🔐 Secure Code Review Report Based on SonarQube Analysis

# 🧾 Prioritized Issue Summary Table

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| --- | --- | --- | --- | --- | --- |
| Rank | Severity | Type | File | Line | Message |
| 45 | CRITICAL | CODE\_SMELL | src/Web/Areas/Identity/Pages/Account/Logout.cshtml.cs | 27 | Add a nested comment explaining why this method is empty, throw a 'NotSupportedException' or complete the implementation. |
| 108 | CRITICAL | CODE\_SMELL | src/Web/Pages/Privacy.cshtml.cs | 7 | Add a nested comment explaining why this method is empty, throw a 'NotSupportedException' or complete the implementation. |
| 105 | CRITICAL | CODE\_SMELL | src/Web/Pages/Basket/Success.cshtml.cs | 14 | Add a nested comment explaining why this method is empty, throw a 'NotSupportedException' or complete the implementation. |
| 23 | CRITICAL | CODE\_SMELL | src/Infrastructure/Data/CatalogContext.cs | 22 | Rename parameter 'builder' to 'modelBuilder' to match the base class declaration. |
| 69 | MAJOR | CODE\_SMELL | src/Web/Controllers/ManageController.cs | 324 | 'System.ApplicationException' should not be thrown by user code. |
| 68 | MAJOR | CODE\_SMELL | src/Web/Controllers/ManageController.cs | 310 | 'System.ApplicationException' should not be thrown by user code. |
| 67 | MAJOR | CODE\_SMELL | src/Web/Controllers/ManageController.cs | 300 | 'System.ApplicationException' should not be thrown by user code. |
| 66 | MAJOR | CODE\_SMELL | src/Web/Controllers/ManageController.cs | 283 | 'System.ApplicationException' should not be thrown by user code. |
| 65 | MAJOR | CODE\_SMELL | src/Web/Controllers/ManageController.cs | 277 | 'System.ApplicationException' should not be thrown by user code. |
| 64 | MAJOR | CODE\_SMELL | src/Web/Controllers/ManageController.cs | 271 | 'System.ApplicationException' should not be thrown by user code. |

# 📁 Per-Module Security Assessment

## 🔹 src/Web/Areas/Identity/Pages/Account

Security State: 🚧 CRITICAL  
Observations:  
- Empty method in logout process lacks context—could lead to unhandled logic or potential misuse.

## 🔹 src/Web/Pages/Privacy.cshtml.cs & Basket/Success.cshtml.cs

Security State: 🚧 CRITICAL  
Observations:  
- Empty handlers raise flags for overlooked functionality or poor error handling paths.

## 🔹 src/Infrastructure/Data/CatalogContext.cs

Security State: 🟠 MODERATE  
Observations:  
- Parameter renaming mismatch could introduce confusion, especially in override methods—leads to maintenance risks.

## 🔹 src/Web/Controllers/ManageController.cs

Security State: 🟠 MODERATE  
Observations:  
- Using deprecated exceptions like ApplicationException is discouraged as they don't provide enough diagnostic context.

# 🛠️ Actionable Recommendations

## 1. 🚫 Avoid Empty Methods Without Explanation

Files: Logout.cshtml.cs, Privacy.cshtml.cs, Success.cshtml.cs  
Fix:  
- Add meaningful comments like:  
 // This method is intentionally left blank to override the default behavior.  
- Or implement basic logging/error-handling if functionality is expected later.

## 2. 🧽 Rename Parameters to Match Base Declaration

File: CatalogContext.cs  
Fix:  
- Rename parameter to align with overridden method:  
 protected override void OnModelCreating(ModelBuilder modelBuilder)  
- Prevents confusion and supports maintainability.

## 3. ❌ Stop Throwing ApplicationException

File: ManageController.cs  
Fix:  
- Use more meaningful exception classes:  
 throw new InvalidOperationException("Specific failure reason");  
- Add contextual details for better debugging and logging.