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MSDN Seminar
Developing Secure Applications with Visual Studio 2005

วันพฤหัสบดีที่ 2 มีนาคม 2549
ห้องบอลรูม โรงแรมแชงกรี-ล่า
เวลา 08.30 -17.00 น.

msdn connection

Microsoft Visual Studio 2005

Microsoft Visual Studio

Writing Secure Code with Visual Studio Team System

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Microsoft Consultant
Microsoft (Thailand)

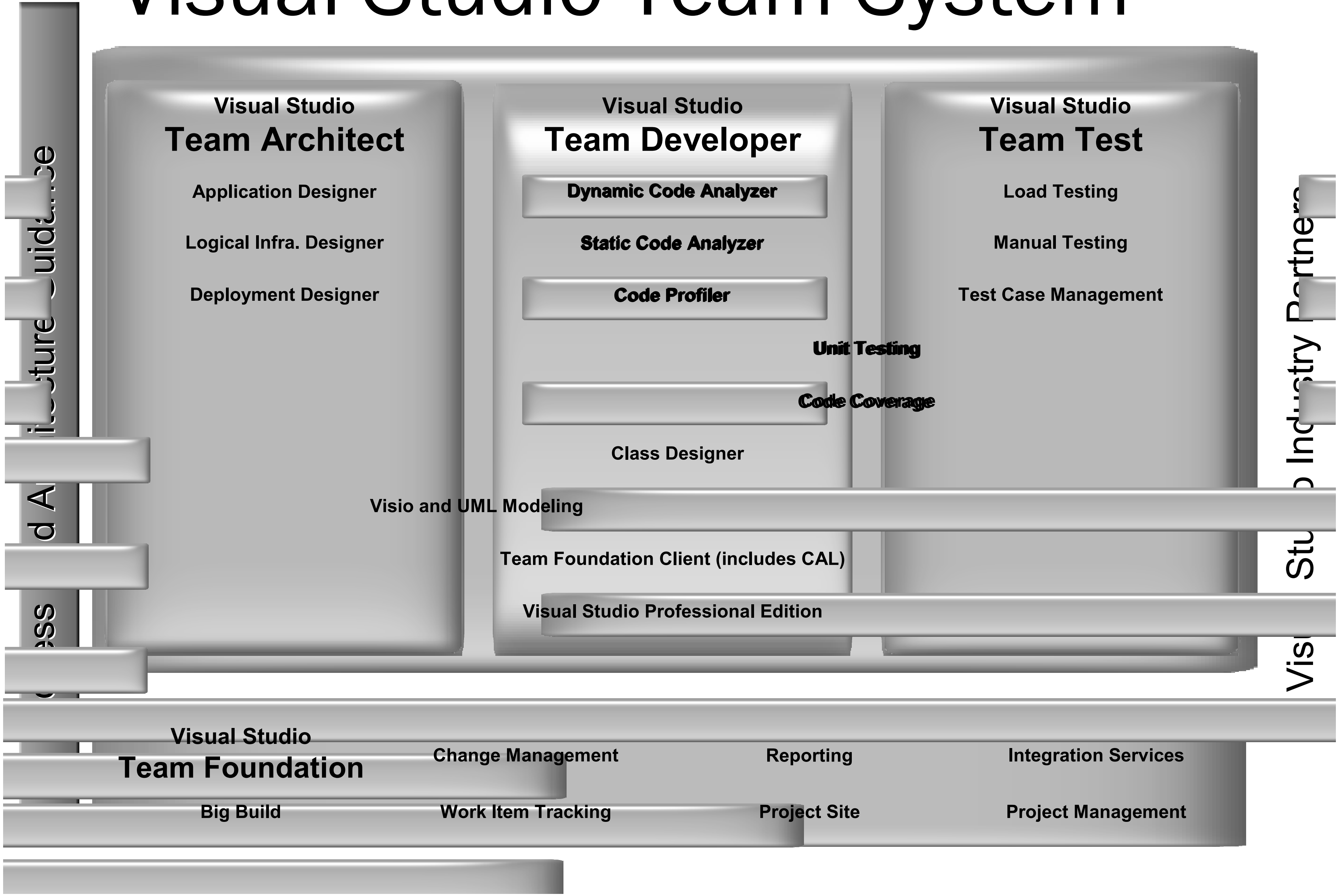
Objectives

- To demonstrate how to use new features of Visual Studio 2005 that help makes application more secure and robust

Agenda

- Visual Studio Team System Overview
- Using FXCop to Uncover Code Defects
- Writing Less Privilege Applications Using Code Access Security
- Using Integrated Code Coverage
- Stress Testing Web Application
- Summary

Visual Studio Team System



Process and Architecture Guidance

Visual Studio
Team Architect

- Application Designer
- Logical Infra. Designer
- Deployment Designer

Visual Studio
Team Developer

- Dynamic Code Analyzer
- Static Code Analyzer
- Code Profiler
- Unit Testing
- Code Coverage

Visual Studio
Team Test

- Load Testing
- Manual Testing
- Test Case Management

Class Designer

Visio and UML Modeling

Team Foundation Client (includes CAL)

Visual Studio Professional Edition

Visual Studio
Team Foundation

- Change Management
- Reporting
- Integration Services
- Big Build
- Work Item Tracking
- Project Site
- Project Management

Visual Studio Industry Partners

Team System

Dev Writes Unit Tests

Dev Writes And Tests C

Dev Reviews Work

Dev Runs Code Analysis

Dev Writes Load Tests

Dev Checks In Work

Developer

Tester Checks Build Status

Tester Runs Load Test

Tester Reports Bug

Dev Diagnoses & Fixes

Dev Checks In Work

Tester

Using FXCop
to Uncover Code Defect

FXCop

- A Code Analysis Tool that checks .NET managed code assemblies for conformance to the Microsoft .NET Framework Design Guidelines
- Use Reflection, MSIL Parsing, and CallGraph Analysis to inspect Assemblies for more than 200 defects
- Intended for Class Library Developer

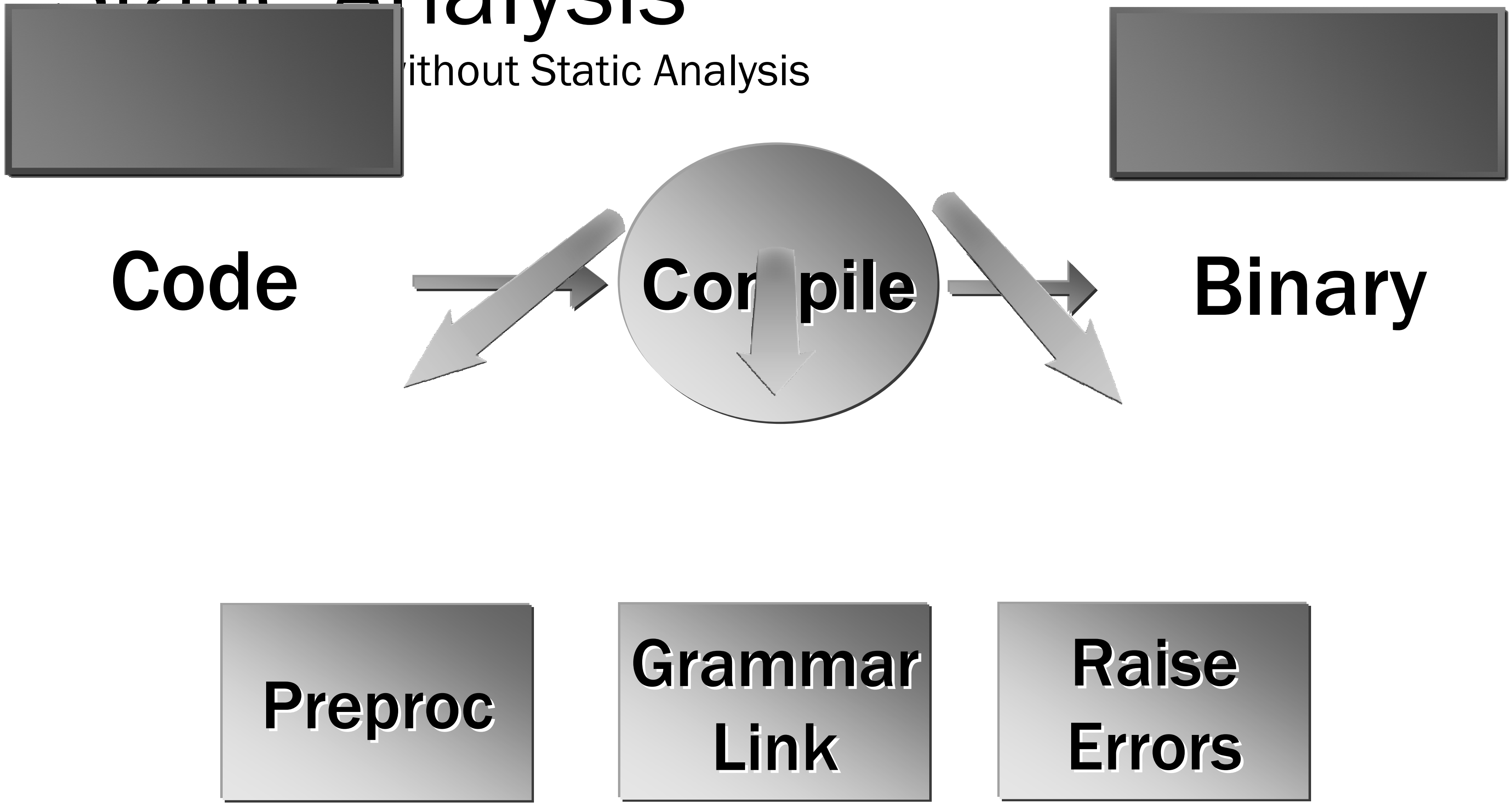
Static Analysis

- Find errors in your code before you run or deploy it
- Checks range from style to code correctness to security issues
- Integrated into the Team System Build Environment

CL1

Static Analysis

without Static Analysis



Slide 10

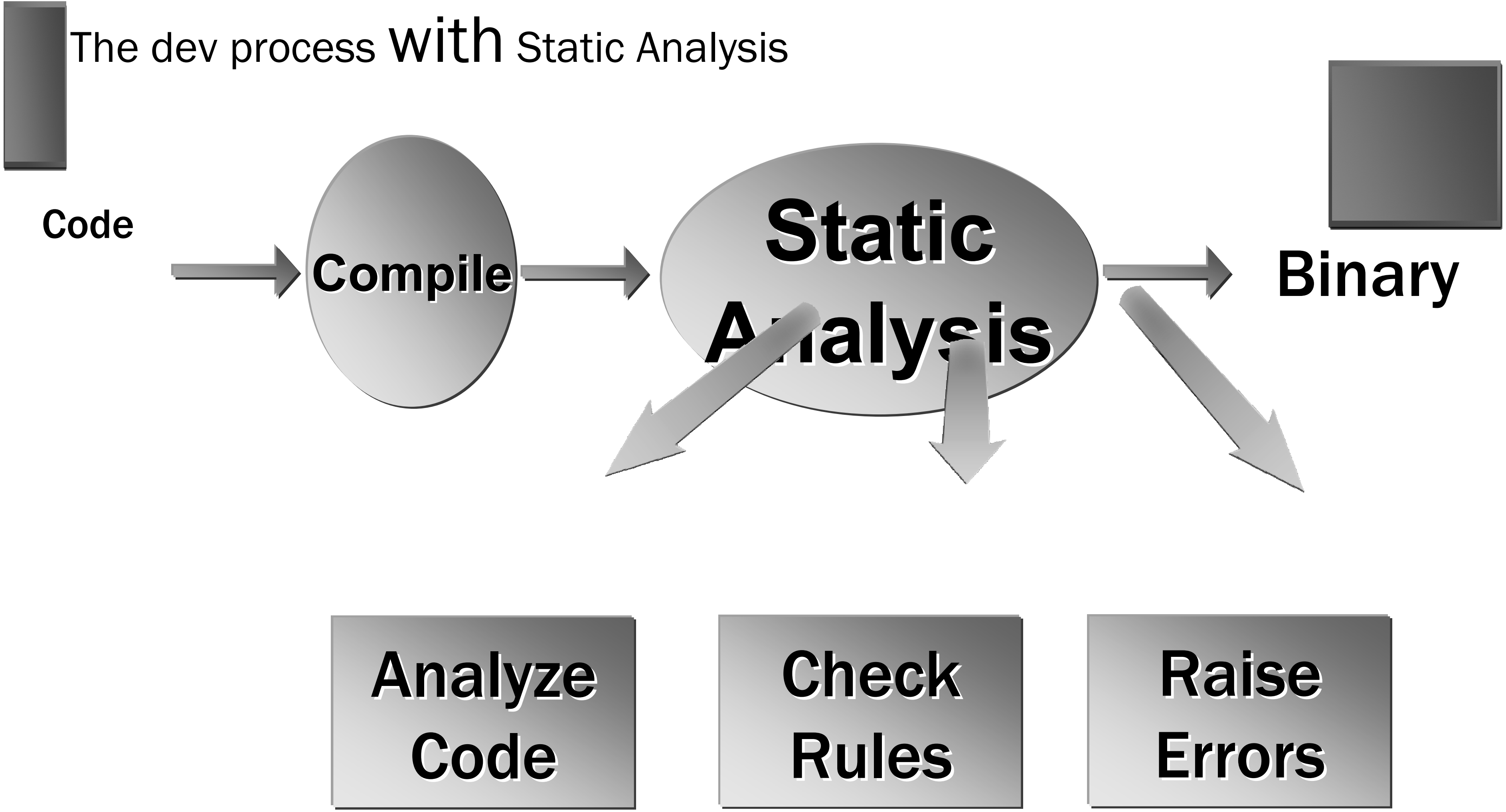
CL1 cut

Chris Lucas, 2/19/2004

CL2

Static Analysis

The dev process with Static Analysis



Code

Compile

Static Analysis

Binary

Analyze Code

Check Rules

Raise Errors

Slide 11

CL2 cut

Chris Lucas, 2/19/2004

Demo :

Using FXCop
to Uncover Code Defect

Writing Less Privilege Applications Using Code Access Security

Code Access Security (CAS)

- CAS limits the access the code has to protected resources and operations by restricting it to an explicit set of permissions according to policy specified

CAS Benefits

- Restrict What Your Code Can Do
- Restrict Which Code Can Call Your Code
- Identify Code

Demo :

Writing Less Privilege Applications Using Code Access Security

Using Integrated Code Coverage

Code Coverage

- Test Authoring isn’t about quantity, it’s about quality
- Code coverage helps you monitor your tests effectiveness
  - Team Members can analyze results at a high-level
  - Can also analyze source for specific missed methods and branches

Code Coverage

```
void PurchaseItem(int itemID)

{

    if (itemID == 0)
    {

        throw new Exception();

    }
    else

    {
        ProcessOrder(itemID);

    }

}
```

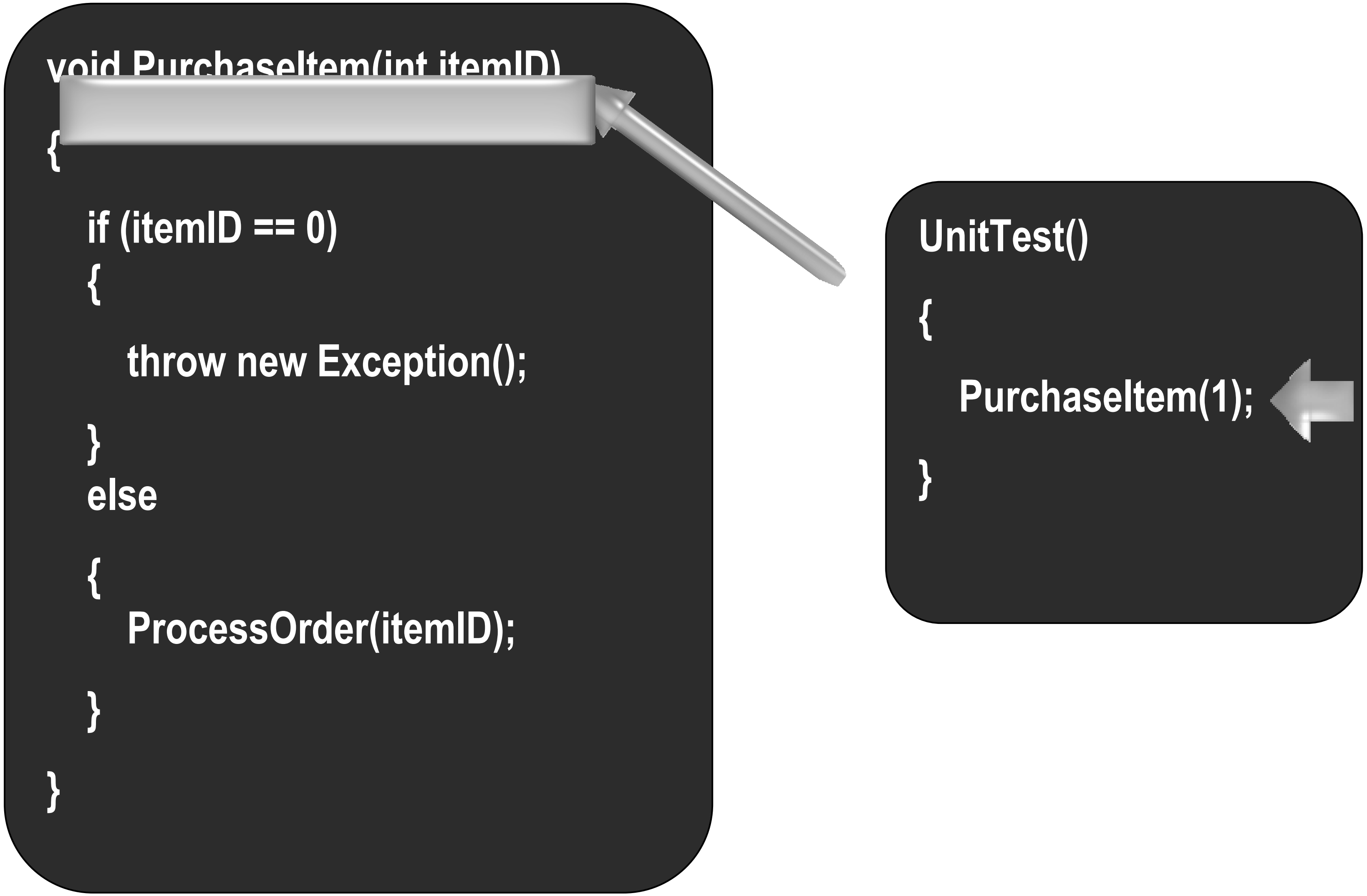
```
UnitTest()

{

    PurchaseItem(1);

}
```

Code Coverage



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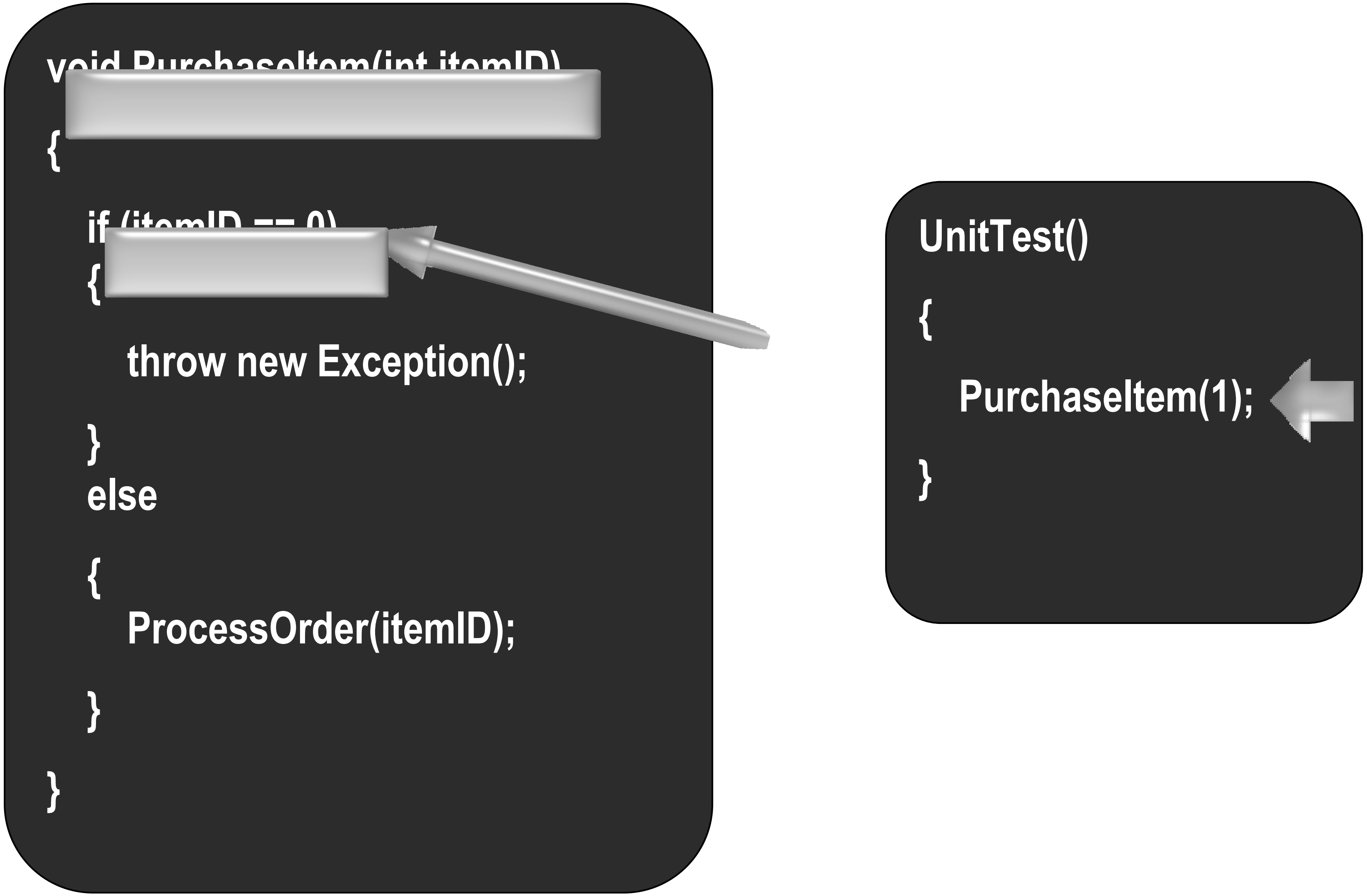

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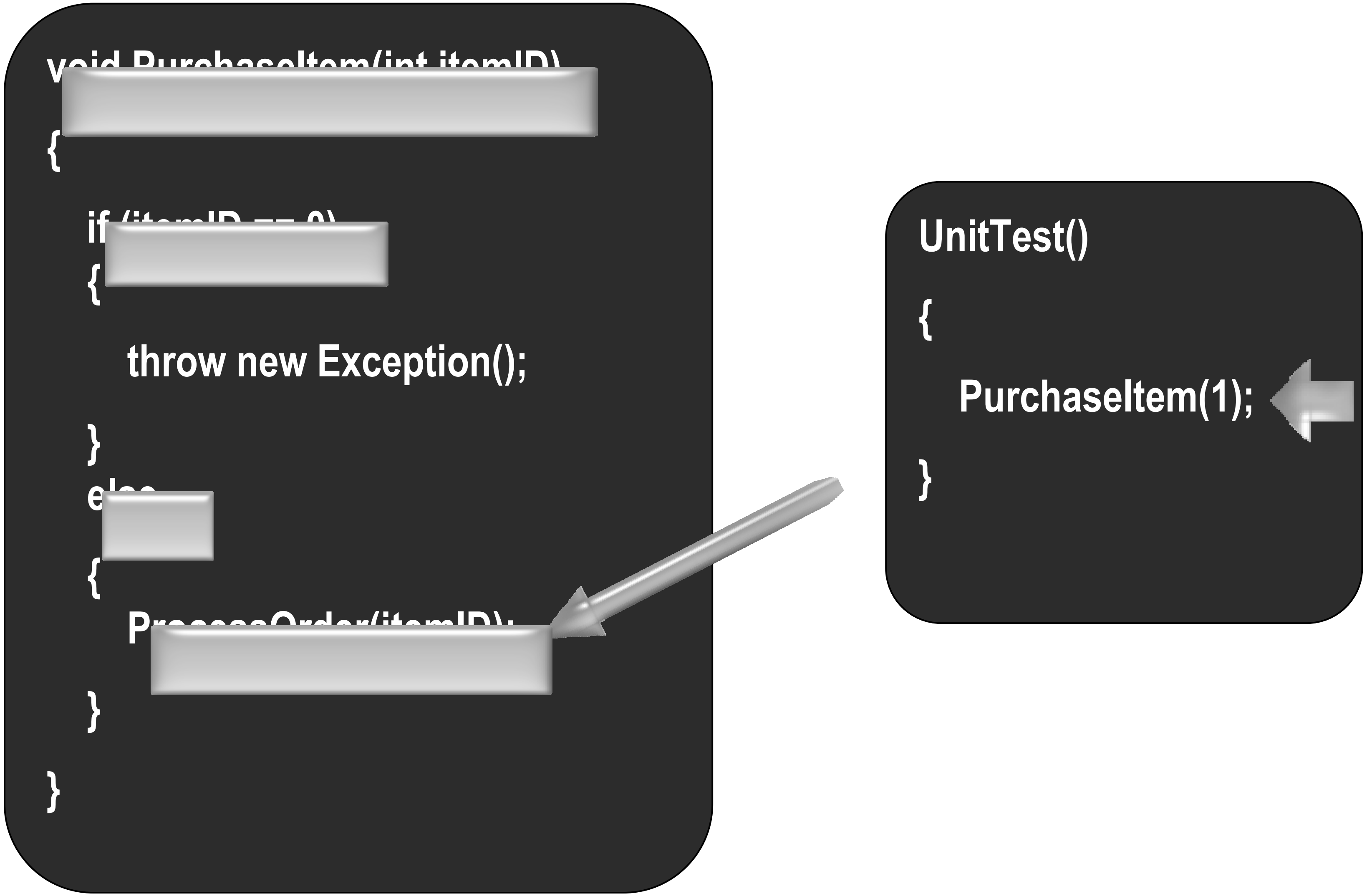

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Demo :

Using Integrated Code Coverage

Stress Testing
Web Application

Demo :

Stress Testing
Web Application

Summary

- Learn about new suite of tools in Visual Studio Team System for
  - Static Code Analysis (FXCop)
  - Code Access Security (CAS)
  - Code Coverage
  - Automated Stress Testing Tool

Questions

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