Exception handling in asp.net core:

Add Exception Middleware:

public class ExceptionHandlingMiddleware

{

private readonly RequestDelegate \_next;

private readonly ILogger<ExceptionHandlingMiddleware> \_logger;

public ExceptionHandlingMiddleware(RequestDelegate next, ILogger<ExceptionHandlingMiddleware> logger)

{

\_next = next;

\_logger = logger;

}

public async Task InvokeAsync(HttpContext httpContext)

{

try

{

await \_next(httpContext); // Continue down the pipeline

}

catch (Exception ex)

{

\_logger.LogError(ex, "An unexpected error occurred.");

await HandleExceptionAsync(httpContext, ex);

}

}

private Task HandleExceptionAsync(HttpContext context, Exception exception)

{

context.Response.ContentType = "application/json";

context.Response.StatusCode = 500; // Internal Server Error

var errorResponse = new

{

message = "An unexpected error occurred.",

details = exception.Message

};

return context.Response.WriteAsJsonAsync(errorResponse);

}

}

Add it in Program.cs:  
builder.Services.AddExceptionHandler< ExceptionHandlingMiddleware>();

New way in Asp.net 8:

Built in Exception handler using IExceptionHandler implementation:  
This interface has only one TryHandleAsync method.You need two things to add an IExceptionHandler implementation to the ASP.NET Core request pipeline:

1. Register the IExceptionHandler service with dependency injection
2. Register the ExceptionHandlerMiddleware with the request pipeline
3. You call the AddExceptionHandler method to register the GlobalExceptionHandler as a service. It's registered with a singleton lifetime. So be careful about injecting services with a different lifetime.
4. call AddProblemDetails to generate a Problem Details response for common exceptions.

You can add multiple IExceptionHandler implementations, and they're called in the order they are registered. A possible use case for this is using exceptions for flow control.

in program.cs:

builder.Services.AddExceptionHandler<GlobalExceptionHandler>();

builder.Services.AddProblemDetails();

var app = builder.Build();

// Use the global exception handler

app.UseExceptionHandler();

internal sealed class GlobalExceptionHandler : IExceptionHandler

{

private readonly ILogger<GlobalExceptionHandler> \_logger;

public GlobalExceptionHandler(ILogger<GlobalExceptionHandler> logger)

{

\_logger = logger;

}

public async ValueTask<bool> TryHandleAsync(

HttpContext httpContext,

Exception exception,

CancellationToken cancellationToken)

{

\_logger.LogError(

exception, "Exception occurred: {Message}", exception.Message);

var problemDetails = new ProblemDetails

{

Status = StatusCodes.Status500InternalServerError,

Title = exception.Message

};

httpContext.Response.StatusCode = problemDetails.Status.Value;

await httpContext.Response

.WriteAsJsonAsync(problemDetails, cancellationToken);

return true;

}

}