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)

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

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

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

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 ...

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

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

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: ...

Back to Basics: C++ Testing - Amir Kirsh - CppCon 2022 - Back to Basics: C++ Testing - Amir Kirsh - CppCon 2022 1 hour, 2 minutes - Proper developer **testing**, is one of the most important steps in software development, and yet sometimes tend to be neglected, ...

SE 45 : Unit Testing with Example | Software Engineering Full Course @csittutorialsbyvrushali - SE 45 : Unit Testing with Example | Software Engineering Full Course @csittutorialsbyvrushali 8 minutes, 32 seconds - Keep Watching..! Keep Learning..! Thank You..! **unit testing**, in software testing **unit testing**, in software engineering **unit testing**, ...

Introduction

What is Unit Testing

Why Unit Testing is necessary

Example of Unit Testing

Advantages of Unit Testing

Disadvantages of Unit Testing

Exam Point of View

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 ...

Cantata - The Unit Testing Tool for C/C++ - Cantata - The Unit Testing Tool for C/C++ 52 minutes - Cantata provides advanced high productivity techniques, allowing developers to dynamically prove their code with intelligent **unit**, ...

Introduction

Software Development Lifecycle

Open Source Tools

Cantata on Host and Target

What Makes Cantata Different

Unit Isolation

stub

wrappers

main differences

integrated code coverage

legacy test cases

autotest parse

certification

generating test scripts

test script manager

account interface

console output

Wrapper

Before After

Whats next

Back to Basics: Test-driven Development - Fedor Pikus - CppCon 2019 - Back to Basics: Test-driven Development - Fedor Pikus - CppCon 2019 1 hour, 1 minute - — Back to Basics: **Test**,-driven Development In this class, attendees will learn about **test**,-driven development as it applies to C++ ...

Test-Driven Development

Unit Tests

Acceptance Test

Performance Tests

Unit Testing

Unit Testing Frameworks

Write a Solver for the Sudoku Puzzle

Google Test Framework

Test-Driven Development Process

Example Driven Design

How Do You Know When You Have Enough Tests

Testing Implementation

Other Options

Test Doubles

Compiler Magic

Compiler Flags Build Magic

Problems with Dependency Injection

Inversion of Control

Interface Injection

Runtime Polymorphism

Corner Cases

Testing Parallel Programs

Test-Driven Development of Multi-Threaded Programs

How Do You Test Concurrent Programs

Unit Testing of Concurrent

Dependency Injection

Be Practical

Modern Dev Practices Unit Testing high - Modern Dev Practices Unit Testing high 1 hour, 4 minutes - In this episode, Robert is joined by Phil Japikse, who explores how in modern development practices, **unit testing**, is part of the ...

Learning Curve

Test-Driven Design

Focusing on Tdd

Bdd

Three Steps to Testing

Obvious Symptom of Implementation

Unit Testing Business Logic The Right Way | Full Tutorial - Unit Testing Business Logic The Right Way | Full Tutorial 23 minutes - In this video, I will show you how to **unit**,-**test**, your application uses. **Unit testing** , the use cases shouldn't be complex. Granted, you ...

Test setup with NSubstitute, exposing internal members

Test cases for the \"Create user\" use case

Test cases for the \"Start following\" use case

How writing testable code makes testing easier

Code coverage overview

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: ...

Unconditional Code • Michael Feathers • GOTO 2018 - Unconditional Code • Michael Feathers • GOTO 2018 44 minutes - Michael Feathers - Working Effectively with Legacy Code ABSTRACT Many systems are full of error checks and conditional logic.

Error Handling

Throw Exceptions

Private Language

Can We Eliminate these Tunnels in Programming

Null Object Pattern

Extending the Domain

Extending the Domain

Tablature

Possible Errors

Exceptions

But if We Change It a Little Bit this Way It Makes Our Code Easier To Deal with and It Feels like We Should Feel Couple of Doing that Sort of Thing You Know Going In like Looking at Generalizing or Code in Particular Ways That Allow Us To GonNa Basically Avoid Edge Cases and Make Things a Bit Easier To Deal with so It's Kind Of Funny Anybody Hear of like the Five Why's At All It's Kind Of like You Know

Asking You Know if There's a Fault and You'Re Doing like Root Cause Analysis Why Did this Happen and Then Why Didn't You Know that Kind of Thing It's Interesting It's We Can Play the Same Game When We'Re Designing

And as I Mentioned Earlier It's like this There's an Interesting Thing Where You Know a Lot of Error Healing Is Basically Related to the Distance between the a Problem and Actually Deciding What the Only Do about It Right When You Follow this Chain You Might Start Think about Alternative Courses of Action That You Might Want To Go and Explore like for Instance You Might Go and Say Well Gee if I Can't Read the Configuration Is It Okay for Me To Actually Create a Default Configuration and Then Notify People and Let Them Know There's like Okay Well We Keep We Brought the System Up Using the Default Configuration because the Other One and It Depends upon the Context in some Context That's Okay and Now There's this Kind of like that To Be a Disaster

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 ...

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, ...

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

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? 8,451 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 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

LS33.2 - C - Unit Testing Introduction with Google Test - LS33.2 - C - Unit Testing Introduction with Google Test 11 minutes, 43 seconds - Press ENTER or type command to continue bash support/**test**,/**unit** ,/make.sh The **C**, compiler identification is GNU 7.4.0 The cxx ...

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: ...

C# Unit Testing Best Practices for Great Code Coverage - C# Unit Testing Best Practices for Great Code Coverage 17 minutes - In this video, I will show you how to **unit,-test**, domain services. **Unit testing**, domain services is easy since most dependencies will ...

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

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

Search filters

Keyboard shortcuts

Playback

General

Subtitles and closed captions

Spherical videos

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