# CWE Detail – CWE-486

## Description

The product compares classes by name, which can cause it to use the wrong class when multiple classes can have the same name.

## Extended Description

If the decision to trust the methods and data of an object is based on the name of a class, it is possible for malicious users to send objects of the same name as trusted classes and thereby gain the trust afforded to known classes and types.

## Threat-Mapped Scoring

Score: 0.0

Priority: Unclassified

## Modes of Introduction

**•** Implementation: N/A

## Common Consequences

**•** Impact: Execute Unauthorized Code or Commands — Notes: If a product relies solely on the name of an object to determine identity, it may execute the incorrect or unintended code.

## Potential Mitigations

**•** Implementation: Use class equivalency to determine type. Rather than use the class name to determine if an object is of a given type, use the getClass() method, and == operator. (Effectiveness: N/A)

## Applicable Platforms

**•** Java (Class: None, Prevalence: Undetermined)

## Demonstrative Examples

**•** However, multiple classes can have the same name therefore comparing an object's class by name can allow untrusted classes of the same name as the trusted class to be use to execute unintended or incorrect code. To compare the class of an object to the intended class the getClass() method and the comparison operator "==" should be used to ensure the correct trusted class is used, as shown in the following example.

**•** However, the equals method compares the class names of the object, obj, and the TrustedClass object to determine if they are the same class. As with the previous example using the name of the class to compare the class of objects can lead to the execution of unintended or incorrect code if the object passed to the equals method is of another class with the same name. To compare the class of an object to the intended class, the getClass() method and the comparison operator "==" should be used to ensure the correct trusted class is used, as shown in the following example.