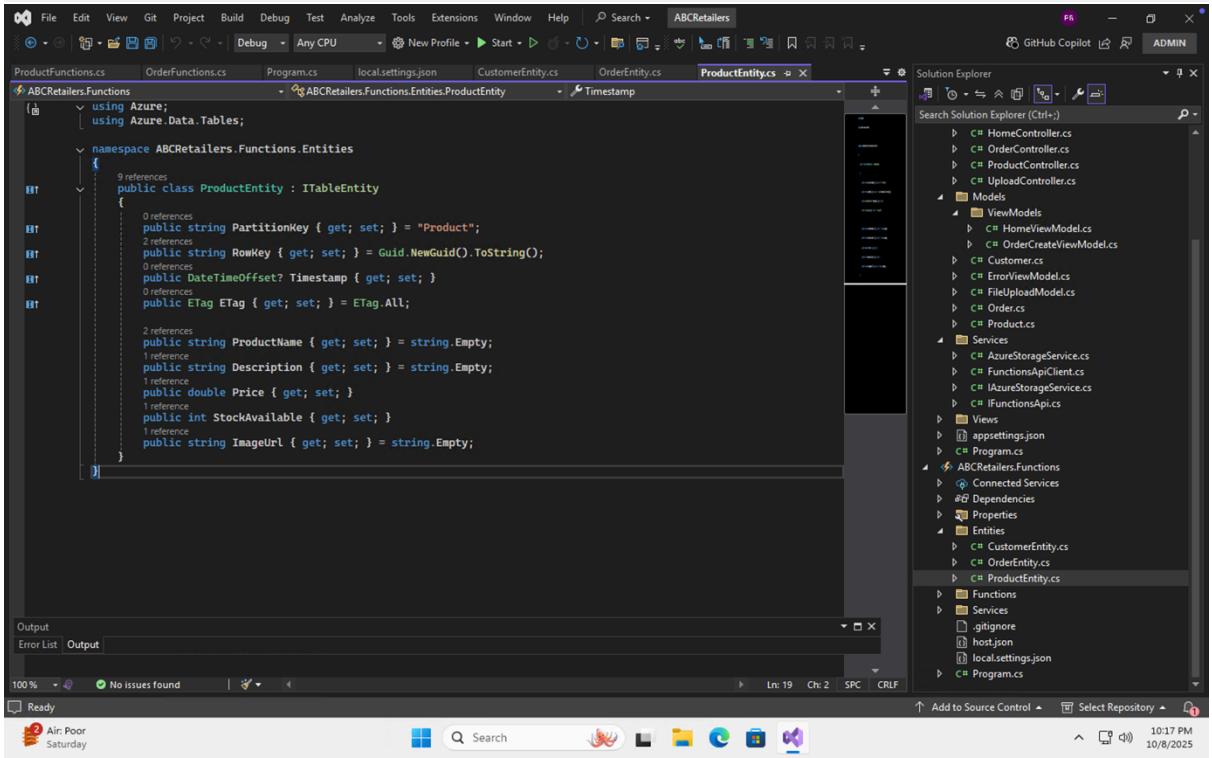
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Timestamp
using Azure;
using Azure.Data.Tables;
namespace ABCRetailers.Functions.Entities
{
9 references
public class ProductEntity : ITableEntity
{
0 references
public string PartitionKey { get; set; } = "Product";
2 references
public string RowKey { get; set; } = Guid.NewGuid().ToString();
0 references
public DateTimeOffset? Timestamp { get; set; }
0 references
public ETag ETag { get; set; } = ETag.All;
2 references
public string ProductName { get; set; } = string.Empty;
1 reference
public string Description { get; set; } = string.Empty;
1 reference
public double Price { get; set; }
1 reference
public int StockAvailable { get; set; }
1 reference
public string ImageUrl { get; set; } = string.Empty;
}
}
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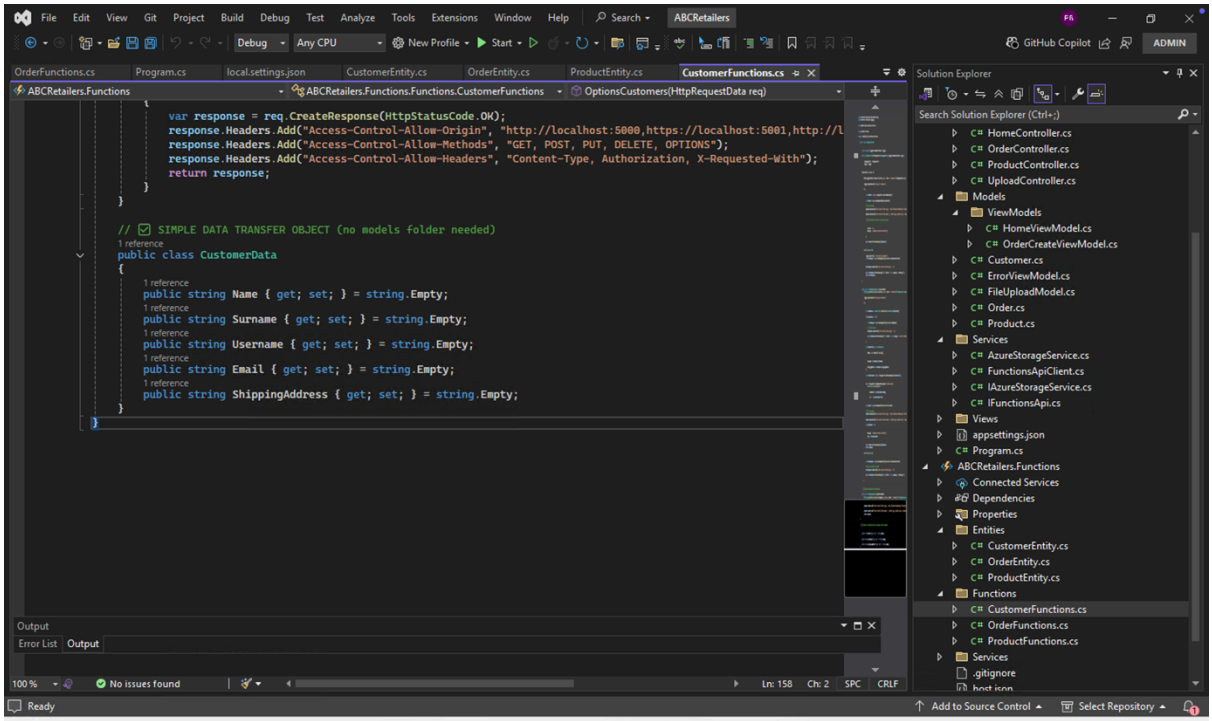
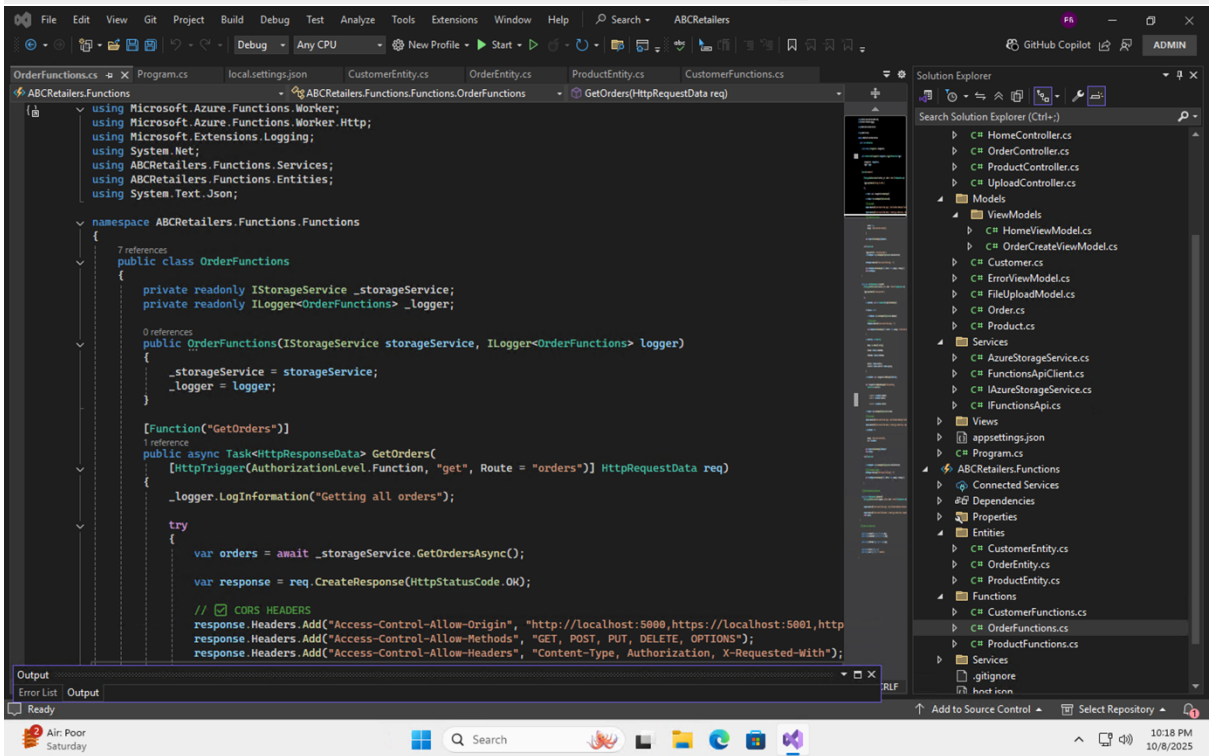
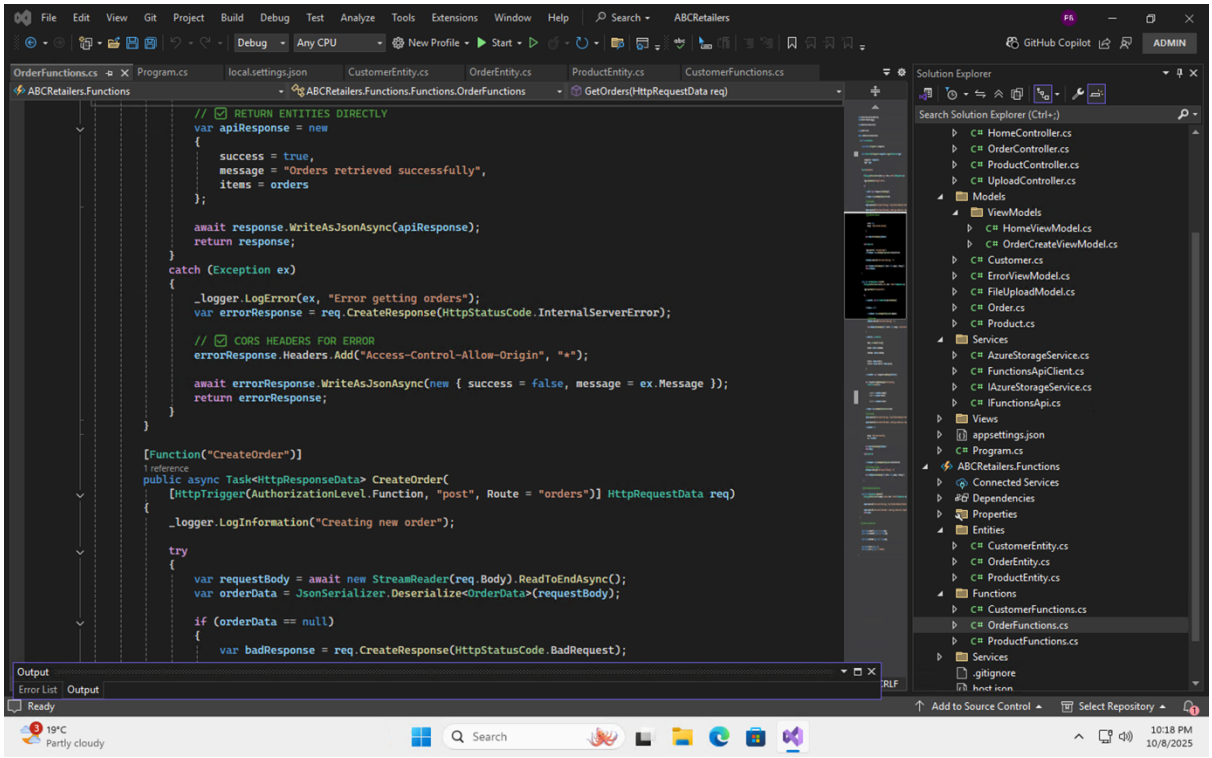
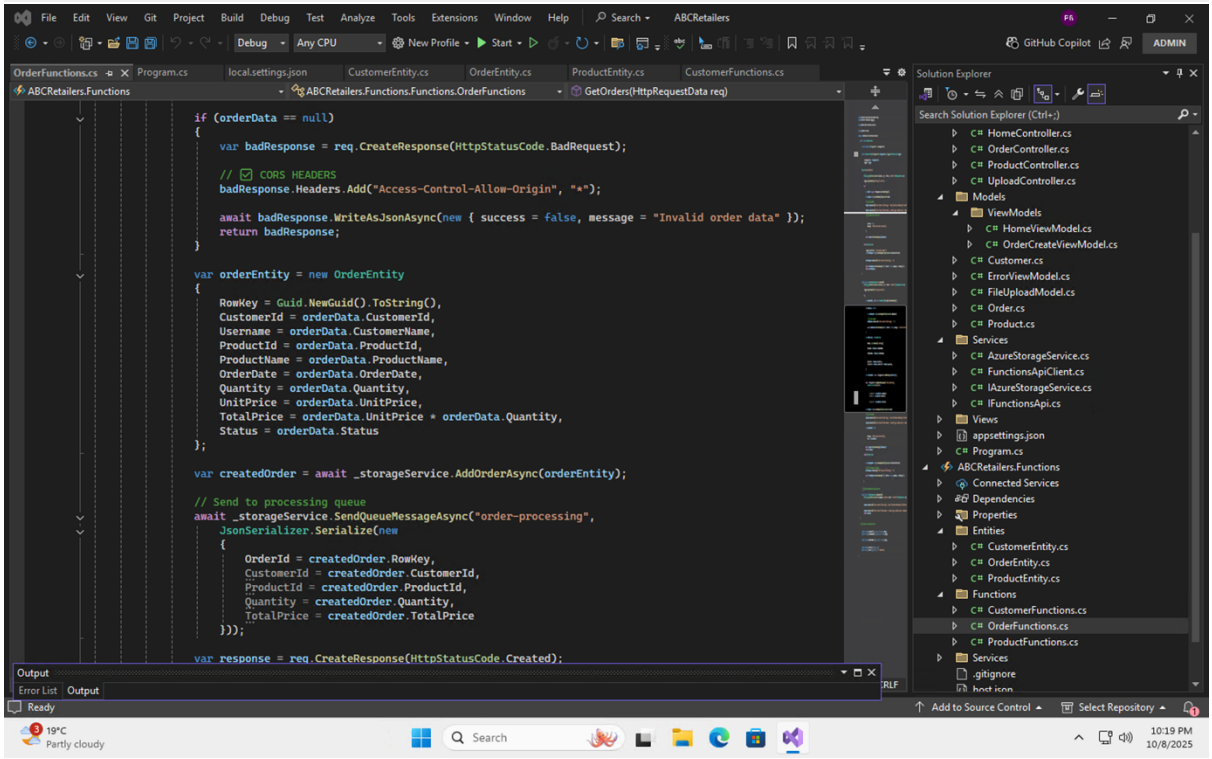
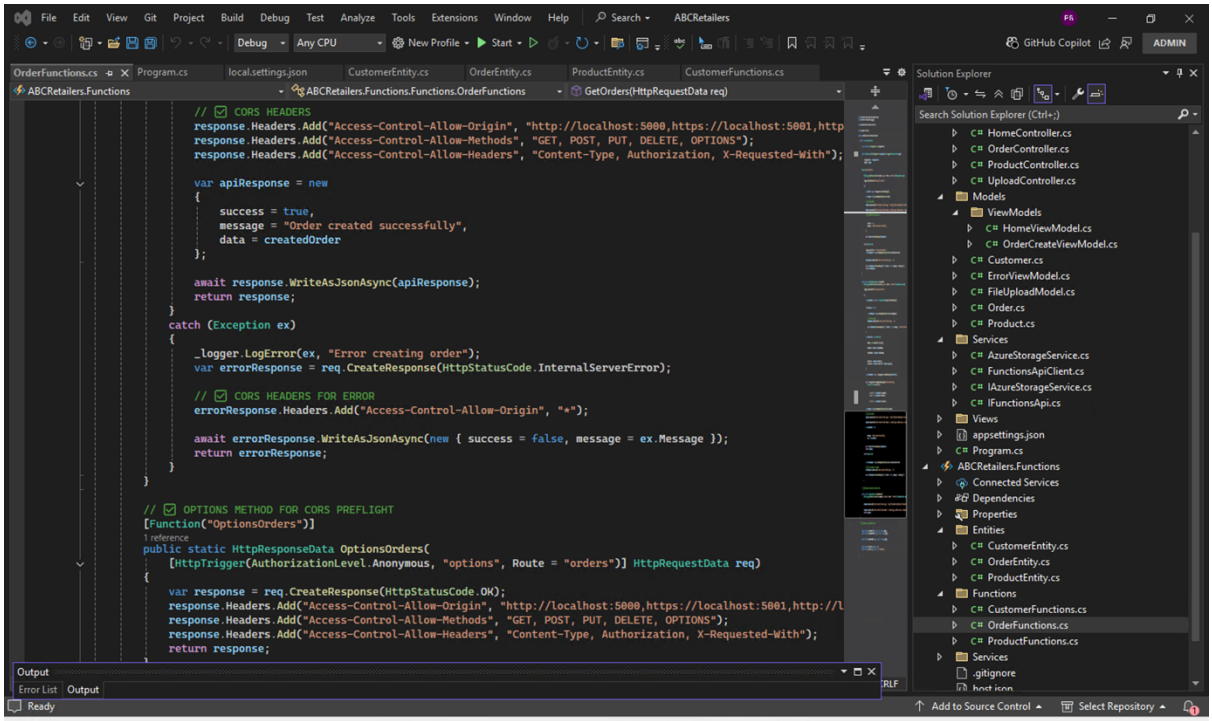

var response = req.CreateResponse(HttpStatusCode.OK);
response.Headers.Add("Access-Control-Allow-Origin", "http://localhost:5000,https://localhost:5001,http://l
response.Headers.Add("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS");
response.Headers.Add("Access-Control-Allow-Headers", "Content-Type, Authorization, X-Requested-With");
return response;
// ☑ SIMPLE DATA TRANSFER OBJECT (no models folder needed)
public class CustomerData
public string Name { get; set; } = string.Empty;
public string Surname { get; set; } = string.Empty;
public string Username { get; set; } = string.Empty;
public string Email { get; set; } = string.Empty;
public string ShippingAddress { get; set; } = string.Empty;


using Microsoft.Azure.Functions.Worker;
using Microsoft.Azure.Functions.Worker.Http;
using Microsoft.Extensions.Logging;
using System.Net;
using ABCRetailers.Functions.Services;
using ABCRetailers.Functions.Entities;
using System.Text.Json;
namespace ABCRetailers.Functions.Functions
public class OrderFunctions
private readonly IStorageService _storageService;
private readonly ILogger<OrderFunctions> _logger;
public OrderFunctions(IStorageService storageService, ILogger<OrderFunctions> logger)
_storageService = storageService;
_logger = logger;
[Function("GetOrders")]
public async Task<HttpResponseData> GetOrders(
[HttpTrigger(AuthorizationLevel.Function, "get", Route = "orders")] HttpRequestData req)
_logger.LogInformation("Getting all orders");
try
var orders = await _storageService.GetOrdersAsync();
var response = req.CreateResponse(HttpStatusCode.OK);
// ☑ CORS HEADERS
response.Headers.Add("Access-Control-Allow-Origin", "http://localhost:5000,https://localhost:5001,http
response.Headers.Add("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS");
response.Headers.Add("Access-Control-Allow-Headers", "Content-Type, Authorization, X-Requested-With");


// ☑ RETURN ENTITIES DIRECTLY
var apiResponse = new
{
success = true,
message = "Orders retrieved successfully",
items = orders
};
await response.WriteAsJsonAsync(apiResponse);
return response;
}
catch (Exception ex)
{
_logger.LogError(ex, "Error getting orders");
var errorResponse = req.CreateResponse(HttpStatusCode.InternalServerError);
// ☑ CORS HEADERS FOR ERROR
errorResponse.Headers.Add("Access-Control-Allow-Origin", "*");
await errorResponse.WriteAsJsonAsync(new { success = false, message = ex.Message });
return errorResponse;
}
}
[Function("CreateOrder")]
1 reference
public async Task<HttpResponseData> CreateOrder(
[HttpTrigger(AuthorizationLevel.Function, "post", Route = "orders")] HttpRequestData req)
{
_logger.LogInformation("Creating new order");
try
{
var requestBody = await new StreamReader(req.Body).ReadToEndAsync();
var orderData = JsonSerializer.Deserialize<OrderData>(requestBody);
if (orderData == null)
{
var badResponse = req.CreateResponse(HttpStatusCode.BadRequest);


if (orderData == null)
{
var badResponse = req.CreateResponse(HttpStatusCode.BadRequest);
// ☑ CORS HEADERS
badResponse.Headers.Add("Access-Control-Allow-Origin", "*");
await badResponse.WriteAsJsonAsync(new { success = false, message = "Invalid order data" });
return badResponse;
}
var orderEntity = new OrderEntity
{
RowKey = Guid.NewGuid().ToString(),
CustomerId = orderData.CustomerId,
Username = orderData.CustomerName,
ProductId = orderData.ProductId,
ProductName = orderData.ProductName,
OrderDate = orderData.OrderDate,
Quantity = orderData.Quantity,
UnitPrice = orderData.UnitPrice,
TotalPrice = orderData.UnitPrice * orderData.Quantity,
Status = orderData.Status
};
var createdOrder = await _storageService.AddOrderAsync(orderEntity);
// Send to processing queue
await _storageService.SendQueueMessageAsync("order-processing",
JsonSerializer.Serialize(new
{
OrderId = createdOrder.RowKey,
CustomerId = createdOrder.CustomerId,
ProductId = createdOrder.ProductId,
Quantity = createdOrder.Quantity,
TotalPrice = createdOrder.TotalPrice
}));
var response = req.CreateResponse(HttpStatusCode.Created);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// ☑ CORS HEADERS
response.Headers.Add("Access-Control-Allow-Origin", "http://localhost:5000,https://localhost:5001,http
response.Headers.Add("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS");
response.Headers.Add("Access-Control-Allow-Headers", "Content-Type, Authorization, X-Requested-With");
var apiResponse = new
{
success = true,
message = "Order created successfully",
data = createdOrder
};
await response.WriteAsJsonAsync(apiResponse);
return response;
}
catch (Exception ex)
{
_logger.LogError(ex, "Error creating order");
var errorResponse = req.CreateResponse(HttpStatusCode.InternalServerError);
// ☑ CORS HEADERS FOR ERROR
errorResponse.Headers.Add("Access-Control-Allow-Origin", "*");
await errorResponse.WriteAsJsonAsync(new { success = false, message = ex.Message });
return errorResponse;
}
}
// ☑ OPTIONS METHOD FOR CORS PREFLIGHT
[Function("OptionsOrders")]
1 reference
public static HttpResponseData OptionsOrders(
[HttpTrigger(AuthorizationLevel.Anonymous, "options", Route = "orders")] HttpRequestData req)
{
var response = req.CreateResponse(HttpStatusCode.OK);
response.Headers.Add("Access-Control-Allow-Origin", "http://localhost:5000,https://localhost:5001,http://l
response.Headers.Add("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS");
response.Headers.Add("Access-Control-Allow-Headers", "Content-Type, Authorization, X-Requested-With");
return response;
}
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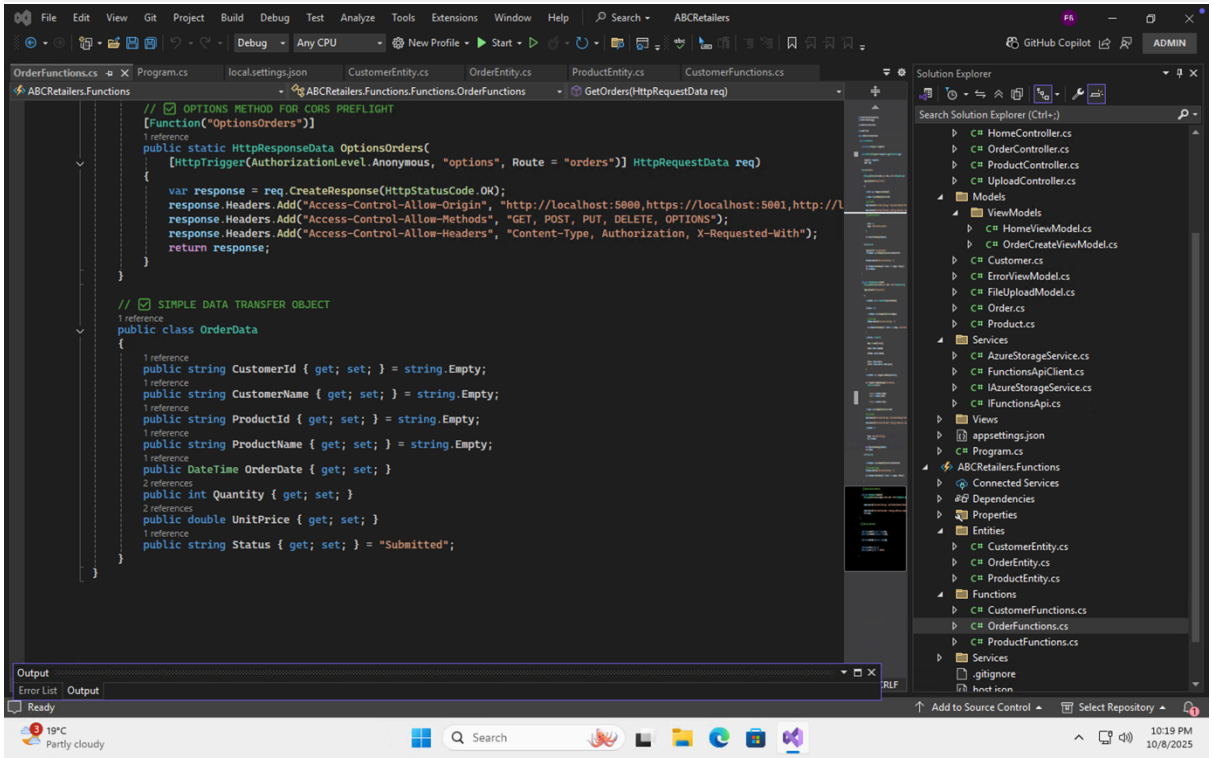
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GetOrders(HttpRequestData req)
// ☑ OPTIONS METHOD FOR CORS PREFLIGHT
[Function("OptionsOrders")]
1 reference
public static HttpResponseData OptionsOrders(
[HttpTrigger(AuthorizationLevel.Anonymous, "options", Route = "orders")] HttpRequestData req)
{
var response = req.CreateResponse(HttpStatusCode.OK);
response.Headers.Add("Access-Control-Allow-Origin", "http://localhost:5000,https://localhost:5001,http://l
response.Headers.Add("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS");
response.Headers.Add("Access-Control-Allow-Headers", "Content-Type, Authorization, X-Requested-With");
return response;
}
}
// ☑ SIMPLE DATA TRANSFER OBJECT
1 reference
public class OrderData
{
1 reference
public string CustomerId { get; set; } = string.Empty;
1 reference
public string CustomerName { get; set; } = string.Empty;
1 reference
public string ProductId { get; set; } = string.Empty;
1 reference
public string ProductName { get; set; } = string.Empty;
1 reference
public DateTime OrderDate { get; set; }
2 references
public int Quantity { get; set; }
2 references
public double UnitPrice { get; set; }
1 reference
public string Status { get; set; } = "Submitted";
}
}
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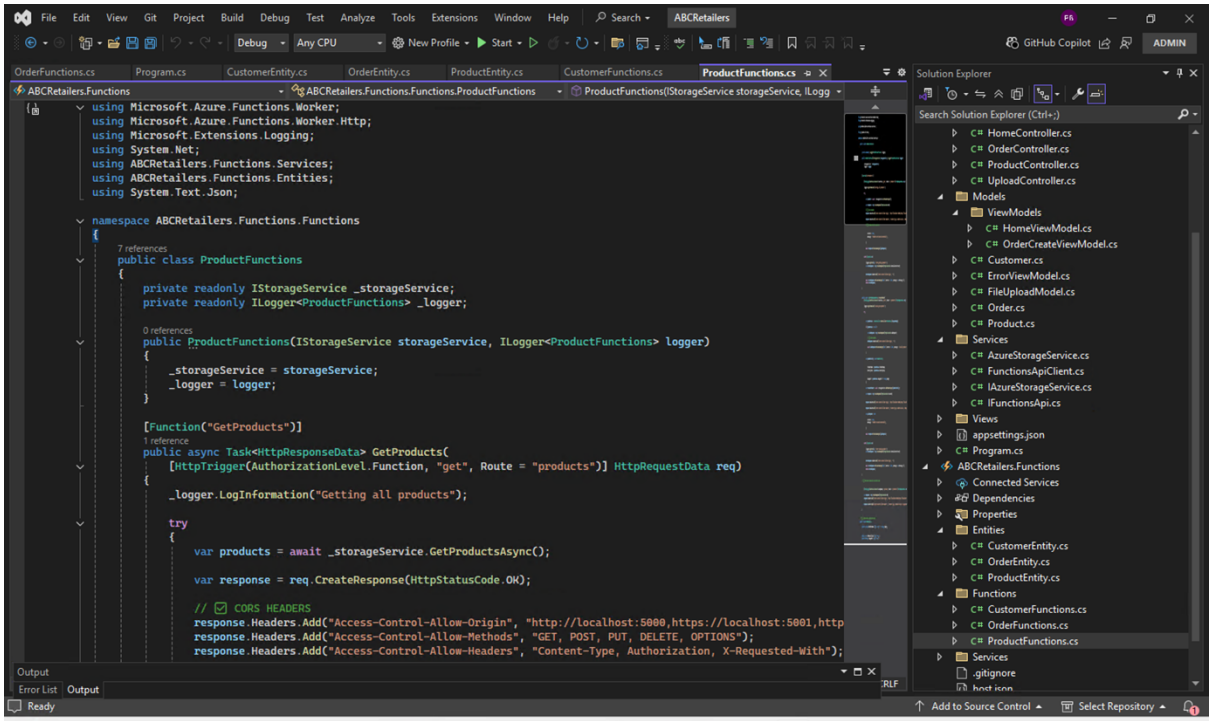
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using Microsoft.Azure.Functions.Worker;
using Microsoft.Azure.Functions.Worker.Http;
using Microsoft.Extensions.Logging;
using System.Net;
using ABCRetailers.Functions.Services;
using ABCRetailers.Functions.Entities;
using System.Text.Json;
namespace ABCRetailers.Functions.Functions
{
7 references
public class ProductFunctions
{
private readonly IStorageService _storageService;
private readonly ILogger<ProductFunctions> _logger;
0 references
public ProductFunctions(IStorageService storageService, ILogger<ProductFunctions> logger)
{
_storageService = storageService;
_logger = logger;
}
[Function("GetProducts")]
1 reference
public async Task<HttpResponseData> GetProducts(
[HttpTrigger(AuthorizationLevel.Function, "get", Route = "products")] HttpRequestData req)
{
_logger.LogInformation("Getting all products");
try
{
var products = await _storageService.GetProductsAsync();
var response = req.CreateResponse(HttpStatusCode.OK);
// ☑ CORS HEADERS
response.Headers.Add("Access-Control-Allow-Origin", "http://localhost:5000,https://localhost:5001,http
response.Headers.Add("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS");
response.Headers.Add("Access-Control-Allow-Headers", "Content-Type, Authorization, X-Requested-With");
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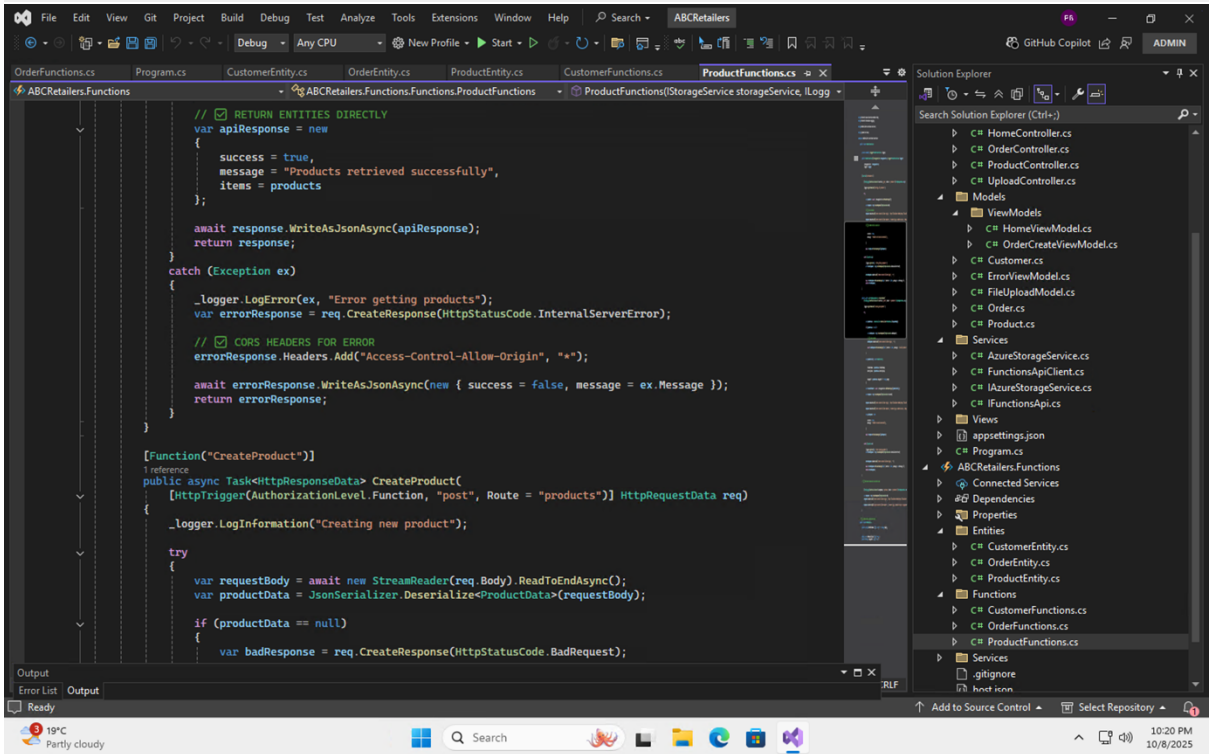
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ProductFunctions(IStorageService storageService, ILogg
// ☑ RETURN ENTITIES DIRECTLY
var apiResponse = new
{
success = true,
message = "Products retrieved successfully",
items = products
};
await response.WriteAsJsonAsync(apiResponse);
return response;
}
catch (Exception ex)
{
_logger.LogError(ex, "Error getting products");
var errorResponse = req.CreateResponse(HttpStatusCode.InternalServerError);
// ☑ CORS HEADERS FOR ERROR
errorResponse.Headers.Add("Access-Control-Allow-Origin", "*");
await errorResponse.WriteAsJsonAsync(new { success = false, message = ex.Message });
return errorResponse;
}
}
[Function("CreateProduct")]
1 reference
public async Task<HttpResponseData> CreateProduct(
[HttpTrigger(AuthorizationLevel.Function, "post", Route = "products")] HttpRequestData req)
{
_logger.LogInformation("Creating new product");
try
{
var requestBody = await new StreamReader(req.Body).ReadToEndAsync();
var productData = JsonSerializer.Deserialize<ProductData>(requestBody);
if (productData == null)
{
var badResponse = req.CreateResponse(HttpStatusCode.BadRequest);
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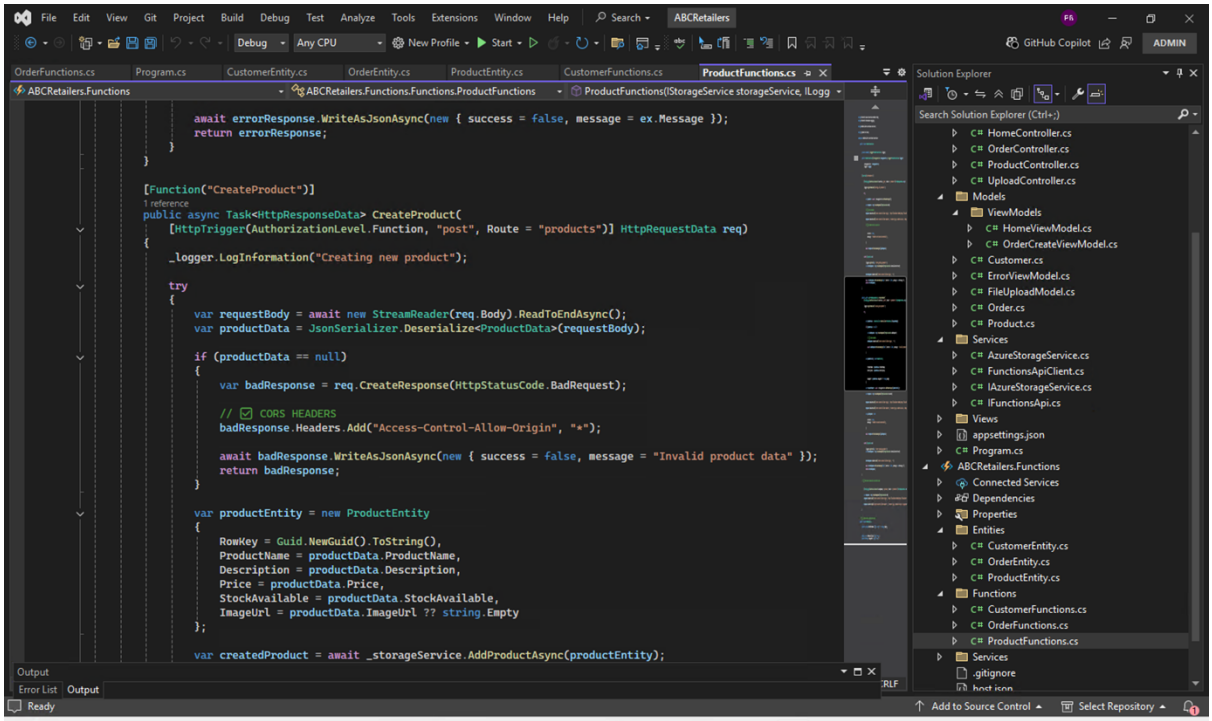
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await errorResponse.WriteAsJsonAsync(new { success = false, message = ex.Message });
return errorResponse;
}
}
[Function("CreateProduct")]
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public async Task<HttpResponseData> CreateProduct(
[HttpTrigger(AuthorizationLevel.Function, "post", Route = "products")] HttpRequestData req)
{
_logger.LogInformation("Creating new product");
try
{
var requestBody = await new StreamReader(req.Body).ReadToEndAsync();
var productData = JsonSerializer.Deserialize<ProductData>(requestBody);
if (productData == null)
{
var badResponse = req.CreateResponse(HttpStatusCode.BadRequest);
// ☑ CORS HEADERS
badResponse.Headers.Add("Access-Control-Allow-Origin", "*");
await badResponse.WriteAsJsonAsync(new { success = false, message = "Invalid product data" });
return badResponse;
}
var productEntity = new ProductEntity
{
RowKey = Guid.NewGuid().ToString(),
ProductName = productData.ProductName,
Description = productData.Description,
Price = productData.Price,
StockAvailable = productData.StockAvailable,
ImageUrl = productData.ImageUrl ?? string.Empty
};
var createdProduct = await _storageService.AddProductAsync(productEntity);
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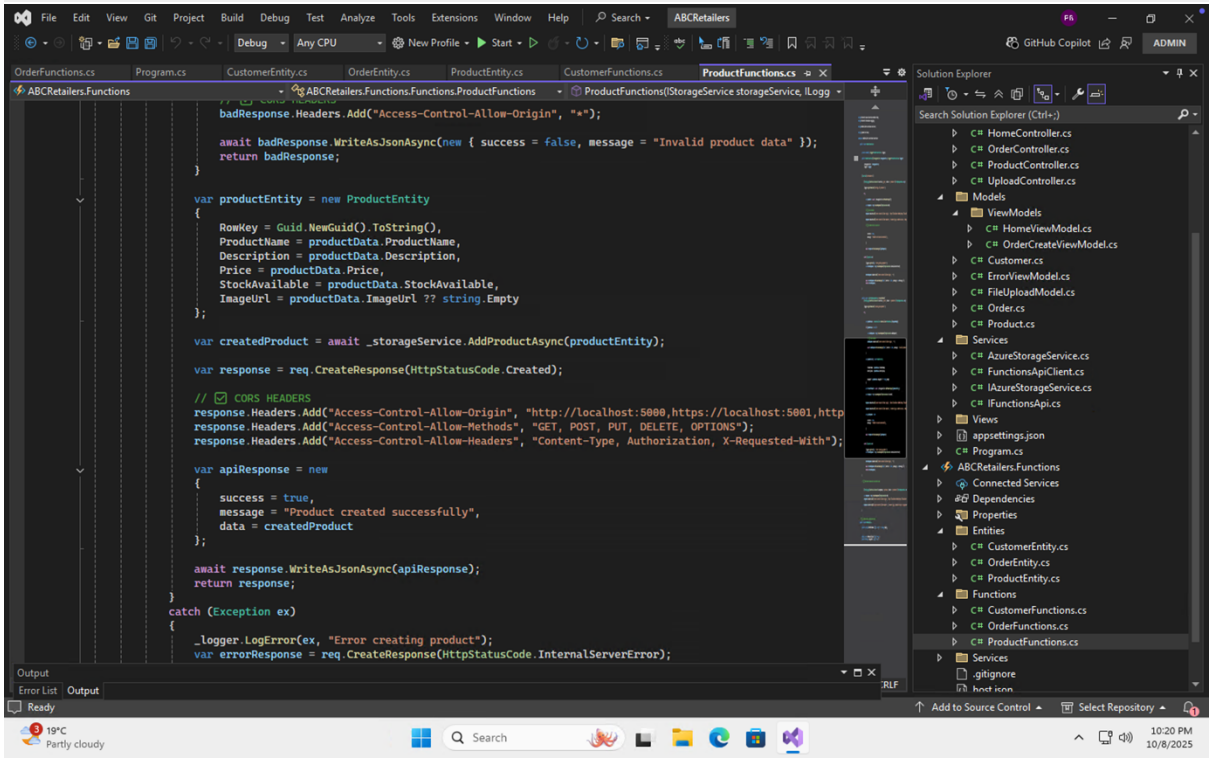
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badResponse.Headers.Add("Access-Control-Allow-Origin", "*");
await badResponse.WriteAsJsonAsync(new { success = false, message = "Invalid product data" });
return badResponse;
}
var productEntity = new ProductEntity
{
RowKey = Guid.NewGuid().ToString(),
ProductName = productData.ProductName,
Description = productData.Description,
Price = productData.Price,
StockAvailable = productData.StockAvailable,
ImageUrl = productData.ImageUrl ?? string.Empty
};
var createdProduct = await _storageService.AddProductAsync(productEntity);
var response = req.CreateResponse(HttpStatusCode.Created);
// ☑ CORS HEADERS
response.Headers.Add("Access-Control-Allow-Origin", "http://localhost:5000,https://localhost:5001,http
response.Headers.Add("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS");
response.Headers.Add("Access-Control-Allow-Headers", "Content-Type, Authorization, X-Requested-With");
var apiResponse = new
{
success = true,
message = "Product created successfully",
data = createdProduct
};
await response.WriteAsJsonAsync(apiResponse);
return response;
}
catch (Exception ex)
{
_logger.LogError(ex, "Error creating product");
var errorResponse = req.CreateResponse(HttpStatusCode.InternalServerError);
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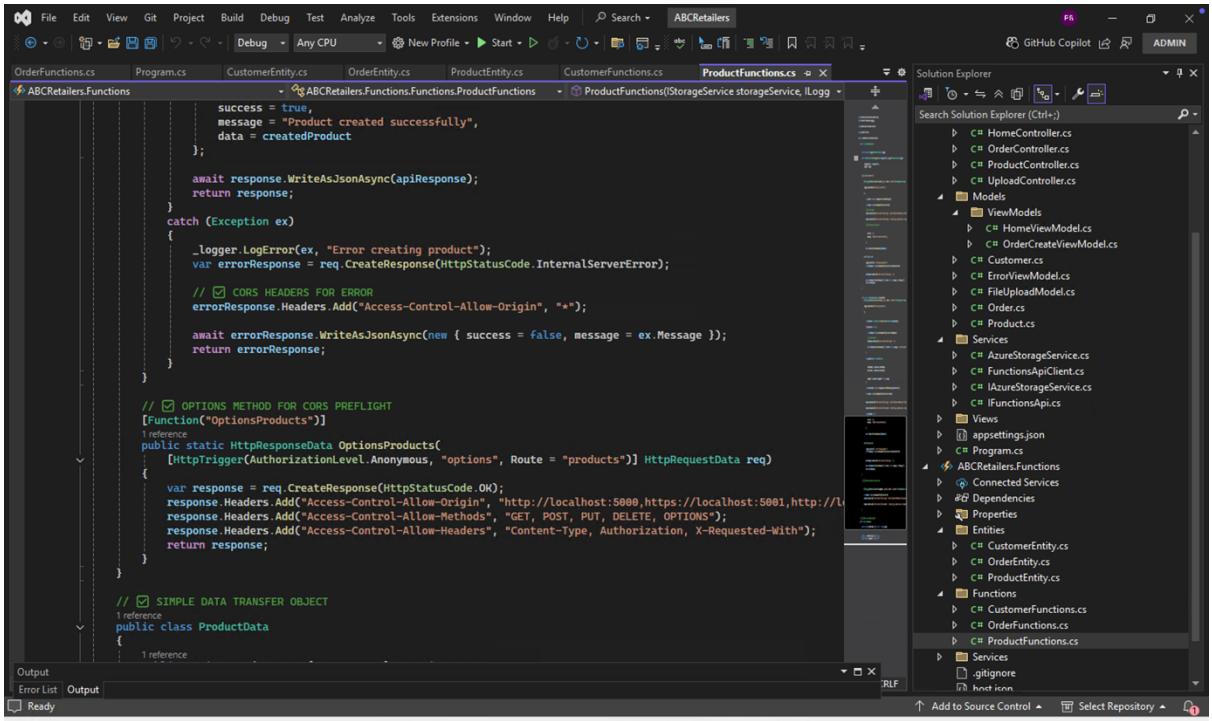
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success = true,
message = "Product created successfully",
data = createdProduct
};
await response.WriteAsJsonAsync(apiResponse);
return response;
}
catch (Exception ex)
{
_logger.LogError(ex, "Error creating product");
var errorResponse = req.CreateResponse(HttpStatusCode.InternalServerError);
// ☑ CORS HEADERS FOR ERROR
errorResponse.Headers.Add("Access-Control-Allow-Origin", "*");
await errorResponse.WriteAsJsonAsync(new { success = false, message = ex.Message });
return errorResponse;
}
}
// ☑ OPTIONS METHOD FOR CORS PREFLIGHT
[Function("OptionsProducts")]
1 reference
public static HttpResponseData OptionsProducts(
[HttpTrigger(AuthorizationLevel.Anonymous, "options", Route = "products")] HttpRequestData req)
{
var response = req.CreateResponse(HttpStatusCode.OK);
response.Headers.Add("Access-Control-Allow-Origin", "http://localhost:5000,https://localhost:5001,http://l
response.Headers.Add("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS");
response.Headers.Add("Access-Control-Allow-Headers", "Content-Type, Authorization, X-Requested-With");
return response;
}
}
// ☑ SIMPLE DATA TRANSFER OBJECT
1 reference
public class ProductData
{
1 reference
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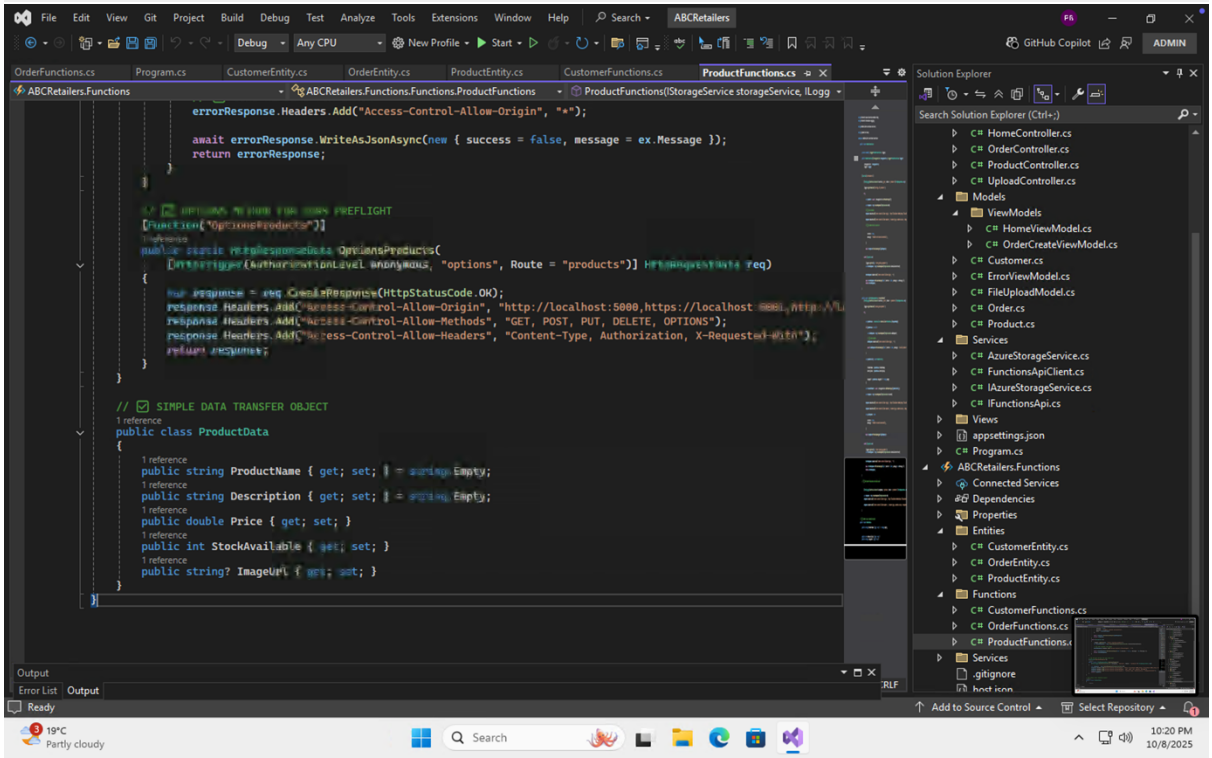
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await errorResponse.WriteAsJsonAsync(new { success = false, message = ex.Message });
return errorResponse;
}
}
// ☑ OPTIONS METHOD FOR CORS PREFLIGHT
[Function("OptionsProducts")]
public static HttpResponseData OptionsProducts(
[HttpTrigger(AuthorizationLevel.Anonymous, "options", Route = "products")] HttpRequestData req)
{
var response = req.CreateResponse(HttpStatusCode.OK);
response.Headers.Add("Access-Control-Allow-Origin", "http://localhost:5000,https://localhost
response.Headers.Add("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS");
response.Headers.Add("Access-Control-Allow-Headers", "Content-Type, Authorization, X-Requested-With");
return response;
}
}
// ☑ SIMPLE DATA TRANSFER OBJECT
1 reference
public class ProductData
{
1 reference
public string ProductName { get; set; } = string.Empty;
1 reference
public string Description { get; set; } = string.Empty;
1 reference
public double Price { get; set; }
1 reference
public int StockAvailable { get; set; }
1 reference
public string? ImageUrl { get; set; }
}
}
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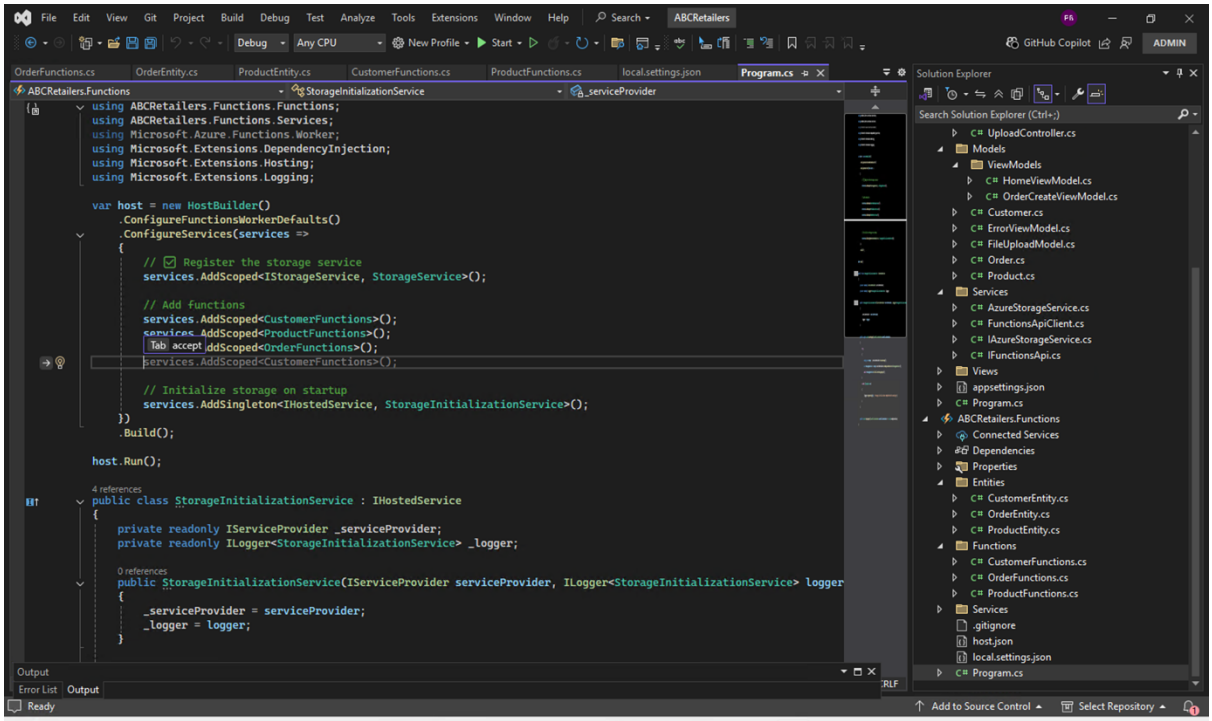
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_serviceProvider
using ABCRetailers.Functions.Functions;
using ABCRetailers.Functions.Services;
using Microsoft.Azure.Functions.Worker;
using Microsoft.Extensions.DependencyInjection;
using Microsoft.Extensions.Hosting;
using Microsoft.Extensions.Logging;
var host = new HostBuilder()
.ConfigureFunctionsWorkerDefaults()
.ConfigureServices(services =>
{
// Register the storage service
services.AddScoped<IStorageService, StorageService>();
// Add functions
services.AddScoped<CustomerFunctions>();
services.AddScoped<ProductFunctions>();
Tab accept ddScoped<OrderFunctions>();
services.AddScoped<CustomerFunctions>();
// Initialize storage on startup
services.AddSingleton<IHostedService, StorageInitializationService>();
})
.Build();
host.Run();
4 references
public class StorageInitializationService : IHostedService
{
private readonly IServiceProvider _serviceProvider;
private readonly ILogger<StorageInitializationService> _logger;
0 references
public StorageInitializationService(IServiceProvider serviceProvider, ILogger<StorageInitializationService> logger
{
_serviceProvider = serviceProvider;
_logger = logger;
}
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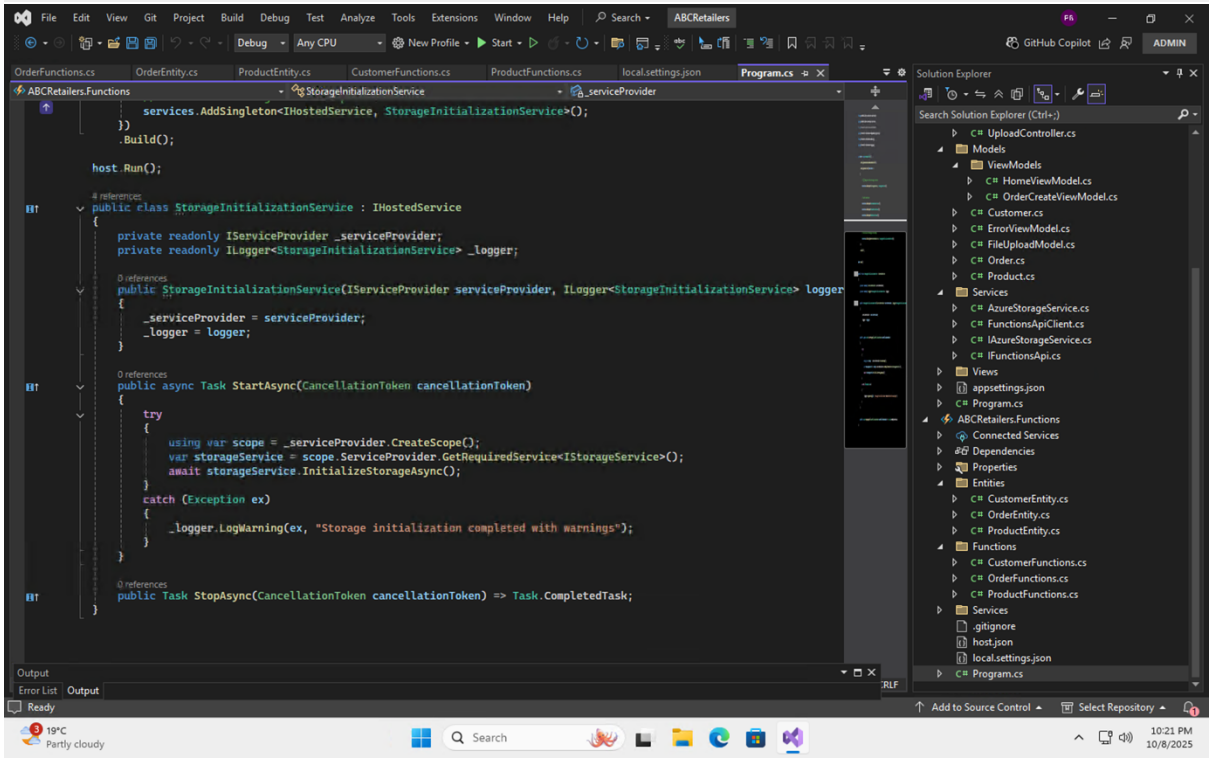
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services.AddSingleton<IHostedService, StorageInitializationService>();
})
.Build();
host.Run();
4 references
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{
private readonly IServiceProvider _serviceProvider;
private readonly ILogger<StorageInitializationService> _logger;
0 references
public StorageInitializationService(IServiceProvider serviceProvider, ILogger<StorageInitializationService> logger
{
_serviceProvider = serviceProvider;
_logger = logger;
}
0 references
public async Task StartAsync(CancellationToken cancellationToken)
{
try
{
using var scope = _serviceProvider.CreateScope();
var storageService = scope.ServiceProvider.GetRequiredService<IStorageService>();
await storageService.InitializeStorageAsync();
}
catch (Exception ex)
{
_logger.LogWarning(ex, "Storage initialization completed with warnings");
}
}
0 references
public Task StopAsync(CancellationToken cancellationToken) => Task.CompletedTask;
}
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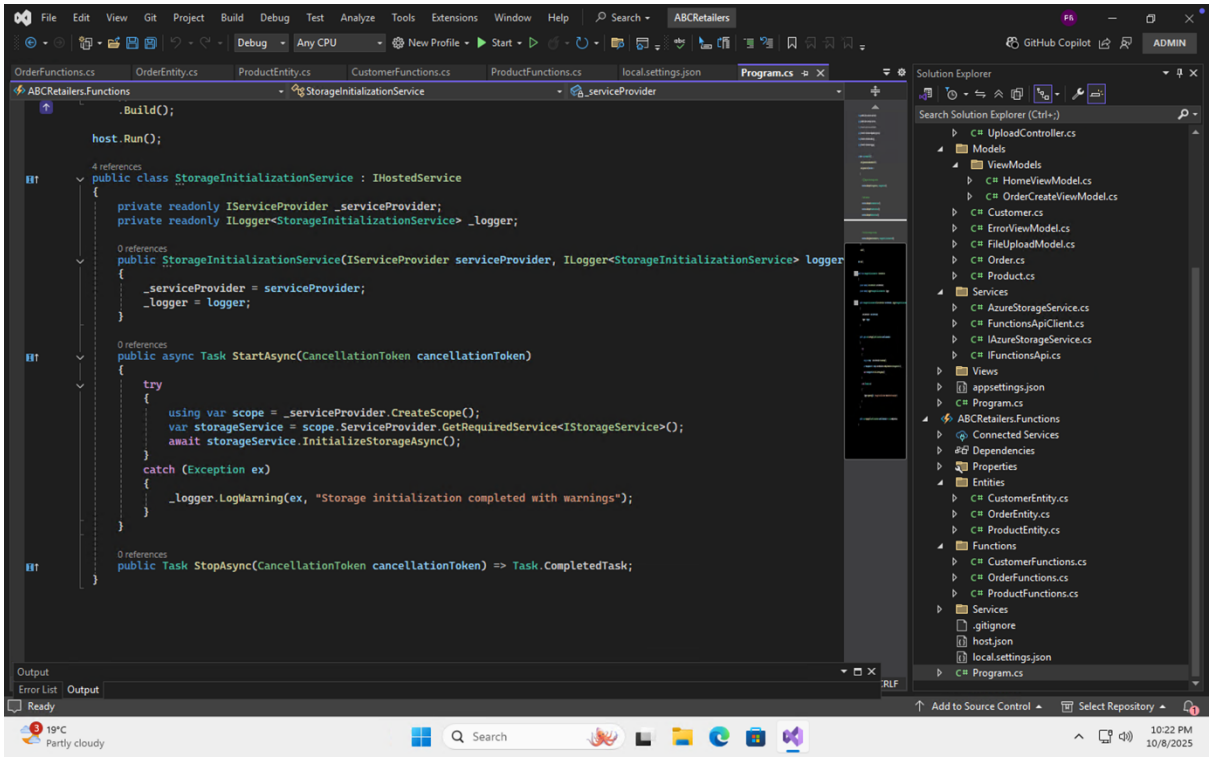
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0 references
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{
_serviceProvider = serviceProvider;
_logger = logger;
}
0 references
public async Task StartAsync(CancellationToken cancellationToken)
{
try
{
using var scope = _serviceProvider.CreateScope();
var storageService = scope.ServiceProvider.GetRequiredService<IStorageService>();
await storageService.InitializeStorageAsync();
}
catch (Exception ex)
{
_logger.LogWarning(ex, "Storage initialization completed with warnings");
}
}
0 references
public Task StopAsync(CancellationToken cancellationToken) => Task.CompletedTask;
}
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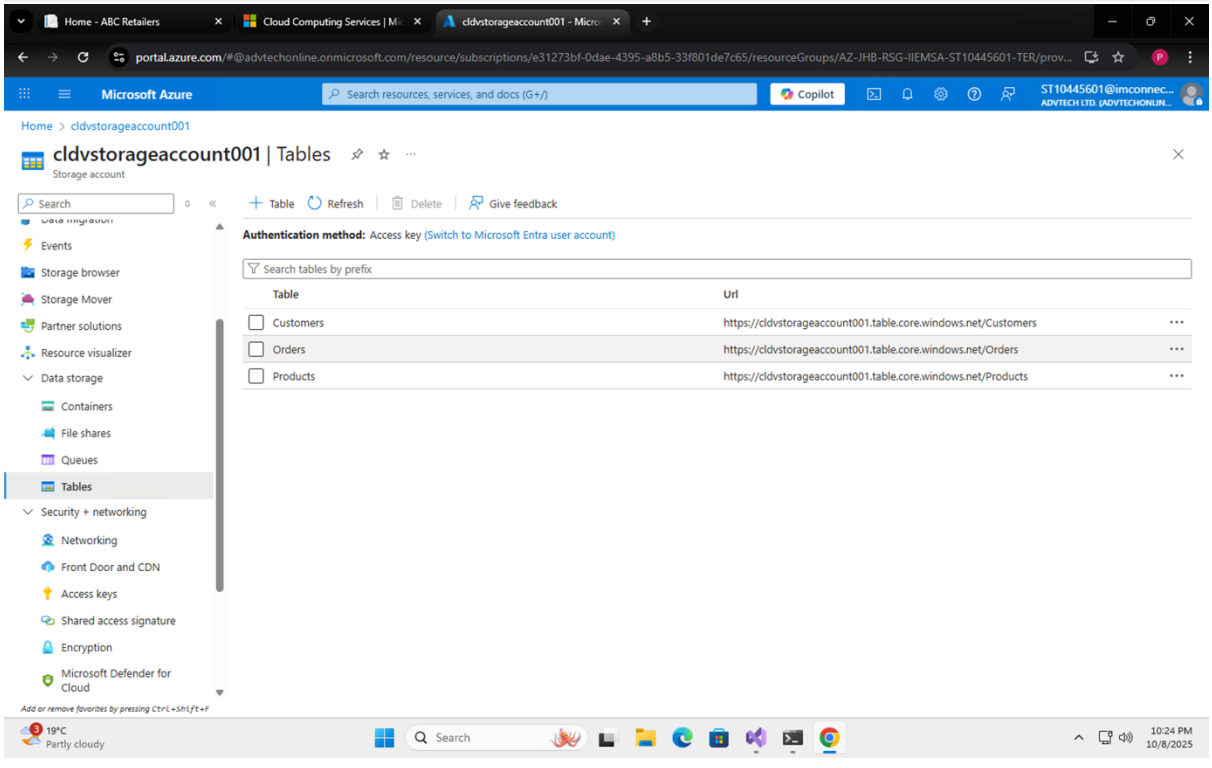
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https://cldvstorageaccount001.table.core.windows.net/Products
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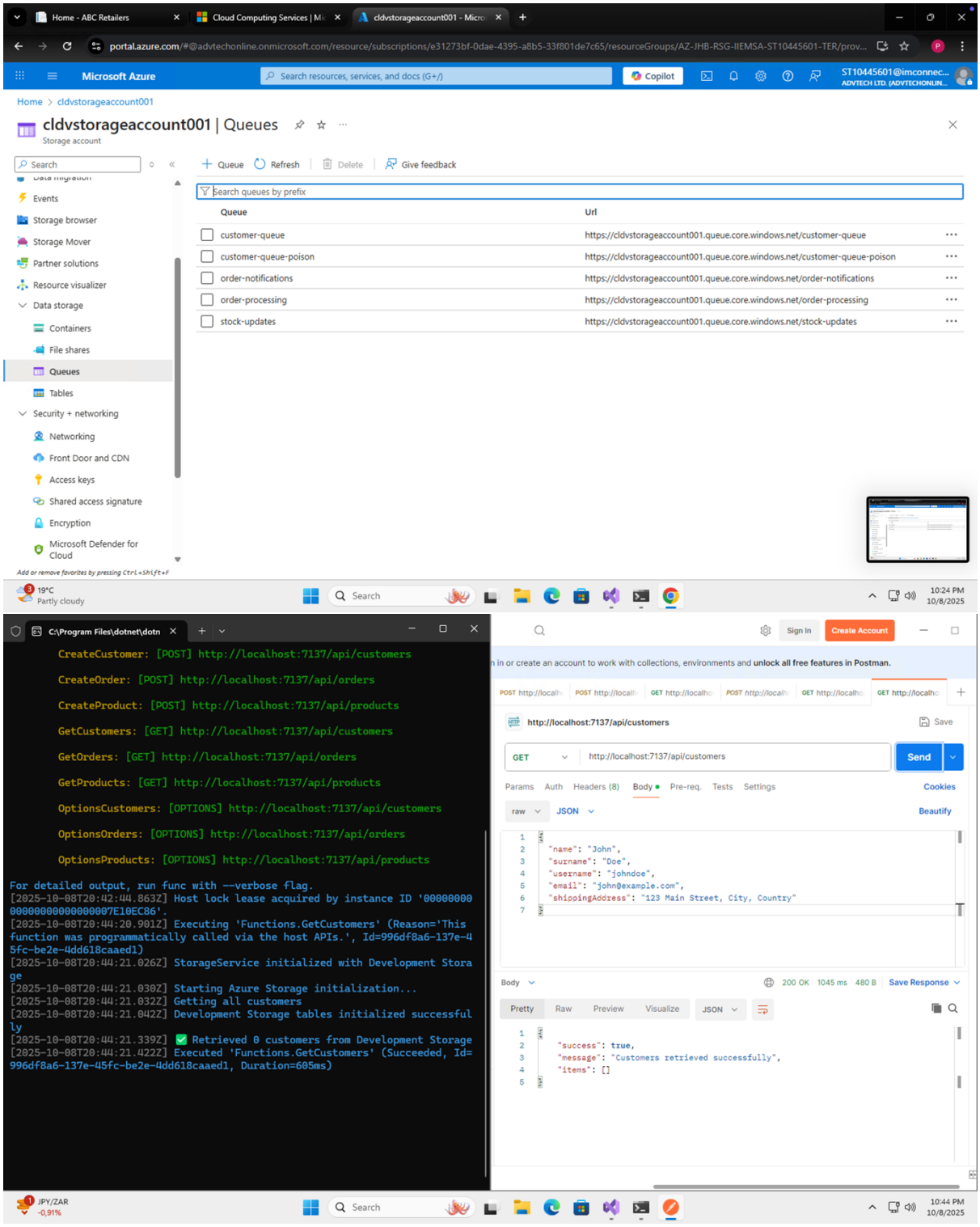
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https://cldvstorageaccount001.queue.core.windows.net/customer-queue-poison
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https://cldvstorageaccount001.queue.core.windows.net/order-notifications
order-processing
https://cldvstorageaccount001.queue.core.windows.net/order-processing
stock-updates
https://cldvstorageaccount001.queue.core.windows.net/stock-updates
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CreateCustomer: [POST] http://localhost:7137/api/customers
CreateOrder: [POST] http://localhost:7137/api/orders
CreateProduct: [POST] http://localhost:7137/api/products
GetCustomers: [GET] http://localhost:7137/api/customers
GetOrders: [GET] http://localhost:7137/api/orders
GetProducts: [GET] http://localhost:7137/api/products
OptionsCustomers: [OPTIONS] http://localhost:7137/api/customers
OptionsOrders: [OPTIONS] http://localhost:7137/api/orders
OptionsProducts: [OPTIONS] http://localhost:7137/api/products
For detailed output, run func with --verbose flag.
[2025-10-08T20:42:44.863Z] Host lock lease acquired by instance ID '00000000000000000000007E10EC86'.
[2025-10-08T20:44:20.901Z] Executing 'Functions.GetCustomers' (Reason='This function was programmatically called via the host APIs.', Id=996df8a6-137e-45fc-be2e-4dd618caaed1)
[2025-10-08T20:44:21.026Z] StorageService initialized with Development Storage
[2025-10-08T20:44:21.030Z] Starting Azure Storage initialization...
[2025-10-08T20:44:21.032Z] Getting all customers
[2025-10-08T20:44:21.042Z] Development Storage tables initialized successfully
[2025-10-08T20:44:21.339Z] Retrieved 0 customers from Development Storage
[2025-10-08T20:44:21.422Z] Executed 'Functions.GetCustomers' (Succeeded, Id=996df8a6-137e-45fc-be2e-4dd618caaed1, Duration=605ms)
Sign In
Create Account
unlock all free features in Postman.
http://localhost:7137/api/customers
Save
GET
http://localhost:7137/api/customers
Send
Params
Auth
Headers (8)
Body
Pre-req.
Tests
Settings
Cookies
raw
JSON
Beautify
{
"name": "John",
"surname": "Doe",
"username": "johndoe",
"email": "john@example.com",
"shippingAddress": "123 Main Street, City, Country"
}
Body
200 OK
1045 ms
480 B
Save Response
Pretty
Raw
Preview
Visualize
JSON
{
"success": true,
"message": "Customers retrieved successfully",
"items": []
}
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Search
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