Pragmatic Unit Testing In C

CppCon 2014: Matt Hargett \"Pragmatic Unit Testing in C++\" - CppCon 2014: Matt Hargett \"Pragmatic Unit Testing in C++\" 1 hour, 7 minutes - http://www.cppcon.org — Presentation Slides, PDFs, Source Code and other presenter materials are available at: ...

Introduction

Summary

What unit testing is not

Optimize for readability

Readability Example: cgreen

Mocking: Runtime

Mocking: Side-by-side

Breaking Dependencies: Compile Time

Move Body: Template functions

Breaking Dependencies: Preprocessor

Breaking Dependencies: Redefine symbols

Breaking Dependencies: Link time

Breaking Dependencies: Static class

Runtime Performance (cont'd)

CppCon 2015: Matt Hargett “Advanced Unit Testing in C \u0026 C++” - CppCon 2015: Matt Hargett “Advanced Unit Testing in C \u0026 C++” 1 hour - http://www.Cppcon.org — Presentation Slides, PDFs, Source Code and other presenter materials are available at: ...

Intro

Summary

Agenda

For multi-taskers

Brief Refresher

Simple Unit Test in C: Start with a Bug

Simple Unit Test in C: Stub collaborators

Simple Unit Test: Running

Simple Unit Test: Mocking Example

Mocking: Link time Cgreen also supplies a mock framework

Mocking: Runtime

Unit Testing Kernel Code

(Linux) Kernel User-land Shim

Note

Mocking stdlib

Our impl and the test we want to write

Satisfying minimal dependencies

Mocking Singletons

Common header, our impl

Link-time mock wraps mockitopp

Mocking Factories

Deep Factory Mocking Example

Deploying a test framework

You Can't Unit Test C, Right? - You Can't Unit Test C, Right? 23 minutes - Benno Rice http://lca2018.linux.org.au/schedule/presentation/114/ **Testing**, is a wonderful thing. Code with good **tests**, is so much ...

Intro

Why is testing awesome?

Automated testing is awesome!

What's a unit?

What else defines a unit test?

Pragmatism \u0026 Coverage

The Mechanics of Automated Unit Testing

Isn't this about C?

Static Compilation

Mocking \u0026 Stubbing

Framework #1: check

Framework #2: atf \u0026 kyua

Dynamic vs Static Linking

Best Practices for Ugly Hacks

Testing main()

Keep main() as small as possible

Unit Testing Exceptions in C# [EN] - Unit Testing Exceptions in C# [EN] 11 minutes, 33 seconds - Using **unit tests for**, exceptions in C# **Unit Tests**,: https://www.youtube.com/watch?v=bhgEYLahrAk Repository: ...

Test Driven Development for Embedded C (Pragmatic Programmers) - Test Driven Development for Embedded C (Pragmatic Programmers) 3 minutes, 36 seconds - Get the Full Audiobook for Free: https://amzn.to/4g4c6Cf Visit our website: http://www.essensbooksummaries.com \"**Test**, Driven ...

UT - C++20 Unit Testing Framework - Kris Jusiak - [CppNow 2021] - UT - C++20 Unit Testing Framework - Kris Jusiak - [CppNow 2021] 1 hour, 31 minutes - In this case study, we will address the difficulty of **testing**, with C++ by implementing a new, fully functional, macro-free **testing**, ...

The Motivation

The Future

Implementation

Concept Test

Summary about the Concepts

Test Implementation

Operator Overloading

Immediately Invoked Function Expressions

Test Suite

Overview the Ut Framework

Does Ut Support Mocking

Fatal Expressions Assertion

Test Suite with Errors

Parameters Tests

Template Meta Programming

Lambdas

Benchmarking

Benchmarks

Reasons Why Ut Is Fast To Compile and Execute

Macro Based Frameworks

Infinte Jest: Pragmatic Unit Testing with Casey Ydenberg - Infinte Jest: Pragmatic Unit Testing with Casey Ydenberg 32 minutes - FIND US ON THE WEB === WEBSITE: https://exchangejs.com TWITTER: https://twitter.com/edmontonjs MEETUP: ...

Introduction

Overview

Why write unit tests

Testdriven development philosophy

Assumptions

What is unit testing

How to make it more efficient

Pure

Asynchronous

Testing Framework

Jest Overview

Example

Testing

Pricing

Failing tests

Writing implementation code

Example code

React

Enzyme

Promises

Is it still alive

Pragmatic Unit Testing in Java 8 with JUnit - Pragmatic Unit Testing in Java 8 with JUnit 1 minute, 53 seconds - From www.pragprog.com: The **Pragmatic**, Programmers classic is back! Freshly updated for modern software development, ...

Back to Basics: Unit Testing in C++ - Dave Steffen - CppCon 2024 - Back to Basics: Unit Testing in C++ - Dave Steffen - CppCon 2024 1 hour - Back to Basics: **Unit Testing**, in C++ - Dave Steffen - CppCon 2024 --- **Unit Testing**, is a big, complicated subject. With good advice ...

Code Review ? - C++ Backtesting Engine - Code Review ? - C++ Backtesting Engine 23 minutes - I reviewed a subscribers C++ backtesting engine, his engine didn't go too well. Join this channel to get access to perks: ...

Refactoring C++ Code for Unit testing with Dependency Injection - Peter Muldoon - CppCon 2024 - Refactoring C++ Code for Unit testing with Dependency Injection - Peter Muldoon - CppCon 2024 1 hour, 1 minute - Refactoring C++ Code for **Unit testing**, with Dependency Injection - Peter Muldoon - CppCon 2024 --- A key principle for testing ...

The Science of Unit Tests - Dave Steffen - CppCon 2020 - The Science of Unit Tests - Dave Steffen - CppCon 2020 55 minutes - But what are the fundamentals that lie beneath all the good advice? What principles should guide our **testing**,? This talk will start ...

Introduction

Previous CppCon talks

Properties of Unit Tests

Common Solutions

Whitebox Testing

BehaviorDriven Testing

The Luminiferous Ether

Empirical Science

Experimental Science

Experimental Setup

Precision

Alternative Solutions

Accuracy

Conclusion

Test Driven C++ - Phil Nash - CppCon 2020 - Test Driven C++ - Phil Nash - CppCon 2020 1 hour, 1 minute - We know that **testing**, is important, but writing **tests**, is hard and takes time - and can be demotivating when you want to hack out ...

Practical Advice for Maintaining and Migrating Working Code - Brian Ruth - CppCon 2021 - Practical Advice for Maintaining and Migrating Working Code - Brian Ruth - CppCon 2021 54 minutes - --- Brian Ruth Brian has been programming in C++ for 20+ years; working for both small and large companies on a wide variety of ...

Intro

Legacy Code

Testing

Getting Started

Discovery Testing

BottomUp Testing

Dealing with Dependencies

Scout Rule

Refactoring

Getters and Setters

Callsite Diagnostics

Use Public Functions

Ease Cognitive Burden

Prevent Maintenance Bugs

File in Files to Keep

Use Enums

Martin Fowler Quote

Conclusion

Google Test and Mock Platform, Complete Tutorial. Part 1: Google Test - Google Test and Mock Platform, Complete Tutorial. Part 1: Google Test 1 hour, 4 minutes - In this video, we will cover the following topics: - Introduction 00:00 - What is a **unit test**,? 02:22 - Why a test platform is needed?

Introduction

What is a unit test?

Why a test platform is needed?

Accompanying repo

Our first C++ unit test

Google Test Assertion Macros

Test Fixtures in GTest

Manipulating, Filtering, and skipping tests

Customizing GTest Output

Sharing Test Logic

Parameterized Tests

Typed Test

Type-Parameterized Test

Assertion in Subroutines

Command line arguments

Intro to CI/CD Part 3: Getting Started with Unit Testing | Digi-Key Electronics - Intro to CI/CD Part 3: Getting Started with Unit Testing | Digi-Key Electronics 50 minutes - This tutorial shows how to use CppUTest to build **unit tests for C**,/C++ applications. From there, we automate the testing process ...

Learn Unit Test with .Net 6 with xUnit and MOQ - Learn Unit Test with .Net 6 with xUnit and MOQ 1 hour, 29 minutes - In this video we are going to explore **Unit Test**, with .Net 6 and how can we get started and utilise MOQ. Agenda: 00:00 Intro 00:45 ...

Intro

Agenda

What is a Unit Test

Why Use Unit Test?

Unit Test Frameworks

How to think about testing?

Ingredients

Code Time - Basic Unit Test Example

Advance Unit Test with MOQ

Beginning C - Part 23 Unit Testing a Permutation - Beginning C - Part 23 Unit Testing a Permutation 35 minutes - In this short video, I demonstrate a simple way to write **unit tests for**, your **C**, programs. This video demonstrates a simple problem of ...

Intro

Test Function

Test Cases

Sort Function

Characteristics

Memory Allocation

String Copy

Sort

Copy Sort

Memory Leaks

Unit Testing Best Practices with Vladimir Khorikov - Unit Testing Best Practices with Vladimir Khorikov 1 hour, 6 minutes - Unit testing, is a vast topic. The industry has accumulated a huge amount of information about it during the past two decades.

How to measure unit test effectiveness

Functional and to end tests

Trivial tests

Fragile tests

Ideal test

How to write effective tests

Vladimir Khorikov — Pragmatic unit testing - Vladimir Khorikov — Pragmatic unit testing 59 minutes - Unit testing, is a vast topic. The industry has accumulated a huge amount of information about it during the past two decades.

About Myself

What's the Goal of Unit Testing

Important Benefit of Having a Unit Test Suite

Coverage Metrics

The Pragmatic Approach to Doing Testing

Protection against Regressions

Resistance to Refactoring

False Positive

What Causes False Positive

Maintainability

End-to-End Tests

Brittle Tests

Test Pyramid

Types of Unit Testing

Types of Unit Testing

State Based Testing

Collaboration Based Testing

Output Based Testing

Observable Behavior

Observable Behavior of the Application Services Layer

Maintaining Backward Compatibility

Examples

Three Types of Unit Testing

General Guideline

Sample Project

Main View Model

Overall Architecture

Components of Available Tests

Delete your unit tests - Delete your unit tests by Alberta Tech 281,488 views 6 months ago 27 seconds – play Short - programming #hopelesscore.

The Unit Tests Strike Back: Testing the Hard Parts - Dave Steffen - CppCon 2021 - The Unit Tests Strike Back: Testing the Hard Parts - Dave Steffen - CppCon 2021 1 hour, 1 minute - But in real life, it's rarely possible to meet all these goals at the same time, and some situations make writing **unit tests**, difficult or ...

Intro

Overview

Plan A Fails

The Problem

Buggy Nondeterminism

Plan B

Plan C

Summary

Fix the interface

Design mistake

Whitebox test

Friend class

How did we get here

What is Plan Omega

Conclusion

QA

Unit testing in C with criterion - Unit testing in C with criterion 12 minutes, 58 seconds - Finally, a clean and simple library to do **unit test in C**, and C++. criterion: https://github.com/Snaipe/Criterion criterion doc: ...

Unit Testing C# Code - Tutorial for Beginners - Unit Testing C# Code - Tutorial for Beginners 44 minutes - 00:00 What is Automated **Testing**, 02:42 Benefits of Automated **Testing**, 05:20 Types of **Tests**, 09:22 **Test**, Pyramid 12:18 The Tooling ...

What is Automated Testing

Benefits of Automated Testing

Types of Tests

Test Pyramid

The Tooling

Source Code

Writing Your First Unit Test

Testing All the Execution Paths

Refactoring With Confidence

Using NUnit in Visual Studio

What is Test-Driven Development

Course Structure

Summary

C Programming For Beginners: Tip #3: Unit Test To Ensure Consistency - C Programming For Beginners: Tip #3: Unit Test To Ensure Consistency 5 minutes, 46 seconds - Udemy courses: get book + video content in one package: Embedded **C**, Programming Design Patterns Udemy Course: ...

Introduction

Overview

Code Coverage

Writing Unit Tests

Use The Arrange - Act - Assert Pattern For Better Unit Tests #shorts - Use The Arrange - Act - Assert Pattern For Better Unit Tests #shorts by Milan Jovanovi? 8,427 views 2 years ago 19 seconds – play Short - Check out my **Pragmatic**, Clean Architecture course: https://bit.ly/3Zn41BK Support me on Patreon to

access the source code: ...

Unit Testing CQRS Handlers With Moq, Fluent Assertions, and xUnit - Unit Testing CQRS Handlers With Moq, Fluent Assertions, and xUnit 13 minutes, 53 seconds - In this video, I'm going to show you how to **unit test**, your CQRS command handlers. **Unit testing**, command handlers is very easy ...

What are we writing tests for?

Writing the first unit test

Accessing internal members in unit tests

Mocking dependencies with Moq

Writing assertions with FluentAssertions

Setting up mock methods

Writing the second unit test

Writing our third unit test

Writing our fourth unit test

Effective Unit Testing by Eliotte Rusty Harold - Effective Unit Testing by Eliotte Rusty Harold 48 minutes - You've been bitten by the **testing**, bug, are thoroughly **test**, infected. Excellent! You're undoubtedly producing more robust, less ...

Intro

Why do we write unit tests?

Eliminate everything that makes input or output unclear or contingent

Why Unit Tests?

Tests and Thread Safety

The Two Least Known Facts of Unit Testing

1. Tests do not share instance data

2. You can have many test classes per model class.

Speed

Passing tests should produce no output

Failing tests should produce clear output

Flakiness

System Skew

Avoid Conditional Logic in Tests

Refactoring

Development Practices

Final Thoughts

Course Preview: Building a Pragmatic Unit Test Suite - Course Preview: Building a Pragmatic Unit Test Suite 1 minute, 12 seconds - Join Pluralsight author Vladimir Khorikov as he walks you through a preview of his \"Building a **Pragmatic Unit Test**, Suite\" course ...

Introduction

Overview

Major Topics

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