

Dokumentacja Projektu – „Projekt dwóch mikroserwisów – ProductService i InventoryService”

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1. Link do repozytorium

Repozytorium z pełnym kodem obu usług (.NET 8 Minimal API):

https://github.com/Vaxi2137/przetwarzanie_rozproszone.git

Repo zawiera:

- ProductService (serwis produktów)
- InventoryService (serwis magazynowy)
- README z instrukcją uruchomienia

2. Dokumentacja działania systemu (zrzuty ekranu)

Screenshot 1 — Uruchomione serwisy

The screenshot displays two terminal windows side-by-side. The left window shows logs for the `ProductService`, indicating it is listening on `http://localhost:5001`. The right window shows logs for the `InventoryService`, detailing an incoming `GET /inventory/1` request from the `ProductService`. The logs include stack traces for the handling of the request.

```
info: ProductService[0]
  ProductService listening on http://localhost:5001
info: Microsoft.Hosting.Lifetime[14]
  Now listening on: http://localhost:5001
info: Microsoft.Hosting.Lifetime[0]
  Application started. Press Ctrl+C to shut down.
info: Microsoft.Hosting.Lifetime[0]
  Hosting environment: Development
info: Microsoft.Hosting.Lifetime[0]
  Content root path: C:\Users\butur\source\repos\ProductService
[ProductService] GET /products/1
[ProductService] Found product 1

at System.Net.Http.RedirectHandler.SendAsync(HttpRequestMessage request, Boolean async, CancellationToken cancellationToken)
  at Microsoft.Extensions.Http.Logging.LoggingHttpRequestMessageHandler.<SendCoreAsync>g__Core|5_0<(HttpRequestMessage request, Boolean useAsync, CancellationToken cancellationToken) cancellationToken cancellationToken)
    at Microsoft.Extensions.Http.Logging.LoggingScopeHttpRequestMessageHandler.<SendCoreAsync>g__Core|5_0<(HttpRequestMessage request, Boolean useAsync, CancellationToken cancellationToken)
      at System.Net.Http.HttpClient.<SendAsync>g__Core|83_0<(HttpRequestMessage request, HttpCompletionOption completionOption, CancellationTokenSource cts, Boolean disposeCts, CancellationTokenSource pendingRequestsCts, CancellationToken originalCancellationToken)
        at Program.<>c.<<<Main>>b__0_2>d.MoveNext() in C:\Users\butur\source\repos\InventoryService\Program.cs:line 24
        --- End of stack trace from previous location ---
      at Microsoft.AspNetCore.Http.RequestDelegateFactory.ExecuteTaskResult[T](Task`1 task, HttpContext httpContext)
        at Microsoft.AspNetCore.DiagnosticsDeveloperExceptionPageMiddlewareImpl.Invoke(HttpContext context)
[InventoryService] GET /inventory/1
info: System.Net.Http.HttpClient.products.LogicalHandler[100]
  Start processing HTTP request GET http://localhost:5001/products/1
info: System.Net.Http.HttpClient.products.ClientHandler[100]
  Sending HTTP request GET http://localhost:5001/products/1
info: System.Net.Http.HttpClient.products.ClientHandler[101]
  Received HTTP response headers after 246.2716ms - 200
info: System.Net.Http.HttpClient.products.LogicalHandler[101]
  End processing HTTP request after 259.4115ms - 200
[InventoryService] ProductService returned 200
```

Screenshot 2 — Scenariusz sukcesu

The screenshot shows a browser window displaying the URL `http://localhost:5002/inventory/1`. The page content is a JSON object representing a product. To the right of the browser is a terminal window showing the logs for the `InventoryService` handling this request. The logs show the service sending a `GET` request to the `ProductService` at `http://localhost:5001/products/1` and receiving a response.

```
info: ProductService[0]
  ProductService listening on http://localhost:5001
info: Microsoft.Hosting.Lifetime[14]
  Now listening on: http://localhost:5001
info: Microsoft.Hosting.Lifetime[0]
  Application started. Press Ctrl+C to shut down.
info: Microsoft.Hosting.Lifetime[0]
  Hosting environment: Development
info: Microsoft.Hosting.Lifetime[0]
  Content root path: C:\Users\butur\source\repos\ProductService
[ProductService] GET /products/1
[ProductService] Found product 1

localhost5002/inventory/1
http://localhost:5002/inventory/1
SON Nieprzetworzone dane Nagłówki
apisz Kopuj Zwin wszystkie Rozwiń wszystkie Filtruj JSON
product:
  id: 1
  name: "Klawiatura"
  price: 129.99
inventory:
  productId: 1
  quantity: 42
  location: "Main Warehouse"

at System.Threading.Tasks.TaskCompletionSourceWithCancellation`1.WaitWithCancellationAsync(CancellationToken cancellationToken)
  at System.Net.Http.HttpConnectionPool.SendWithVersionDetectionAndRetryAsync(HttpRequestMessage request, Boolean async, Boolean doRequestAuth, CancellationToken cancellationToken)
    at System.Net.Http.DiagnosticsHandler.SendAsyncCore(HttpRequestMessage request, Boolean async, CancellationToken cancellationToken)
      at System.Net.Http.RedirectHandler.SendAsync(HttpRequestMessage request, Boolean async, CancellationToken cancellationToken)
        at Microsoft.Extensions.Http.Logging.LoggingHttpRequestMessageHandler.<SendCoreAsync>g__Core|5_0<(HttpRequestMessage request, Boolean useAsync, CancellationToken cancellationToken) cancellationToken cancellationToken)
          at Microsoft.Extensions.Http.Logging.LoggingScopeHttpRequestMessageHandler.<SendCoreAsync>g__Core|5_0<(HttpRequestMessage request, Boolean useAsync, CancellationToken cancellationToken)
            at System.Net.Http.HttpClient.<SendAsync>g__Core|83_0<(HttpRequestMessage request, HttpCompletionOption completionOption, CancellationTokenSource cts, Boolean disposeCts, CancellationTokenSource pendingRequestsCts, CancellationToken originalCancellationToken)
              at Program.<>c.<<<Main>>b__0_2>d.MoveNext() in C:\Users\butur\source\repos\InventoryService\Program.cs:line 24
              --- End of stack trace from previous location ---
            at Microsoft.AspNetCore.Http.RequestDelegateFactory.ExecuteTaskResult[T](Task`1 task, HttpContext httpContext)
              at Microsoft.AspNetCore.DiagnosticsDeveloperExceptionPageMiddlewareImpl.Invoke(HttpContext context)
[InventoryService] GET /inventory/1
info: System.Net.Http.HttpClient.products.LogicalHandler[100]
  Start processing HTTP request GET http://localhost:5001/products/1
info: System.Net.Http.HttpClient.products.ClientHandler[100]
  Sending HTTP request GET http://localhost:5001/products/1
info: System.Net.Http.HttpClient.products.ClientHandler[101]
  Received HTTP response headers after 246.2716ms - 200
info: System.Net.Http.HttpClient.products.LogicalHandler[101]
  End processing HTTP request after 259.4115ms - 200
[InventoryService] ProductService returned 200
```

Screenshot 3 — Scenariusz błędu (404)

The image shows two terminal windows and a browser screenshot. The left terminal window displays logs from a .NET application (ProductService) running on port 5001. It shows the service starting, listening on localhost:5001, and handling requests for products 1 and 999. The right terminal window shows a stack trace for a 'FileNotFoundException' occurring in the 'InventoryService'. The browser screenshot shows a simple web page with a single link to '/inventory/999', which returns a 404 error message: "Product not found in catalog".

```
info: ProductService[0]
  ProductService listening on http://localhost:5001
info: Microsoft.Hosting.Lifetime[14]
  Now listening on: http://localhost:5001
info: Microsoft.Hosting.Lifetime[0]
  Application started. Press Ctrl+C to shut down.
info: Microsoft.Hosting.Lifetime[0]
  Hosting environment: Development
info: Microsoft.Hosting.Lifetime[0]
  Content root path: C:\Users\butur\source\repos\ProductService
[ProductService] GET /products/1
[ProductService] Found product 1
[ProductService] GET /products/999
[ProductService] Not found 999

localhost:5002/inventory/999
http://localhost:5002/inventory/999
ON Nieprzetworzone dane Nagłówki
apisz Kopiuj Zwiń wszystkie Rozwiń wszystkie Filtruj JSON
message: "Product not found in catalog"

C:\Users\butur\source\repos> + - x
C:\Users\butur\source\repos> + - x
at System.Threading.Tasks.TaskCompletionSourceWithCancellation`1
WaitWithCancellationAsync(CancellationToken cancellationToken)
at System.Net.Http.HttpConnectionPool.SendWithVersionDetectionAnd
RetryAsync(HttpRequestMessage request, Boolean async, Boolean doRequestAut
h, CancellationToken cancellationToken)
at System.Net.Http.DiagnosticsHandler.SendAsyncCore(HttpRequestMe
ssage request, Boolean async, CancellationToken cancellationToken)
at System.Net.Http.RedirectHandler.SendAsync(HttpRequestMessage r
equest, Boolean async, CancellationToken cancellationToken)
at Microsoft.Extensions.Http.Logging.LoggingHttpMessageHandler.<S
endCoreAsync>g__Core|5_0(HttpContext request, Boolean useAsync, Can
celationToken cancellationToken)
at Microsoft.Extensions.Http.Logging.LoggingScopeHttpMessageHandl
er.<SendCoreAsync>g__Core|5_0(HttpContext request, Boolean useAsync
, CancellationToken cancellationToken)
at System.Net.Http.HttpClient.<SendAsync>g__Core|83_0(HttpContext
Message request, HttpCompletionOption completionOption, CancellationTokenS
ource cts, Boolean disposeCts, CancellationTokenSource pendingRequestsCts,
CancellationToken originalCancellationToken)
at Program.<>c.<<<Main>$>b__0_2>d.MoveNext() in C:\Users\butur\so
urce\repos\InventoryService\Program.cs:line 24
--- End of stack trace from previous location ---
at Microsoft.AspNetCore.Http.RequestDelegateFactory.ExecuteTaskRe
sult[T](Task`1 task, HttpContext httpContext)
at Microsoft.AspNetCore.Diagnostics.DeveloperExceptionPageMiddlew
areImpl.Invoke(HttpContext context)
[InventoryService] GET /inventory/1
info: System.Net.Http.HttpClient.products.LogicalHandler[100]
Start processing HTTP request GET http://localhost:5001/products/1
info: System.Net.Http.HttpClient.products.ClientHandler[100]
Sending HTTP request GET http://localhost:5001/products/1
info: System.Net.Http.HttpClient.products.ClientHandler[101]
Received HTTP response headers after 246.2716ms - 200
info: System.Net.Http.HttpClient.products.LogicalHandler[101]
End processing HTTP request after 259.4115ms - 200
[InventoryService] ProductService returned 200
[InventoryService] GET /inventory/999
info: System.Net.Http.HttpClient.products.LogicalHandler[100]
Start processing HTTP request GET http://localhost:5001/products/999
info: System.Net.Http.HttpClient.products.ClientHandler[100]
Sending HTTP request GET http://localhost:5001/products/999
```

Podsumowanie

System składa się z dwóch mikroserwisów komunikujących się przez HTTP.

InventoryService pobiera dane z ProductService i zwraca wynik działania.

Udokumentowano poprawne działanie systemu w scenariuszu sukcesu oraz błędu.