

List of unit testing frameworks

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This page is a list of tables of code-driven unit testing frameworks for various programming languages. Some but not all of these are based on xUnit.

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Columns (Classification)

- **Name:** This column contains the name of the framework and will usually link to it.
- **xUnit:** This column indicates whether a framework should be considered of xUnit type.
- **TAP:** This column indicates whether a framework can emit TAP output for TAP-compliant testing harnesses.
- **Generators:** Indicates whether a framework supports data generators. Data generators generate input data for a test and the test is run for each input data that the generator produces.
- **Fixtures:** Indicates whether a framework supports test-local fixtures. Test-local fixtures ensure a specified environment for a single test.
- **Group fixtures:** Indicates whether a framework supports group fixtures. Group fixtures ensure a specified environment for a whole group of Tests
- **MPI:** Indicates whether a framework supports message passing via MPI - commonly used for high-performance scientific computing.
- **Other columns:** These columns indicate whether a specific language / tool feature is available / used by a framework.
- **Remarks:** Any remarks.

Languages

ABAP

Name	xUnit	Source	Remarks
ABAP Unit	Yes	^[1]	since SAP NetWeaver 2004

ActionScript / Adobe Flex

Name	xUnit	Source	Remarks
FlexUni		^[2]	
FlexUnit 4	Yes	^[3]	Metadata-driven unit testing for Flex 2,3 and 4 and ActionScript 3 projects
Reflex Unit		^[4]	Metadata-driven unit testing framework for Flex 2 and 3
ASTUce	Yes	^[5]	Unit testing for ActionScript 3 (also JavaScript, ActionScript 1, ActionScript 2), that can also run on the command-line with a cross-platform executable (support OS X / Linux / Windows)
AsUnit		^[6]	Flash Players 6, 7, 8, 9 and 10
dpUInt		^[7]	Unit and Integration testing framework for Flex 2 and 3
Fluint		^[8]	Unit and Integration testing framework for Flex 2 and 3
morefluent		^[9]	More fluent testing of asynchronous behaviors in Flex
mojotest	Yes	^[10]	(under development) Unit testing for ActionScript 3, Flash Player 10

Ada

Name	xUnit	Source	Remarks
AUnit		^[11]	
AdaTEST 95	No	^[12]	
Ahven		^[13]	
TBrun		^[14]	
VectorCAST/Ada	No	^[15]	

AppleScript

Name	xUnit	Source	Remarks
ASUnit	Yes	^[16]	Testing framework for AppleScript, influenced by SUnit, AStest and Python unittest
ASTest	Yes	^[17]	A testing framework for AppleScript

ASCET

Name	xUnit	Source	Remarks
TPT	Yes	^[18]	Model based physical stimulation and implemented stimulation

ASP

Name	xUnit	Source	Remarks
ASPUnit		[19]	

Bash

Name	xUnit	Source	Remarks
bats		[20]	Bats: Bash Automated Testing System

BPEL

Name	xUnit	Source	Remarks
BPELUnit		[21]	

C

Name	xUnit	Fixtures	Group fixtures	Generators	Source	License	Remarks
libcbdd	Yes	Yes	Yes		[22]	Apache License	libcbdd is block based behaviour driven development library which allows for very readable tests. Tests are written inside main functions and this allows for great flexibility on how to run these tests.
AceUnit	Yes	Yes			[23]	BSD License	AceUnit is JUnit 4.x style, easy, modular and flexible. AceUnit can be used in resource constraint environments, e.g. embedded software development, as well as on PCs, Workstations and Servers (Windows and UNIX).
API Sanity Checker	Yes	Yes (spectypes)	Yes (spectypes)	Yes	[24]	LGPL	Unit test generator for C/C++ libraries. Can automatically generate reasonable input data for every API function.
Automated Testing Framework					[25]	BSD	Originally developed for the NetBSD operating system but works well in most Unix-like platforms. Ability to install tests as part of a release.
Autounit (GNU)					[26]	LGPL	In beta/under construction
Parasoft C/C++test	Yes	Yes	Yes	Yes	[27]	Proprietary	Automated unit/component test generation and execution on host or embedded systems with code coverage and runtime error detection. Also provides static analysis and peer code review.
QA Systems Cantata	No	Yes	Yes	Yes	[28]	Proprietary	Automated unit and integration testing on host and embedded systems with code coverage and unique call interface control to simulate and intercept calls.
Catsrunner					[29]	GPL	Unit testing framework for cross-platform embedded development.
cfix	Yes				[30]		Specialized for Windows development—both Win32 and NT kernel mode. Compatible to WinUnit.
Cgreen					[31]	LGPL	Unit test framework including strict and loose mocks, reflective runner discovering tests automatically, suites, BDD-style Concept Under Test notation, test protected against exceptions, natural language out, extensible reporter, learning mocks...
CHEAT					[32][33]	BSD	Header-only unit testing framework. Multi-platform. Supports running each test in a separate process. Works without needing to "register" test cases.
Check	Yes	Yes	Yes		[34]	LGPL	Check features a simple interface for defining unit tests, putting little in the way of the developer. Tests are run in a separate process, so Check can catch both assertion failures and code errors that cause segmentation faults or other signals. The output from unit tests can be used within source code editors and IDEs. Check is supported on Linux, OS X, Windows, and probably others.
Cmocka	Yes	Yes	Yes		[35]	Apache License 2.0	CMocka is a test framework for C with support for mock objects. It's easy to use and setup.CMocka is the successor of cmockery, which was developed by Google but has been unmaintained for some time. So, CMocka was forked and will be maintained in the future.
Cmockery	Yes				[36]	Apache License 2.0	Google sponsored project.
CppUTest	Yes	Yes	No	Yes	[37]		Limited C++ set by design to keep usage easy and allow it to work on embedded platforms. C++ is buried in macros so the learning curve for C programmers is minimal. Ported to Symbian. Has a mocking support library CppUMock
Criterion	Yes	Yes	Yes	Yes	[38]	MIT	Unit testing framework with automatic test registration. Supports theories and parameterized tests. Each test is run in its own process, so signals and crashes can be reported. Can output to multiple formats, like the TAP format or JUnit XML. Supported on Linux, OS X, FreeBSD, and Windows.
CU					[39]	LGPL	CU is a simple unit testing framework for handling automated tests in C.
CTest	Yes	Yes	Yes		[40]	Apache License 2.0	Ctest is a framework with some special features: formatted output for easy parsing, easy to use.
CUnit	Yes				[41]	LGPL	OS independent (Windows, Linux, Mac OS X and probably others)
CUnitWin32	Yes				[42]	LGPL	For Win32. Minimalistic framework. Executes each test as a separate process.
CUT	No				[43]	BSD	
CuTest	Yes				[44]	zlib	Simple, straightforward, fast. Single .c file. Used in the Apache Portable Runtime Library.
Cutter	Yes				[45]	LGPL	A Unit Testing Framework for C.
EmbeddedUnit	Yes	Yes			[46]	MIT	Embedded C
Embunit	No				[47]	Proprietary	Create unit tests for C/C++ and Embedded C++
FCTX	Yes				[48]	BSD	Fast and complete unit testing framework all in one header. Declare and write your functions in one step. No dependencies. Cross-platform.
GLib Testing	Yes	Yes			[49]		Part of GLib
GUnit					[50]		for GNOME
lcut	Yes	Yes	Yes		[51]	Apache License 2.0	a Lightweight C Unit Testing framework, including mock support
LibU	Yes	No			[52]	BSD	multiplatform (Unices and Windows); explicit test case/suite dependencies; parallel and sandboxed execution; xml, txt and customizable report formatting.
MinUnit					[53]	as-is	extreme minimalist unit testing using 2 C macros
Mut	No	No	No	No	[54]	MIT	Another minimalistic framework for C and Unix. Single header file.
NovaProva	Yes	Yes	No	Yes	[55]	Apache License	Unit testing framework with automatic test registration. Supports mocking and stubbing. Each test is run in parallel with valgrind in its own process, so memory

						2.0	errors and signals can be caught. Supported on Linux.
Opmock	Yes	Yes	Yes	Yes	[56]	GPLv3	Stubbing and mocking framework for C and C++ based on code generation from headers. Can check call parameters, call sequence, handle multiple implementations of a mock, and more. Includes as well a small unit testing framework, with JUnit compatible XML output, but works also with any unit testing framework.
RCUNIT	Yes	Yes	Yes		[57]	MIT	RCUNIT is a small framework for testing C programs. It uses non-local jumps to emulate exceptions and handles program terminating signals (e.g. SIGILL) during test runs. RCUNIT allows creation of test fixtures, either per test or per test group.
RTRT					[58]		
SeaTest	Yes	Yes			[59]	MIT	Simple, pure C, unit testing framework
Smarttester					[60]		Automated unit and integration testing, and code coverage
Sput					[61]	2-clause BSD	Simple, portable C unit testing framework, single header file
STRIDE	Yes	Yes	Yes	No	[62]	Proprietary	Embedded software quality solution that includes techniques for unit, API, Behavior & Integration testing as well as interactive reporting portal
TBrun					[14]		Automated unit and integration testing, and code coverage
Tessy					[63]		Automated unit and integration testing, and code coverage
TestApe					[64]		Test and mocking framework. Automatic default mocks for unresolved externals
Test Dept.	Yes				[65]	GPL	Can modify calls from software under test; e.g. test error conditions by stubbing malloc and letting it return null. Well documented
TF unit test	Yes	Yes			[66]	GNU Lesser GPL	Pure C, supports test isolation in separate processes
TPT	Yes	Yes	Yes	Yes	[18]	Proprietary	Time Partition Testing: Automated model based unit and integration testing for embedded systems.
Unity	Yes			Yes	[67]	MIT	Lightweight and includes features for embedded development. Can work with Mocks and Exceptions via CMock and CException. Also integrated with test build environment Ceedling.
VectorCAST/C	No	Yes	Yes	Yes	[68]	Proprietary	Automated unit and integration testing, and code coverage
Visual Assert	Yes				[69]		Unit-Testing Add-In for Visual Studio. Based on the cfix testing framework.
tinytest	Yes	Yes			[70]	Apache	Standalone, no dependencies, header-only.
xTests					[71]	BSD	Depends on STLSoft C & C++ Libraries

C#

See .NET programming languages below.

C++

Name	License	xUnit	Fixtures	Group fixtures	Generators	Mocks	Exceptions	Macros	Templates	Grouping	Source	Remarks
Aeryn		No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	[72]	
API Sanity Checker	GNU LGPL	Yes	Yes (spectypes)	Yes (spectypes)	Yes						[24]	Unit test generator for C/C++ libraries. Automatically generate reasonable input data for every API function. LGPL
ATF	BSD						Yes	Yes	Yes	Yes	[25]	BSD Licensed. Originally developed for the NetBSD operating system works well in macOS. Unix-like platform. Ability to install as part of a release.
Bandit		No (describe/it)	Yes (describe)	Yes (Nested describe)	No	No	Yes	Yes	No	Yes (Nested describe)	[73]	Header only. Automatic test registration. Specifically developed for C++
Boost Test Library		Yes ^[74]	Yes ^[75]	Yes ^[76]	Yes	With additional library "Turtle" ^[77]	Yes	User decision	Yes	Suites	[78]	Part of Boost
BugEye	Boost	No	No	No	No	No	Yes	No	No	Yes	[79]	Header-only. Tailor output.
QA Systems Cantata		No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	[28]	Commercial. Automated OO u and integration testing on host and embedded systems with code coverage and unique call interface control simulate and intercept calls.
CATCH		No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	[80]	Header only, no external dependencies, automatic registration, tdd and bdd features
doctest		No	Yes	Yes	No	No	Yes	Yes	Yes	Yes	[81]	The lightest feature rich C++ single header testing framework
CATCH-VC6		No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	[82]	VC6 port of CATCH
cfix		Yes	Yes	No	No	No	Yes	Yes	No		[30]	Specialized for Windows development—both Win32 and NT kernel mode. Compatible with WinUnit.
Cput		Yes	Yes	Yes	Yes		Yes	Yes	No	Suites	[83]	Library and MS Visual Studio add-on to create and run tests. Open Source
CPPOCL/test	Apache 2	No	Yes		No		Yes	Yes			[84]	Released Under Apache 2.0, Compliant with C98 and C++ 11. Works for Linux Windows 32/64 bit using gcc, Cygwin, VS2005 and VS2008. Header file only library. Provides ability to write performance tests similar way to unit tests. Has some support for reporting memory leaks.
CppTest	GNU LGPL		Yes					Yes		Suites	[85]	Released under LGPL
cpptest-lite	MIT		Yes				Yes	Yes		Suites	[86]	Released under MIT. Developed for C++11.
CppUnit	GNU	Yes	Yes	Yes	No	No	Yes	Yes	No	Suites	[87][88]	Released under LGPL

	LGPL											
CppUTest		Yes	Yes	Yes	No	Yes	No	Yes	No	Suites	[37]	Limited C++ set design to keep use easy and allow it work on embedded platforms. C++ is buried in macros the learning curve for C programmers is minimal. Ported to Symbian. Has a mocking support library CppUMock.
CppUnitLite		Yes			No	No	No	Yes	No	Suites	[89]	
CPUUnit		Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	[90]	Released under E
Criterion	MIT	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Suites	[91]	Unit testing framework with automatic test registration. Needs C++11 compiler support for the C API. Supports theories and parameterized tests. Each test is run in its own process, so signals and crash can be reported. Output to multiple formats, like the JUnit XML format or JUnit XSL. Supported on Linux, OS X, FreeBSD, Windows. Released under the MIT license.
crpcut		No	Yes		No	No		Yes	Yes	Suites within Suites	[92]	BSD 2 clause. Runs each test in its own process, guaranteeing that the test suite continues even in event of an unexpected crash or infinite loop.
CUTE		Yes	Yes	No	No	Yes	Yes			Suites	[93]	CUTE (C++ Unit Testing Easier) with Eclipse CDT integration. Single line include, with inheritance. Mock support is provided by Mockator.
cutee		No	No	No	Yes						[94]	
CxxTest		Yes	Yes	Yes	No	Yes*	Optional	Yes	No	Suites	[95]	Uses a C++ parser and code generator (requiring Python) for test registration. Has a framework for generating mock objects, not for generating mocks of objects.
Embunit		No				No	Yes				[47]	Commercial. Creates unit tests for C/C++ and Embedded C.
Exercisix	BSD	No	No	No	No	No	Yes	Yes	Yes	Executables	[96]	BSD-licensed. Aims to make adding tests as fast and easy as possible.
FakeIt	MIT					Yes					[97]	Use the latest C++ features to create expressive, yet very simple, API. MIT license.
FCTX		Yes	Yes	Yes	No	No	No	Yes	No	Yes	[98]	Fast and complete unit testing framework all in header. Declare and write your functions in one step. No

												dependencies. C# platform.
Fructose		No	Yes	No	Yes	No	Yes	Yes	Yes	No	[99]	A simple unit test framework.
Name	License	xUnit	Fixtures	Group fixtures	Generators	Mocks	Exceptions	Macros	Templates	Grouping	Source	Remarks
Google C++ Mocking Framework						Yes	No	Yes	Yes		[100]	
Google Test	BSD	Yes	Yes			Yes	Yes	Yes	Yes		[101]	Supports automatic test discovery, a large set of assertions, defined assertion death tests, fatal & non-fatal failures, various options for running the tests, XML test report generation.
Hestia		Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Suites	[102]	Open source. Can run on servers, libraries, applications, and test embedded software.
Hippomocks						Yes	No	Yes	Yes		[103]	
Igloo			Yes (Contexts)	No	No	No	Yes	Yes	Yes	Yes (nested contexts)	[104]	BDD style unit testing in C++
lest		No	Yes	No	No	No	Yes	Yes	Yes	No	[105]	Tiny header-only C++11 test framework
liblittletest		Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	[106]	liblittletest is a portable, one file header-only C++ library for unit testing. Supports rich set of assertions, automatic test discovering and various options for running the tests.
libunittest		Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	[107]	libunittest is a portable C++ library for unit testing making use of C++11.
Typemock Isolator++		Yes	Yes			Yes	Yes	Yes	Yes		[108]	Commercial. Isolation/Mocking Framework for C/C++
Microsoft Unit Testing Framework for C++		Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	[109]	Commercial. Integrated into Microsoft Visual Studio 2012 IDE later versions.
Mockator						Yes	No	Yes	Yes		[110]	Header-only mocking object library and Eclipse plug-in to create test doubles; a simple yet powerful way; leverages native C++11 language facilities while still being compatible with C++03; has built-in support for CUTE
mock++/mockcpp		Yes	Yes		No	Yes	Yes	Yes	Yes	Suites	[111]	Simple testing framework for C (requires cmake)
mockitopp						Yes					[112]	A C++ mock object framework providing similar syntax to mockito for Java
mockpp		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Suites	[113]	A C++ mocking framework hosted by Google
NanoCppUnit		No	Yes	Yes	No	No	No	Yes	Yes	Suites	[114]	Proof-of-concept
NullUnit		Yes	Yes	Yes	No	No	Yes	Yes	Yes	Suites	[115]	Low effort, easy to use. Supports automatic test

												discovery, user-defined assertion fatal and non-fatal conditions, XML report generation strong support for IDE integration.
OAKUT		No	No	Yes	Yes (XML)	No	Yes	Yes	Yes	XML	[116]	Uses shared library DLLs
Opmock	GNU GPL	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	[56]	Stubbing and mocking framework for C and C++ based on code generation from headers. Does not imply modification to existing code, so suited for legacy refactoring. In particular, you do not need virtual operations or abstract classes. Can check call parameters, call sequence, handle multiple implementations mock, and more. Includes as well a small unit testing framework, with compatible xml output, but works with any unit test framework. GPL license.
Parasoft C/C++test		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	[27]	Commercial. Automated unit/component test generation and execution on hosts embedded system with code coverage and runtime error detection. Also provides static analysis and peer code review.
QtTest		Yes	Yes	No	No	No	Yes ^[117]	No	No		[118]	Built on the ultra cross platform Qt Library. Allows testing on Windows, Mac OS X, Linux, BSD, Symbian, and any other platform can build on.
QuickCheck++											[119]	Framework for automatically generating tests. Inspired by QuickCheck
QuickTest		No	No	No	No	No	Yes	Yes	Yes	No	[120]	
SafetyNet		Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	[121]	Lightweight fast testing framework that is easy to set and use. Works on Windows and Linux. Supports GNU C, VC++, MinGW, QtSDK and can create test projects in VisualStudio, CodeBlocks, Eclipse, KDevelop
ShortCUT		No								Yes	[122]	
STRIDE		Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	[123]	Commercial. Embedded software quality solution that includes techniques for unit, API, Behavior & Integration testing

												well as interactive reporting portal
Symbian OS Unit		Yes									[124]	Based on CxxTest
TBrun											[125]	Commercial.
Tessy											[63]	Commercial.
TDOG		Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Macro (namespaces)	[126]	TDOG is a lightweight, portable and open source xUnit Testing Framework.
Test soon		No	Yes	Yes	Yes	No	Auto-detect	Yes	Yes	Macro (namespaces)	[127]	Complex macro (deliberately)
Testwell CTA++		Yes	No	No	Yes	No	Yes	Yes	Yes		[128]	Commercial.
tpunit++		Yes	Yes		No	No	Optional	Yes	Yes		[129]	A simple, portable C++ xUnit library contained in a single header.
Trompeloil	Boost					Yes					[130]	Simple, yet powerful single header framework for mocking. Requires C++14. Boost Software License
TUT		No	No	Yes	No	No	Yes	Yes	Yes	Templates	[131]	Based on template Automatic test registration/discovery, customizable report generation process, various tests run options. Easy adaptable to world Windows CE.
Unit++											[132]	
unit.hpp		No	Yes	No	Yes	No	Yes	Yes	No		[133]	Extremely lightweight single header (<500loc) testing framework follows the spirit in regards to unit tests. Automatic discovery. RAII style test setup that are reusable in SECTIONS (Sim to Catch).
UnitTest++		No	Yes	Yes		No	Yes	Yes	Yes	Suites	[134]	UnitTest++ is free software. Simple portability, speed small footprint are important aspects of UnitTest++.
upp11		Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	[135]	Free software. Minimal (single header), auto test registrations, parametrized test etc. C++11 only.
UquoniTest		Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	[136]	Commercial. Adv features like easy creation of (reusable) test directories, F Booleans in assertions, and more
VectorCAST/C++		No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	[68]	Commercial. Automated unit and integration testing and code coverage
Visual Assert		Yes	Yes	No	No	No	Yes	Yes	No		[69]	Unit-Testing Add-on for Visual Studio Based on the cfx testing framework
WinUnit											[137]	Focused more towards C/C++ than .NET developers
xTests							Yes	Yes			[71]	Depends on STL C & C++ Libraries
xUnit++		Yes	Yes	Yes	Yes		Yes	Yes (Test	Yes	Yes (Suites and	[138]	Supports running tests concurrently

								setup only)		Attributes)		Macros are only for test setup, not test assertions.
tinytest	Apache 2	Yes						Yes			[70]	Standalone, no dependencies, he only. Apache lice
sTest	MIT						Yes	Yes	Yes	Yes	[139]	Lightweight (one header file, uses standard library). Simple to use and write tests quickl need to: build spe constructions, cre objects, use scop catch or throw exceptions). Counting, groupi and merging test: Easy to modify o (separated logic f printing logs). No C++11.
Name	License	xUnit	Fixtures	Group fixtures	Generators	Mocks	Exceptions	Macros	Templates	Grouping	Source	Remarks

Cg

Name	xUnit	Source	Remarks
UnitTestCg	No	[140]	Pixel and Vertex Shaders supported.

CFML (ColdFusion)

Name	xUnit	Source	Remarks
CFUnit			
cfcUnit	Yes		
MXUnit	Yes	[141]	Unit Test Framework with Eclipse and Sublime Text Plugins for CFML on ColdFusion, Railo, and Lucee
TestBox	Yes		xUnit and Behavior Driven Testing Framework for CFML ColdFusion, Railo, and Lucee
MockBox	No		Mocking/Stubbing Framework for CFML (ColdFusion)

Clojure

Name	xUnit	Source	Remarks
clojure.test (built-in)	Yes	[142]	
Fact	Yes	[143]	
Midje		[144]	
SpecJ	Yes	[145]	

Cobol

Name	xUnit	Source	Remarks
COBOLUnit (CBU)	Yes	[146]	GPL v3
cobol-unit-test	No	[147]	Enable isolated unit testing of individual paragraphs in COBOL programs, in a standalone environment with no connection to a z/OS system. (CC BY-SA 4.0)
savvytest	No	[148]	Commercial tool (rather than a framework) to edit and perform component tests on the IBM mainframe platform
zUnit	Yes	[149]	Commercial framework on the IBM mainframe platform
mfunit (MFU)	Yes	[150]	Commercial framework for testing Micro Focus COBOL programs on the Windows/Unix platforms

Common Lisp

Name	xUnit	Source	Remarks
CLUnit		[151]	
CyberTiggyr Test		[152]	
FiveAM	No	[153]	
FReT		[154]	
grand-prix		[155]	
HEUTE		[156]	
LIFT		[157]	
lisp-unit		[158]	
RT		[159]	
stefil		[160]	
XLUnit		[161]	

Crystal

Name	xUnit	Source	Remarks
Crotest		[162]	MIT License. A tiny and simple test framework for Crystal with common assertions and no pollution into Object class.

Curl

Name	xUnit	Source	Remarks
CurlUnit		[163]	

Delphi

Name	xUnit	Source	License	Remarks
DUnit	Yes	[164]	MPL	-
DUnit2	Yes	[165]		-
DUnitX	Yes	[166]		-

Emacs Lisp

Name	xUnit	Source	Remarks
ElUnit		[167]	
elk-test	No	[168]	
Unit-test.el		[169]	

Erlang

Name	xUnit	Fixtures	Group Fixtures	Generators	Source	Remarks
EUnit	Yes	Yes	Yes	Yes	[170]	Included in Erlang release R12B5 and later

Fortran

Name	xUnit	Fixtures	Group fixtures	Generators	MPI	OpenMP	Source	Remarks
FUnit	Yes	Yes	Yes	No			[171]	Minimum Fortran plus assertions and boiler plate expanded via Ruby.
FRUIT	Yes	Yes	Yes	Yes			[172]	Written in Fortran 95 yet works with code written in any version of Fortran. Has assertions, fixture, setup, teardown, reporting and more. Generator in Ruby.
Ftnunit							[173]	
pFUnit	Yes	Yes	Yes	Yes	Yes	Yes	[174]	Supports testing of MPI and OpenMP based procedures. A fully object-oriented implementation using Fortran 2003 is now available. In use with a range of legacy and new Fortran code.
ObjexxFTK:UnitTest							[175]	User writes Fortran tests: Python script automatically finds all tests and generates the Fortran test driver. Supports F77-F2003. Assertion support and string and array libs included.

F#

Name	xUnit	Source	Remarks
Foq	No	[176]	Lightweight type-safe and thread-safe mock object library for F# with C# and VB.Net support.
FsCheck	No	[177]	Random testing (Fuzzing) combinator library based on QuickCheck for Haskell.
FsMocks	No	[178]	F# mock library based on Rhino.Mocks.
FsTest	Yes	[179]	Domain specific language for writing language oriented programming specifications in F#. Based on FsUnit syntax, but targeting xUnit.net.
FsUnit	No	[180]	Stand-alone Behavior Driven Development framework, with natural syntax for writing specifications.
NaturalSpec	No	[181]	Domain specific language for writing specifications in a natural language. Based on NUnit.
Unquote	Yes	[182]	Combines F# Quotation decompilation, evaluation, and incremental reduction implementations to allow test assertions to be written as plain, statically-checked quoted expressions which produce step-by-step failure messages. Integrates configuration-free with all exception-based unit testing frameworks including xUnit.net, NUnit, and MbUnit. Unquote may also be used within FSI sessions.
Other		-	See also listing for .NET programming languages, elsewhere on this page.

Go

Name	xUnit	Source	Remarks
go test		[183]	'Go test' automates testing the packages named by the import paths.
go2xunit	Yes	[184]	Converts go test -v (or gocheck -vv) output to xunit or xunit.net compatible XML output (used in Jenkins/Hudson).

Groovy

All entries under Java may also be used in Groovy.

Name	xUnit	Source	Remarks
easyb		[185]	BDD
Spock	Yes	[186]	
Gmock	Yes	[187]	Mocking Framework

Genexus

Name	xUnit	Source	Remarks
GXUnit	Yes	[188]	It's a framework (prototype) to perform unit testing for Genexus.

Haskell

Name	xUnit	Source	Remarks
HUnit	Yes	[189]	
HUnit-Plus	Yes	[190]	
QuickCheck	No	[191]	QuickCheck
SmallCheck	No	[192]	Exhaustive analysis test of "small" example data.
Hspec		[193]	RSpec-style BDD framework for Haskell that integrates with QuickCheck and HUnit.
chuchu	No	[194]	Cucumber-style acceptance testing framework for Haskell
bdd	No	[195]	Internal domain-specific language for testing programs using Behavior-Driven Development process

Haxe

Name	xUnit	Source	Remarks
munit		[196]	Produces HTML reports for multiple compile targets including JavaScript, ActionScript and C++

HLSL

Name	xUnit	Source	Remarks
UnitTestCg	No	[140]	Pixel and Vertex Shaders supported.

ITT IDL

Name	xUnit	Source	Remarks
MGunit	Yes	[197]	
white paper		[198]	Only a white paper, not a framework

Internet

Name	xUnit	Source	Remarks
HtmlUnit		[199]	Java headless browser emulator
HttpUnit			Testing framework for web applications, typically used in combination with JUnit
IEUnit		[200]	Testing framework for web applications, based on IE browser and JavaScript
Canoo WebTest		[201]	Open source framework based on HtmlUnit. Support both XML-like or Groovy syntax in scripting.
Selenium			Testing framework whose playback can run in most modern web browsers to test webpages.
Watir			Testing framework based on the Ruby language, that can run in web browsers to test webpages.
soapUI		[202]	Open source web service testing platform for service-oriented architectures.
SOAtest		[203][204]	Commercial. API testing platform whose record/playback runs in most modern web browsers to test webpages. Supports Selenium WebDriver.

Java

Name	xUnit	Source	Remarks
Arquillian	Yes	[205]	Open source framework for writing Integration and functional tests. It includes Arquillian graphene, Drone and Selenium to write tests to the visual layer too.
beanSpec		[206]	Behavior-driven development
BeanTest	No	[207]	A tiny Java web test framework built to use WebDriver/HTMLUnit within BeanShell scripts
Cactus			A JUnit extension for testing Java EE and web applications. Cactus tests are executed inside the Java EE/web container.
Concordion		[208]	Acceptance test-driven development, Behavior-driven development, Specification by example
Concutest		[209]	A framework for testing concurrent programs
Cucumber-JVM		[210]	Behavior-driven development replaces deprecated JRuby-based Cuke4Duke
Cuppa		[211]	Behavior-driven development framework for Java 8
DbUnit		[212]	A JUnit extension to perform unit testing with database-driven programs
EasyMock		[213]	A mock framework ^[214]
EtlUnit	Yes	[215]	A unit testing framework for Extract-Transform-Load processes, written in Java. Capable of testing Oracle, Informatica, SqlServer, PostGreSQL, MySQL, etc. ^[216]
EvoSuite		[217]	A test case generation tool that can automatically generate JUnit tests.
GrandTestAuto		[218]	GrandTestAuto (GTA) is a platform for the complete automated testing of Java software. Tests can be distributed across a number of machines on a network.
GroboUtils		[219]	A JUnit extension providing automated documentation, class hierarchy unit testing, code coverage, and multi-threaded tests.
HavaRunner	Yes	[220]	A JUnit runner with built-in concurrency support, suites and scenarios.
Instinct		[221]	Behavior-driven development
Java Server-Side Testing framework (JSST)		[222]	Java Server-Side Testing framework which is based on the similar idea to the one of Apache CACTUS, but unlike CACTUS it's not coupled to JUnit 3.x and can be used in conjunction with any testing framework.
JBehave		[223]	Behavior-driven development
JDave		[224]	Behavior-driven development
JExample	Yes	[225]	A JUnit extension that uses dependencies between test cases to reduce code duplication and improves defect localization.
JGiven		[226]	Behavior-driven development
JMock		[227]	A mock framework
JMockit		[228]	Open source framework. Tests can easily be written that will mock final classes, static methods, constructors, and so on. There are no limitations.
Jnario	Yes	[229]	Behavior-driven development like Cucumber
Jtest	Yes	[230]	Commercial. Automated unit/component test generation and execution with code coverage and runtime error detection. Also provides static analysis and peer code review.
Jukito		[231]	Combines Mockito and Guice to allow automatic mocking and instantiation of dependencies
JUnit	Yes	[232]	
JUnitEE		[233]	A JUnit extension for testing Java EE applications
JWalk		[234]	Fast, semi-automatic creation of exhaustive unit test-sets
Mockito		[235]	A mock framework, using the [12] library
Mockrunner		[236]	A JUnit extension for testing testing servlets, filters, tag classes and Struts actions and forms.
Needle		[237]	Open source framework for testing Java EE components outside of the container in isolation.
NUTester		[238]	Testing framework developed at Northeastern University to aid in teaching introductory computer science courses in Java
OpenPojo		[239]	Open source framework used to validate and enforce POJO behavior as well as manage identity - equals, hashCode & toString.
PowerMock		[240]	An extension to both Mockito and EasyMock that allows mocking of static methods, constructors, final classes and methods, private methods, removal of static initializers and more.
Randoop	Yes	[241]	Automatically finds bugs and generates unit tests for Java, via feedback-directed random testing (a variant of Fuzzing).
SpryTest	Yes	[242]	Commercial. Automated Unit Testing Framework for Java
SureAssert		[243]	An integrated Java unit testing solution for Eclipse. Contract-First Design and test-driven development
TestNG	Yes	[244]	Tests can include unit tests, functional tests, and integration tests. Has facilities to create even no-functional tests (as loading tests, timed tests). ^{[245][246]}
Unitils		[247]	Offers general utilities and features for helping with persistence layer testing and testing with mock objects. Offers specific support for testing application code that makes use of JPA, hibernate and spring. Unitils integrates with the test frameworks JUnit and TestNG.
XMLUnit		[248]	JUnit and NUnit testing for XML

JavaScript

Name	xUnit	TAP	Client-side	Server-side	Source	Remarks
AVA	Yes	Yes	No	Yes	[249]	Futuristic JavaScript test runner
Suitest			Yes	Yes	[250]	[OBSOLETE]: Suitest is a powerful and easy-to-use JavaScript BDD test suite
DOH			Yes	Yes	[251]	Dojo Objective Harness that can be run in-browser or independently via Rhino
LBRTW UT		No	Yes	No	[252][253]	Developed as a learning project
JSUnit	Yes	No	Yes	No	[254]	JSUnit is no longer actively maintained
Enhance JS	Yes	No	Yes	No	[255]	Port of Enhance PHP
QUnit			Yes	Yes	[256]	jQuery test harness
Unit.js	Compatible	Yes	Yes	Yes	[257]	Unit testing framework for javascript and Node.js. Unit.js works with any unit testing framework and assertion libraries. Multiple assertions styles: TDD, BDD, spec (provides a spec documentation generator), expect, ...
RhUnit			Yes	Yes	[258]	QUnit compatible Rhino/JUnit framework
Crosscheck			No	Yes	[259]	Browserless Java-based framework
J3Unit			Yes	No	[260]	
Mocha	Yes	Yes	Yes	Yes	[261]	JavaScript test framework running on node.js
intern	No	Yes	Yes	Yes	[262]	
JSNUnit			Yes	No	[263]	
YUI Test	Yes	Yes	Yes	Yes	[264]	
JSSpec			Yes	No	[265]	Behaviour-driven development framework
UnitTesting			Yes	No	[266]	script.aculo.us javascript test harness
JSpec			Yes	Yes	[267]	Highly readable BDD, 50+ matchers, DOM / framework independent, async, rhino, node.js support and more (no longer maintained)
Jasmine			Yes	Yes	[268]	BDD, framework independent, easy integration with Ruby projects and continuous builds. Allows for both DOM-less testing and asynchronous testing.
screw-unit			Yes	No	[269]	Requires jQuery
Tape	Yes	Yes	Yes	Yes	[270]	TAP-producing test harness for node and browsers
Test.Simple	No ^[271]	Yes	Yes	No	[272]	Write TAP-emitting unit tests in JavaScript and run them in your browser.
Test.More	No[1]	Yes	Yes	No	[273]	Write TAP-emitting unit tests in JavaScript and run them in your web browser.
TestCase			Yes	No	[274]	
TestIt			Yes	Yes	[275]	Light-weight, non-polluting, and easy to set up and use
jsUnitTest			Yes	Yes ^[276]		Based on TestCase but without the Prototype dependency
JSTest			Yes	No	[277]	Light-weight, non-polluting browser-based framework
JSTest.NET			No	Yes	[278]	Browserless JavaScript unit test runner for use with MsTest, XUnit, NUnit, etc.
jsUnity	Yes	No	Yes	Yes	[279]	Context-agnostic (JavaScript, JScript (ASP/WSH), Rhino, etc.)
RhinoUnit			No	Yes	[280]	Rhino-based framework that allows tests to be run in Ant
JasUnit	Yes	No	Yes	No	[281]	Light-weight framework. Part of a project that provides Mocks and IoC.)
FireUnit			Yes	No	[282]	Testing framework that provides logging and viewing within a new tab of Firebug.
Js-test-driver	Yes		Yes	No	[283]	The goal of JsTestDriver is to build a JavaScript test runner which easily integrates with continuous builds systems and allows running tests on multiple browsers quickly to ease TDD style development.
Js-test-runner	No		Yes	Yes	[284]	A JUnit test runner that runs JavaScript tests. The goal of the JS Test Runner is to be able to test JavaScript code using an approach that test driven programmers will feel comfortable with; particularly in the context of Continuous Integration.
Sinon.js	Compatible		Yes	Yes	[285]	Standalone test spies, stubs and mocks for JavaScript. No dependencies, works with any unit testing framework.
SOAtest	No		Yes	No	[204]	Commercial. Testing platform whose record/playback runs in most modern web browsers where client-side Javascript can be tested both through static analysis and functional verification.
Vows	No			Yes	[286]	
Nodeunit			Yes	Yes	[287]	Asynchronous Javascript testing framework
Tyrtle			Yes	Yes	[288]	Testing framework which allows expressive assertions and interactive test output
wru	Compatible		Yes	Yes	[289]	General purpose environment agnostic sync/async JavaScript test framework. Compatible with any browser, desktop or mobile, node.js, Rhino, and phantom.js. Tiny, essential, fast.
Buster.JS	Compatible	Yes	Yes	Yes	[290]	BDD/xUnit, assertions, expectations, browser/server, extendable with tools like linting and other QA measures, highly configurable, well documented and actively developed
Lighttest			Yes	Yes	[291]	Minimalistic testing library, supports flow control, focused on keeping the tests clear
Chai			Yes	Yes	[292]	BDD / TDD assertion library for node and the browser that can be delightfully paired with any javascript testing framework.
JSUS			Yes	No	[293]	A simple JavaScript Unit teSting tool!
Wallaby.js			Yes	Yes	[294]	Commercial. Continuous test runner that reports code coverage and other results directly to the code editor immediately as the code changes. Supports AVA, Jasmine, Mocha, QUnit, Jest, Babel, Webpack, Browserify, CoffeeScript, TypeScript.

Lasso

Name	xUnit	Source	Remarks
L-Unit		[295]	

LaTeX

Name	xUnit	Source	Remarks
qstest		[296]	

LabVIEW

Name	xUnit	Source	Remarks
LabVIEW Unit Test Framework	No		Generate test harnesses for VIs in LabVIEW automatically.
VI Tester	Yes	[297]	native LabVIEW object-oriented implementation of xUnit framework. Unit tests are written as VIs in LabVIEW.
Caraya	Yes	[298]	native LabVIEW implementation of xUnit framework.

LISP

Name	xUnit	Source	Remarks
FiveAM		[153]	
LIFT		[157]	
lisp-unit		[158]	

Logtalk

Name	xUnit	Source	Remarks
lgtunit	Yes	[299]	Supports code coverage at the predicate clause level

Lua

Name	xUnit	Source	Remarks
LuaUnit		[300]	
lunit		[301]	

MATLAB

Name	xUnit	Source	Remarks
mlUnit	Yes	[302]	
mlUnit 2008a	Yes	[303]	
Legland's MUnit		[304]	Inspired Lombardi's MUnit
Lombardi's MUnit		[305]	Similar to xUnit
MATLAB xUnit Test Framework	Yes	[306]	MATLAB R2008a and later (uses OOP features introduced in this release). Renamed from mtest . Accepts both xUnit-style subclass or simple MATLAB function test cases.
Doctest	No	Bitbucket repository - source and documentation ^[307]	Allows automated test cases to be put in the documentation so your usage examples double as test cases and vice versa. A TAP producer. Inspired by the Python module of the same name. As of August 2011, it can only handle single line test-cases and its exception handling facility cannot handle exceptions that are generated after other output. ^[308]
matlab.unittest	Yes	MATLAB documentation ^[309]	Included as part of MATLAB R2013a
MOxUnit	Yes	github repository ^[310]	Works for both Matlab and Octave. Uses old-style OOP features and is compatible with the Matlab xUnit Test Framework. Can be used with the Travis-ci and Shippable continuous integration services (example), and integrates with MOcov to provide code coverage reports either offline or through coveralls.io(example).

.NET programming languages

Name	xUnit	Source	Remarks
Atata	Yes	[311]	Test automation full featured framework based on Selenium WebDriver.
csUnit	Yes		includes GUI, command line, VS2005 plug-in; supports C#, VB.NET, Managed C++, J#, other .NET languages, supports .NET 3.5 and earlier versions; integrated with ReSharper
DbUnit.NET		[312]	A .NET 2.0 unit testing framework for database access code
ErrorUnit		[313]	Generates Unit Tests from logged error's, or paused Visual Studio's call stack; Mocks parameters, class values, EF Data accessed so far.
Fixie	Yes	[314]	Based on NUnit and xUnit, with an emphasis on customization through user-defined conventions. Integrates with TestDriven.NET.
Foq	No	[176]	Lightweight type-safe and thread-safe mock object library for F# with C# support.
Gallio		[315]	Extensible, and neutral automation platform that provides a common object model, runtime services and tools (such as test runners) that may be leveraged by any number of test frameworks.
MbUnit	Yes	[316]	Extensible, model-based nUnit compatible framework. Part of the Gallio Test Automation Platform.
Moq	Yes	[317]	Moq is a .NET Framework library for creating mock objects. It leverages C# 3.0 lambda expressions, typically used in Test Driven Development.
MSTest	No		A command-line tool for executing Visual Studio created unit tests outside of the Visual Studio IDE - not really a testing framework as it is a part of the Visual Studio Unit Testing Framework.
NaturalSpec	No	[181]	Domain-specific language for writing specifications in a natural language. Based on NUnit.
NBi	Yes	[318]	Data centric test framework specialized for the Microsoft Business Intelligence platform. Tests equivalence of result sets based on SQL, MDX or DAX queries, performance, syntax, structure and dimensions' members (Multidimensional and Tabular SSAS). Includes a tests generator.
NMate		[319]	NUnit and PartCover Code Generation and integration Addin for Microsoft Visual Studio 2005/2008
NUnit	Yes		includes GUI, command line, integrates into Visual Studio with ReSharper
NUnitAsp			Based on NUnit
Pex	Yes	[320]	Microsoft Research project providing White box testing for .NET, using the Z3 constraint solver to generate unit test input (rather than Fuzzing).
Quality Gate One Studio	No	[321]	Commercial/freeware test framework for unit and integration testing that analyses dependencies between test cases to flow data between them. Supports combinatorial testing, multithreading and time-dependencies.
QuickUnit.net	No	[322]	Implement unit tests without coding. Minimalist approach to test driven development.
Randoop.NET	Yes	[323]	Automatically finds bugs and generates unit tests for .NET, via feedback-directed random testing (a variant of Fuzzing).
Rhino Mocks	Yes	[324]	A dynamic mock object framework for the .NET platform.
Roaster	Yes	[325]	NUnit-based framework and tools for the .NET Compact Framework
SpecFlow	Yes	[326]	Behavior Driven Development framework for .NET. Inspired by Cucumber. Integrates with NUnit, MSTest, MbUnit, and others.
Specter	Yes	[327]	Behavior-driven development with an easy and readable syntax for writing specifications. Includes command line, optional integration with NUnit
TestDriven.NET		[328]	Commercial
.TEST	Yes	[329]	Commercial. Automated software quality solution that includes unit test generation and execution as well as reporting industry standard code coverage.
TickSpec	Yes	[330]	Behavior-driven development framework for .NET and Silverlight. Supports the Gherkin language as used by Cucumber and extends it with combinatorial examples. Integrates with NUnit, xUnit, MbUnit and MSTest.
TPT	Yes	[18]	Time Partition Testing provides a .NET-API for the TPT-VM for testing controller software.
Typemock Isolator	Yes	[331]	Commercial unit testing framework with simple API and test code generation features, supports C#, ASP.NET, SharePoint, Silverlight.
Visual Studio	No		The Visual Studio Unit Testing Framework was first included in Visual Studio Team System 2005 where it integrated with the IDE, but not available in the most-used Standard Edition. From Visual Studio 2008 it is available also in Professional Edition. Starting with Visual Studio Express 2013, it is included with Visual Studio Express editions.
Visual T#	Yes	[332]	Visual T# is a unit testing framework and development environment integrated with Visual Studio. It includes T#, a programming language designed specifically to naturally express unit test intentions, and tools for compiling, running and maintaining them.
xUnit.net	Yes	[333]	

Objective-C

Name	xUnit	Source	Remarks
GHUnit	Yes	[334]	An easy to integrate, use and visual test framework for simulator and devices.
CATCH		[335]	A modern, fully featured, unit test framework with no external dependencies - all implemented in headers
Cedar		[336]	BDD for Objective-C
Kiwi		[337]	RSpec-style BDD for Objective-C with support for mocks and stubs.
Specta		[338]	A light-weight TDD / BDD framework for Objective-C & Cocoa.
Quick		[339]	A behavior-driven development test framework for Swift and Objective-C.
ObjcUnit		[340]	
OCUnit	Yes	[341]	Comes with Xcode. Fully integrated with Xcode 4.
WiteBox for iPhone		[342]	Exclusively for iPhone unit testing, provides visual feedback, hierarchical results display, and test durations.
WOTest		[343]	
XCTest	Yes	[344]	Supports iOS & Mac OS X. Requires Xcode 5. Derived from OCUnit.

OCaml

Name	xUnit	TAP	Source	Remarks
Alcotest			[345]	
OUnit			[346]	Based on HUnit, which is based on JUnit
Kaputt			[347]	
TestSimple		Yes	[348]	Generates TAP
FORT			[349]	

Object Pascal (Free Pascal)

Name	xUnit	TAP	Source	Remarks
FPCUnit	Yes	No	[350]	This is a port to Free Pascal of the JUnit core framework.
Tap4Pascal	No	Yes	[351]	A Pascal implementation of the Test Anything Protocol
FPTTest	Yes	No	[352]	This is a fork of DUnit2, specifically for use with the Free Pascal Compiler.

PegaRULES Process Commander

Name	xUnit	Source	Remarks
PRUnit	Yes	[353]	xUnit style testing adapted to PRPC

Perl

Name	xUnit	TAP	Source	Remarks
TAP	N/A	Yes	[354]	The Test Anything Protocol used by most Perl tests
Test::Harness	N/A	Yes	[355]	The standard Perl test runner and TAP parser
Test::More	No	Yes	[356]	The baseline testing module, included with all modern Perl installations
Test::Class	Yes	Yes	[357]	xUnit style testing adapted to Perl
Test::Builder	N/A	Yes	[358]	A module for making more testing modules. These modules can be combined in a single test program
Test::Unit (a.k.a. PerlUnit)	Yes	No	[359][360]	a fairly straight port of JUnit to the Perl programming language. Note: This code seems to be abandoned as noted here [361] and here.[362]
Test::DBUnit	N/A	Yes	[363]	The database testing modules for both clear box and black box testing
Test::Unit::Lite	Yes	Yes (via Test::Unit::HarnessUnit)	[364]	Test::Unit replacement without external dependencies and with some bugs fixed
Test::Able	Yes	Yes	[365]	xUnit style testing with Moose

PHP

Name	xUnit	TAP	Source	Remarks
PHPUnit	Yes	Yes	[366]	Produces XML, HTML reports with code coverage
PHP Unit Testing Framework	Yes	No	[367]	It produces ASCII, XML or XHTML output and runs from the command line.
SimpleTest	Yes	No	[368]	Unit test framework for both PHP and web.
Testilence	Yes	No	http://www.testilence.org/	URL no longer works.
lime	No	Yes	[369]	Sub-project of Symfony
Apache-Test	No	Yes	[370]	PHP implementation of Test::More (test-more.php)[371]
ojes	No	No	[372]	Documentation-driven testing
SnapTest	Yes	Yes	[373]	SnapTest is a powerful unit testing framework for PHP 5+, leveraging PHP's unique runtime language to simplify the unit test process without sacrificing the agility tests provide.
OnionTest	No	Yes		Write an Onion! No coding needed just some txt files.
Enhance PHP	Yes	Yes		Unit testing framework with mocks and stubs built in. Runs in the command line or get HTML5, TAP or XML output via a web browser.
Atoum	Yes	Yes	[374]	A modern, simple and intuitive PHP 5.3+ unit testing framework.
Tester	Yes	Yes	[375]	PHP library for unit-testing (in console and browser), simplified variant of PHPUnit. With ability to handle errors and exceptions in tests.
PhpInlineTest	No	No	[376]	PhpInlineTest - script to run inline tests for PHP functions and class methods.
PHPSpec	No	No	[377]	A BDD style testing framework.
Nette Tester	Yes	Yes	[378]	Sub-project of Nette Framework
Kahlan	Yes	No	[379]	Unit/BDD PHP Test Framework with Monkey Patching & Stubbing capabilities
Codeception	Yes	Yes	[380]	BDD-styled PHP testing framework written on top of PHPUnit. Codeception tests are written in a descriptive manner using a simple PHP DSL. Supports re-use, modules and addons.

PowerBuilder

Name	xUnit	Source	Remarks
PBUnit		[381]	

PowerShell

Name	xUnit	Source	Remarks
Pester	No	[382]	a BDD and unit testing framework for PowerShell

Progress 4GL

Name	xUnit	Source	Remarks
proUnit	Yes	[383]	xUnit-style framework for Progress OpenEdge procedures and objects
OEUnit	Yes	[384]	xUnit-style framework for Progress OpenEdge procedures and objects

Prolog

Name	xUnit	Source	Remarks
PLUnit		[385]	

Python

Name	xUnit	Generators	Fixtures	Group Fixtures	Source	Remarks
Autotest	Yes		Yes		[386]	Used for Linux kernel testing
unittest	Yes	Yes	Yes	No		(sometimes referred to as "PyUnit"), has been included in Python standard library from Python version 2.1.[387]
XPyUnit						adding XML report generation to PyUnit
TestOOB						an extended test framework for PyUnit
Doctest						easy, Pythonic, and part of Python's standard library
Nose	Yes	Yes	Yes		[388]	a discovery-based unittest extension
py.test	Yes	Yes	Yes	Yes	[389]	Distributed testing tool
TwistedTrial	Yes	Yes	Yes	No	[390]	PyUnit extensions for asynchronous and event-driven code
Should DSL	Yes	Yes	Yes	Yes	[391]	Distributed testing tool
Green	Yes	Yes	Yes	No	[392]	Python test runner.

R programming language

Name	xUnit	Source	Remarks
RUnit	No	[393]	Open source
testthat	Yes	[394]	Open source

Racket

Name	xUnit	Source	Remarks
rackunit	Yes	[395]	Open source
Overeasy	No	[396]	Open source

REALbasic

Name	xUnit	Source	Remarks
RBUnit	No	[397]	

Rebol

Name	xUnit	Source	Remarks
Runit		[398]	

RPG

Name	xUnit	Source	Remarks
RPGUnit	Yes	[399]	

Ruby

Name	xUnit	Source	Remarks
Test::Unit	Yes	^[400]	Default in Ruby 1.8, deprecated from 2.2. ^{[401][402]} It was only a wrapper of minitest. ^[403]
RSpec		Behaviour-driven development framework	
Shoulda		^[404]	
microtest			
Bacon			
minitest	Yes	^{[405][406]}	Ruby Gem by Ryan Davis. Default in Ruby >= 1.9, independent gem since 2.2. ^[401] Recommended by official documentation. ^[403]
TMF		^[407]	

SAS

Name	xUnit	Source	Remarks
FUTS	Yes	^[408]	the Framework for Unit Testing SAS
SCLUnit	Yes	^[409]	SAS/AF implementation of the xUnit unit testing framework SAS
SASUnit	Yes	^[410]	completely written in SAS, runs with SAS on Windows and Linux

Scala

Name	xUnit	Source	Remarks
Rehersal		^[411]	with JMock like Expectations and natural language test names.
ScalaCheck	No	^[412]	Similar to QuickCheck.
ScalaTest		^[413]	Scalable Test Framework - supports different styles of testing: TDD, BDD, and more. Supports Scala.js.
ScUnit		^[414]	JUnit-style testing with fixture method injection and matchers for assertion.
specs2		^[415]	Behavior Driven Development
µTest		^[416]	Supports Scala.js

Scilab

Name	xUnit	Source	Remarks
Scilab test_run	Yes	^[417]	Provided by default by Scilab

Scheme

Name	xUnit	Source	Remarks
SchemeUnit	Yes	^[418]	
Testeez	No	^[419]	

Shell

Name	xUnit	Source	Remarks
assert.sh		^[420]	LGPL licensed. Lightweight..
bats		^[421]	the Bash Automated Testing System. TAP-compliant. MIT license
ATF		^[25]	BSD Licensed. Originally developed for the NetBSD operating system but works well in most Unix-like platforms. Ability to install tests as part of a release.
jshu		^[422]	Simplified Shell Unit Testing for Jenkin/Hudson
Roundup	No	^[423]	
ShUnit	Yes	^[424]	
shUnit2	Yes	^[425]	Originally developed for log4sh
filterunit		^[426]	Test framework for filters and other command-line programs

Simulink

Name	xUnit	Source	Remarks
slUnit		^[427]	
TPT	Yes	^[18]	Time Partition Testing: Automated interface analysis, testframe generation, test execution, test assessment, reporting.

Smalltalk

Name	xUnit	Source	Remarks
SUnit	Yes		The original source of the xUnit design

SQL and Database Pr ocedural Languages

SQL

Name	xUnit	Source	Remarks
SQLUnit		[428]	
DbFit		[429]	Compare FitNesse.

MySQL

Name	xUnit	Source	Remarks
STK/Unit	Yes	[430]	
MyTAP	Yes	[431]	
utMySQL	Yes	[432]	

PL/SQL

Name	xUnit	Source	Remarks	Active
utPLSQL	Yes	[433]	Initially developed by Steven Feuerstein, an open source unit testing framework for PL/SQL development modeled on the JUnit and xUnit frameworks.	Yes
Code Tester for Oracle		[434][435]	A commercial PL/SQL testing tool originally from Quest Software (the makers of Toad) and Steven Feuerstein. Since 2012 Quest Software is part of Dell.	Yes
SQL Developer		[436]	Oracle includes a Unit Tester as part of the free SQL Developer application.	Yes
pl/unit		[437]	PL/Unit is a unit testing framework that provides the functionality to create unit tests for PL/SQL code. PL/Unit is expressed as a single package that is compiled into the database and made available for use by PL/SQL unit tests.	No
PL/SQL Unit Testing for Oracle (PLUTO)	Yes	[438]	Open source unit testing framework modeled after JUnit and based on the Oracle PL/SQL object system	No
ruby-plsql-spec	Yes	[439]	PL/SQL unit testing with Ruby open source libraries	Yes
DBFit		[440]	Write, manage and execute tests directly from the browser. DbFit is written on top of FitNesse, a mature, fully featured framework with a large community.	Yes

IBM DB2 SQL-PL

Name	xUnit	Source	Remarks	Active
db2unit	Yes	[441]	db2unit is an OpenSource framework developed for DB2 LUW. It is a xUnit/jUnit style framework for SQL-PL routines and it requires DB2 v9.7 or higher.	Yes

PostgreSQL

Name	xUnit	TAP	Source	Remarks	Active
Epic			[442]	Epic is a unit test framework for PostgreSQL stored procedures. It requires PG 8.1 or higher.	No
pgTAP	Yes	Yes	[443]	Write tests in SQL or xUnit-style functions.	Yes
PGtools			[444]	Schema loading and testing tools for PostgreSQL.	No
PGUnit	Yes	No	[445]	xUnit-style framework for stored procedures.	No

Transact-SQL

Name	xUnit	Source	Remarks
tSQLt	Yes	[446]	Includes mocking framework, continuous integration support and uses SQL Test as a GUI ^[447]
TSQLUnit	Yes	[448]	[449]
utTSQL	Yes	[450]	
Visual Studio Team Edition for Database Professionals		[451]	
Alcyone SQL Unit	Yes	[452]	Includes GUI for writing tests and maintaining data table files.
T.S.T.		[453]	
Slacker	Yes	[454]	Based on RSpec

Swift

Name	xUnit	Source	Remarks
Quick		[455]	A behavior-driven development test framework for Swift and Objective-C.
Sleipnir		[456]	A BDD-style framework for Swift.
XCTest	Yes	[344]	Derived from OUnit.

SystemVerilog

Name	xUnit	Source	Remarks
SVUnit		[457]	SVUnit: SVUnit is a unit test framework for developers writing code in SystemVerilog.

TargetLink

Name	xUnit	Source	Remarks
TPT		[18]	Time Partition Testing: Automated interface analysis, testframe generation, test execution, test assessment, reporting.

Tcl

Name	xUnit	Source	Remarks
tcltest		[458]	
tclUnit	Yes	[459]	
t-unit		[460]	

TinyOS/nesc

Name	xUnit	Source	Remarks
TUnit	Yes	[461]	Embedded multi-platform wireless testing and characterization

TypeScript

Name	xUnit	Source	Remarks
tsUnit	Yes	[462]	
Oscar	Yes	[463]	
Alsatian	Yes	[464]	

VHDL

Name	Source
VUnit	[465]

Visual FoxPro

Name	xUnit	Source	Remarks
FoxUnit		[466]	

Visual Basic (VB6.0)

For unit testing frameworks for VB.NET, see the .NET programming languages section.

Name	xUnit	License	Source	Remarks
vbUnit		Commercial	[467]	Visual Basic and COM objects
vbUnitFree		LGPL	[468]	Visual Basic and COM objects
VbaUnit		BSD	[469]	Visual Basic for Applications
ExcelVbaUnit		LGPL	[470]	Similar to VbaUnit, but specifically for testing Excel VBA (written as an Excel add-in)
TinyUnit			[471]	Visual Basic 6, VB .NET, and PHP5
SimplyVbUnit	Yes	MIT	[472]	VB6 Unit Testing Framework modeled after the popular NUnit for .NET
VBLiteUnit		BSD	[473]	Visual Basic and COM objects

Visual Lisp

Name	xUnit	Source	Remarks
vl-unit		[474]	Unit testing framework for Visual Lisp.

XML

Name	xUnit	Source	Remarks
XUnit		[475]	for testing <ul style="list-style-type: none"> native XML programs, individual XSLT templates, and Java programs that deal with XML data
WUnit		[476]	for testing Web applications <ul style="list-style-type: none"> tests are written in XML/XPath (XUnit), AJAX applications are supported, can also test server-side functionalities if they are made with Java servlets (for example, it is possible to store authoritatively an object in the user session server-side without sending an HTTP request and then get with HTTP the page that renders it)
SOAtest	No	[204]	Commercial. Parasoft's full-lifecycle quality platform for ensuring secure, reliable, compliant business processes.
XMLUnit	Yes	[248]	Plugin for JUnit and NUnit, allowing Assertion-style tests to be written for XSLT documents in Java or C#
Vibz Automation	No	[477]	Open Source. Vibzworld's Fully featured Open source test framework.

Name	xUnit	Source	Remarks
AntUnit		[478]	For testing Apache Ant tasks

XSLT

Name	xUnit	Source	Remarks
juxy		[479]	a library for unit testing XSLT stylesheets from Java
Tennison Tests		[480]	allows to write unit-tests in XML, exercising XSLT from Apache Ant. When incorporated in a continuous integration environment, it allows to run multiple XSLT tests as part of a build, failing the build when they go wrong.
UTF-X		[481]	unit testing framework for XSLT that strongly supports the test-first-design principle with test rendition and test validation features
XMLUnit	Yes	[248]	Plugin for JUnit and NUnit, allowing Assertion-style tests to be written for XSLT documents in Java or C#
XSLTunit		[482]	Proof of concept unit testing framework for XSLT
XSpec		[483]	XSpec is a Behavior Driven Development (BDD) framework for XSLT and XQuery. It is based on the Spec framework of RSpec, which is a BDD framework for Ruby.
Another XSLTUnit			This framework allow develop your XSLTs and validate the outputs against XSD files, It supports Maven 3 and JUnit reports.

Other

Name	xUnit	Source	Remarks
Test Manager		[484]	
IdMUnit	Yes	[485]	Identity management
Visual Studio Unit Testing Framework		[486]	Microsoft's suite of unit testing tools

See also

- List of GUI testing tools

Unit testing in general:

- Unit testing
- Software testing
- Mock object

Extreme programming approach to unit testing:

- xUnit
- Test-driven development (TDD)
- Behavior-driven development (BDD)
- Extreme programming

References

1. "SAP Library - ABAP - Analysis Tools" (http://help.sap.com/saphelp_nw2004s/helpdata/en/a2/8a1b602e858645b8aac1559b638ea4/frameset.htm)Help.sap.com Retrieved 2012-11-12.
2. "as3flexunitlib - ActionScript 3.0 framework for unit testing. - Google Project Hosting" (https://code.google.com/p/as3flexunitlib/)Code.google.com. 2008-08-20 Retrieved 2012-11-12.
3. http://www.flexunit.org/
4. "reflex-unit - Unit testing framework for Flex 2/3 - Google Project Hosting" (https://code.google.com/p/reflex-unit/) Code.google.com Retrieved 2012-11-12.
5. "astuce - a JUnit clone for ECMAScript - Google Project Hosting" (https://code.google.com/p/astuce/) Code.google.com Retrieved 2012-11-12.
6. "AsUnit" (http://www.wasunit.org/). *asunit.org*. Retrieved 23 June 2015.
7. "dpuint - Unit and Integration Testing Framework for Flex 2 and 3 - Google Project Hosting" (https://code.google.com/p/dpuint/) Code.google.com Retrieved 2012-11-12.
8. "fluint - Flex Unit and Integration Testing Framework - Google Project Hosting" (http://fluint.googlecode.com/) *fluint.googlecode.com* Retrieved 23 June 2015.
9. "loomis / morefluent / wiki / Home" (https://bitbucket.org/loomis/morefluent/) Bitbucket.org. 2011-02-25. Retrieved 2012-11-12.
10. "mojotest - A very simple and easy to use ActionScript 3 Unit test framework - Google Project Hosting" (https://code.google.com/p/mojotest/) Code.google.com Retrieved 2012-11-12.
11. "Aunit" (http://libre.adacore.com/libre/tools/aunit/)Libre.adacore.com Retrieved 2012-11-12.
12. "AdaTEST95 – efficient implementation of unit and integration testing" (http://www.qa-systems.com/adatest-95.html) Qa-systems.com. 2012-03-16 Retrieved 2012-11-12.
13. "Ahven - Unit Testing Library for Ada Programming Language" (http://ahven.stronglytyped.org/). *stronglytyped.org*. Retrieved 23 June 2015.

14. "LDRA - LDRA Tool Suite" (<http://www.ldra.com/tbrun.asp>) *ldra.com*. Retrieved 23 June 2015.
15. "Embedded Software Testing - Vector Software" (<http://www.vectorcast.com>) *vectorcast.com*. Retrieved 23 June 2015.
16. "ASUnit" (<http://nirs.freeshell.org/asunit/>) *freeshell.org*. Retrieved 23 June 2015.
17. [1] (<http://applemodsourceforge.net/mods/Development/ASTest.php>) Archived (<http://web.archive.org/web/20060716115058/http://applemodsourceforge.net/mods/Development/ASTest.php>) July 16, 2006, at the Wayback Machine
18. "TPT - real time testing embedded control software" (<http://www.piketec.com/product/s/tpt.php?lang=en>) *Piketec.com*. Retrieved 2012-11-12.
19. "ASPUnit: an ASP Unit Testing Framework" (<http://aspunit.sourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
20. "sstephenson/bats" (<https://github.com/sstephenson/bats>) *GitHub*. Retrieved 2016-10-08.
21. Mayer, Philip; Daniel Lübke (2006). "Towards a BPEL unit testing framework" (<http://dl.acm.org/citation.cfm?id=1145723>). *TAV-WEB '06 Proceedings of the 2006 workshop on Testing, analysis, and verification of web services and applications* New York, NY, USA: ACM: 33–42. ISBN 1595934588. doi:10.1145/1145718.1145723 (<https://doi.org/10.1145/1145718.1145723>).
22. "nassersala/cbdd" (<https://github.com/nassersala/cbdd>) *GitHub*. Retrieved 23 June 2015.
23. "AceUnit" (<http://aceunit.sourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
24. "Overview - API Sanity Checker - Open-Source Projects" (<https://github.com/lvc/api-sanity-checker>) *github.com*. Retrieved 2015-06-25.
25. "Automated Testing Framework (ATF)" (<http://www.NetBSD.org/~jmmv/atf/>) *Netbsd.org*. Retrieved 2012-11-12.
26. "autounit.tigris.org" (<http://autounit.tigris.org/>) *tigris.org*. Retrieved 23 June 2015.
27. "C and C++ testing tools: Static code analysis, code review/unit testing" (<http://www.parasoft.com/jsp/products/cpptest.jsp?itemId=47>) *Parasoft*. 2012-09-24 Retrieved 2012-11-12.
28. "Dynamic testing with Cantata: automated and easy" (<http://www.qa-systems.com/cantata.html>) *Qa-systems.com*. 2012-03-16 Retrieved 2012-11-12.
29. [2] (<http://www.wagilerules.com/projects/catsrunner/index.phtml>) Archived (<https://web.archive.org/web/2007032220106/http://www.wagilerules.com/projects/catsrunner/index.phtml>) March 22, 2007, at the Wayback Machine
30. "cfix - C and C++ Unit Testing Framework for Windows" (<http://www.cfix-testing.org/>) *cfix-testing.org*. Retrieved 23 June 2015.
31. Marcus Baker; et al. "Cgreen is a unit testing framework for the C programming language" (<http://cgreen.sf.net>) Retrieved 2013-05-15.
32. "CHEAT on GitHub" (<https://github.com/Tuplanolla/cheat/>)
33. "CHEAT Website" (<http://users.jyu.fi/~sapekiis/cheat/>)
34. "Check" (<http://check.sourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
35. "cmocka - unit testing framework for C" (<https://cmocka.org/>) Retrieved 2016-03-21.
36. "cmockery - A lightweight library to simplify and generalize the process of writing unit tests for C applications. - Google Project Hosting" (<https://github.com/google/cmockery>) *Code.google.com* Retrieved 2016-07-27.
37. "CppUTest (Moved!) | Free Development software downloads at" (<http://sourceforge.net/projects/cpptest>) *Sourceforge.net*. Retrieved 2012-11-12.
38. "Criterion - A KISS, non-intrusive cross-platform C unit testing framework" (<https://github.com/Snape/Criterion/>) *GitHub*. Retrieved 4 September 2015.
39. "DanFis - CU - C Unit Testing Framework" (<http://cu.danfis.cz/>) *danfis.cz*. Retrieved 23 June 2015.
40. "bvdberg/ctest · GitHub" (<https://github.com/bvdberg/ctest>) *GitHub.com*. Retrieved 2012-11-12.
41. "CUnit" (<http://cunit.sourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
42. "cunitwin32 - CUnitWin32 is a unit testing framework for C/C++ for Microsoft Windows - Google Project Hosting" (<https://code.google.com/p/cunitwin32/>) *Code.google.com* Retrieved 2012-11-12.
43. "CUT 2.6 - 10th Anniversary Version!" (<http://www.falvotech.com/content/cut/>) *Falvotech.com* Retrieved 2012-11-12.
44. "CuTest: The Cutest C Unit Testing Framework" (<http://cutest.sourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
45. "a Unit Testing Framework for C and C++ - Cutter" (<http://cuttersourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
46. "Embedded Unit" (<http://embunit.sourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
47. "Unit Testing Tool - Embunit" (<http://www.embunit.com/>) *embunit.com*. Retrieved 23 June 2015.
48. "imb/fctx" (<https://github.com/imb/fctx>) *GitHub*. Retrieved 23 June 2015.
49. [3] (<http://library.gnome.org/devel/glib/2.20/glib-Testing.html>)
50. "garage: GUnit: Project Info" (<https://garage.maemo.org/projects/gunit>) *Garage.maemo.org*. Retrieved 2012-11-12.
51. "lcut - a Lightweight C Unit Testing framework - Google Project Hosting" (<https://github.com/bigwhite/lcut>) *google.com*. Retrieved 2016-07-27.
52. "LibU" (<http://koanlogic.com/libu>) *koanlogic.com*. Retrieved 23 June 2015.
53. "JTN002 - MinUnit - a minimal unit testing framework for C" (<http://www.jera.com/techinfo/jtns/jtn002.html>) *Jera.com*. Retrieved 2012-11-12.
54. "galvedro/mut" (<https://github.com/galvedro/mut>) *GitHub*. Retrieved 23 June 2015.
55. "novaprova" (<http://novaprova.org/>) *novaprova.org*. Retrieved 4 September 2015.
56. "opmock | Free software downloads at" (<http://sourceforge.net/projects/opmock/>) *Sourceforge.net*. Retrieved 2012-11-12.
57. "jecklgamis/rcunit" (<https://github.com/jecklgamis/rcunit>) *GitHub*. Retrieved 23 June 2015.
58. "IBM Rational software" (<http://www.rational.com>) *rational.com*. Retrieved 23 June 2015.
59. "keithn/seatest" (<https://github.com/keithn/seatest>) *GitHub*. Retrieved 23 June 2015.
60. "Accord - Dynamic Analyzer - C Unit Test Tool" (<http://wwwaccord-soft.com/dynamicanalyser.html>) *Accord-soft.com* Retrieved 2012-11-12.
61. "Sput Unit Testing Framework for C/C++" (<http://www.wuse-strict.de/sput-unit-testing/>) *use-strict.de*. Retrieved 2017-02-17.
62. "STRIDE Wiki" (<http://www.stridewiki.com/>) *stridewiki.com*. Retrieved 23 June 2015.
63. "Redir" (<http://www.hitex.de/perm/tessyhtm>) *Hitex.de*. Retrieved 2012-11-12.
64. "TestApe - Unit testing for embedded software" (<http://www.testape.com/>) *testape.com*. Retrieved 23 June 2015.
65. "test-dept - Unit Test Framework for C with Stubbing - Google Project Hosting" (<http://test-dept.googlecode.com>) *test-dept.googlecode.com*. Retrieved 23 June 2015.
66. "tf-unit-test - unit testing framework for ansi c - Google Project Hosting" (<https://code.google.com/p/tf-unit-test/>) *google.com*. Retrieved 23 June 2015.
67. <http://unity.sourceforge.net> Archived (<https://web.archive.org/web/20020125160715/http://unity.sourceforge.net/>) 2002-01-25 at the Wayback Machine
68. "Embedded Software Testing - Vector Software" (<http://www.vectorcast.com/>) *vectorcast.com*. Retrieved 23 June 2015.
69. <http://www.visualassert.com/>
70. "ccosmin/tinytest" (<https://github.com/ccosmin/tinytest>) *GitHub*. Retrieved 23 June 2015.
71. "xTests - Multi-language, Lightweight Test-suites" (<http://xtests.sourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
72. "Login" (<http://aeryn.tigris.org/>) *tigris.org*. Retrieved 23 June 2015.
73. "bandit" (<http://banditcpp.org/>) *banditcpp.org*. Retrieved 23 June 2015.
74. Llopis, Noel. "Exploring the C++ Unit Testing Framework Jungle" (<http://gamesfromwithin.com/exploring-the-c-unit-testing-framework-jungle#boost>) 2004-12-28. Retrieved on 2010-2-13.
75. Rozental, Gennadiy "Boost Test Fixture Documentation" (http://www.boost.org/doc/libs/1_42_0/libs/test/doc/html/utf/userguide/fixture.html) Retrieved on 2010-2-13.
76. Rozental, Gennadiy "Boost Test Suite Level Fixture Documentation" (http://www.boost.org/doc/libs/1_42_0/libs/test/doc/html/utf/userguide/fixture/test-suite-shared.html) Retrieved on 2010-2-13.
77. "Turtle" (<http://turtle.sourceforge.net/>) *sourceforge.net*.
78. "Boost Test Library" (http://www.boost.org/doc/libs/1_42_0/libs/test/doc/html/index.html) *Boost.org*. Retrieved 2012-11-12.
79. "Munkei/BugEye" (<https://github.com/Munkei/BugEye>) *GitHub*. Retrieved 2016-10-27.
80. "philsquared/Catch · GitHub" (<https://github.com/philsquared/Catch>) *GitHub.com*. Retrieved 2012-11-12.
81. "onqtam/doctest" (<https://github.com/onqtam/doctest>) *GitHub*. Retrieved 2016-05-22.
82. "martinmoene/Catch · GitHub" (<https://github.com/martinmoene/Catch>) *GitHub.com*. Retrieved 2013-09-03.
83. "cput" (<http://cput.codeplex.com/>) *CodePlex*. Retrieved 23 June 2015.
84. "CPOCL/test" (<https://github.com/cppocl/cppocl/wiki/Unit-test-framework>) *GitHub.com*.
85. "CppTest - A C++ Unit Testing Framework" (<http://cpptest.sourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
86. "doe300/cpptest-lite · GitHub" (<https://github.com/doe300/cpptest-lite>) *GitHub.com*. Retrieved 2015-10-18.
87. "cppunit" (http://sourceforge.net/apps/mediawiki/cppunit/index.php?title=Main_Page) *SourceForge.net*. 2009-11-23. Retrieved 2012-11-12.
88. "cppunit" (<http://freedesktop.org/wiki/Software/cppunit/>) *Freedesktop.org*. 18 May 2013. Retrieved 6 November 2013.
89. "Cpp Unit Lite" (<http://c2.com/cgi/wiki?CppUnitLite>) *C2.com*. 2011-04-21. Retrieved 2012-11-12.
90. "CPUnit project page" (<http://cpunit.sourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
91. "Criterion - A KISS, non-intrusive cross-platform unit testing framework" (<https://github.com/Snape/Criterion/>) *GitHub*. Retrieved 4 September 2015.
92. "crpcut - the Compartmented Robust Posix C++ Unit Test system" (<http://crpcut.sourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
93. "Wiki - CUTE - C++ Unit Testing Easier" (<http://www.cute-test.com/>) *cute-test.com*. Retrieved 23 June 2015.
94. "cutee, C++ Unit Testing Easy Environment" (http://www.codesink.org/cutee_unit_testing.html) *Codesink.org*. Retrieved 2012-11-12.
95. "CxxTest" (<http://cxxtest.com/>) *cxxtest.com*.
96. "Exercisix | Alexander Churanov | Personal Website" (<http://alexanderchuranov.com/software/exercisix/>) Alexander Churanov 2011-07-14. Retrieved 2012-11-12.
97. "eranpeer/FakeIt" (<https://github.com/eranpeer/FakeIt>) *GitHub*. Retrieved 23 June 2015.
98. <http://fctx.wildbearsoftware.com> Archived (<https://web.archive.org/web/20110718051434/http://fctx.wildbearsoftware.com/>) 2011-07-18 at the Wayback Machine
99. "FRUCTOSE | Free Development software downloads at" (<http://sourceforge.net/projects/fructose/>) *Sourceforge.net*. Retrieved 2012-11-12.
100. "googlemock - Google C++ Mocking Framework - Google Project Hosting" (<https://github.com/google/googletest>) *github.com*. Retrieved 2016-07-27.
101. "googletest - Google C++ Testing Framework - Google Project Hosting" (<https://github.com/google/googletest>) *github.com*. Retrieved 2016-07-27.
102. "Hestia | Free Development software downloads at" (<http://sourceforge.net/projects/hestia/>) *Sourceforge.net*. Retrieved 2012-11-12.
103. "Hestia | Free Development software downloads at" (http://hippomocks.com/Main_Page/) *Sourceforge.net*. Retrieved 2012-11-12.
104. "Igloo - BDD Style Unit Testing for C++" (<http://igloo-testing.org/>) *igloo-testing.org*. Retrieved 23 June 2015.
105. "martinmoene/lest · GitHub" (<https://github.com/martinmoene/lest>) *GitHub.com*. Retrieved 2013-09-03.
106. "etr/liblittletest" (<https://github.com/etr/liblittletest>) *GitHub*. Retrieved 23 June 2015.
107. "libunitest C++ library" (<http://libunitest.sourceforge.net/>) *sourceforge.net*. Retrieved 23 June 2015.
108. "Smart Unit Testing for C/C++" (<http://www.tytemock.org/>) *tytemock.org*.
109. "Writing Unit tests for C/C++ with the Microsoft Unit Testing Framework for C++" (<https://msdn.microsoft.com/en-us/library/hh598953.aspx>) *Microsoft*. Retrieved 2016-01-13.
110. "An Eclipse CDT plug-in for C++ Seams and Mock Objects" (<http://mockator.com>) *IFS*. Retrieved 2012-11-18.
111. "mockcpp - A C++ Mock Framework - Google Project Hosting" (<https://bitbucket.org/godsmo/mockcpp>) *bitbucket.org*. Retrieved 2016-07-27.
112. "mockitopp - Simple mocking for C++" (<https://github.com/tpounds/mockitopp>) *github.com*. Retrieved 2015-03-19.

113. "Software Patent Mine Field: Danger! Using this website is risky!"(<http://mockpp.sourceforge.net/>). *sourceforge.net*. Retrieved 23 June 2015.
114. [4] (<http://www.xpsd.org/cgi-bin/wiki?NanoCppUnit>) Archived (<https://web.archive.org/web/20060118114838/http://www.xpsd.org/cgi-bin/wiki?NanoCppUnit>) January 18, 2006, at the Wayback Machine
115. "jdmclark/nullunit" (<https://github.com/jdmclark/nullunit>) *GitHub*. Retrieved 23 June 2015.
116. "Service temporarily unavailable"(<http://www.oaklib.org/oakut/index.html>) *oaklib.org*. Retrieved 23 June 2015.
117. "since Qt5" (http://doc.qt.io/qt-5/qtest.html#QVERIFY_EXCEPTION_THROWN)
118. "Qt 4.7: QTestLib Tutorial" (<http://doc.qt.nokia.com/latest/qtestlib-tutorial.html>) Doc.qt.nokia.com Retrieved 2012-11-12.
119. "QuickCheck++" (<http://software.legiasoft.com/quickcheck/>)
120. "QuickTest" (<http://quicktest.sf.net>) *sf.net*. Retrieved 23 June 2015.
121. "SafetyNet, C++ Unit Testing Framework" (<http://safetynet.devmentor.org>). *devmentor.org*. Retrieved 23 June 2015.
122. "ShortCUT - A Short C++ Unit Testing Framework" (<http://www.codeproject.com/KB/applications/shortcut.aspx?print=true>) CodeProject. 2007-02-15 Retrieved 2012-11-12.
123. "STRIDE Wiki" (<http://www.stridewiki.com>) *stridewiki.com*. Retrieved 23 June 2015.
124. charlesweir "Symbian OS C++ Unit Testing Framework" (<http://www.symbianosunit.co.uk/>). *symbianosunit.co.uk* Retrieved 23 June 2015.
125. <http://www.wldra.co.uk/tbrun.asp>
126. [5] (http://bigangrydog.com/tdog_test_framework.html) TDOG C++ xUnit Testing Framework" (http://bigangrydog.com/tdog_test_framework.html) *bigangrydog.com* Retrieved 16 March 2016.
127. "Test soon: Test soon documentation" (<http://testsoon.sourceforge.net>). *sourceforge.net*. Retrieved 23 June 2015.
128. "Testwell CTA++ Description" (<http://www.testwell.fi/ctadesc.html>) Testwell.fi Retrieved 2012-11-12.
129. "tpounds/tpunitpp · GitHub" (<https://github.com/tpounds/tpunitpp>) GitHub.com. 2012-05-20. Retrieved 2012-11-12.
130. "rollbear/Trompeloel" (<https://github.com/rollbear/trompeloel>) *GitHub*. Retrieved 23 July 2015.
131. <http://tut-framework.sourceforge.net/>
132. "The unit++ Testing Framework" (<http://unitpp.sourceforge.net/>). *sourceforge.net*. Retrieved 23 June 2015.
133. "burner/sweet.hpp" (<https://github.com/burner/sweet.hpp>) *GitHub*. Retrieved 23 June 2015.
134. "unittest-cpp/unittest-cpp" (<https://github.com/unittest-cpp/unittest-cpp>) *GitHub*. Retrieved 23 June 2015.
135. "DronMDF/uppl" (<https://github.com/DronMDF/uppl>). *GitHub*.
136. "UquoniTest: a unit testing library for C" (<http://www.q-mentum.com/uquonitest.php>) Q-mentum.com Retrieved 2012-11-12.
137. "WinUnit" (<http://winunit.codeplex.com/>) *CodePlex*. Retrieved 23 June 2015.
138. "moswald / xUnit++ / wiki / Home – Bitbucket" (<https://bitbucket.org/moswald/xunit/>) Bitbucket.org. 2012-11-06. Retrieved 2012-11-12.
139. "sTest - The C++ unit testing framework" (<https://github.com/greg-white/sTest>). *GitHub*. Retrieved 15 June 2017.
140. "unittestcg - UnitTestCg is a unittest framework for Cg and HLSL programs." (<https://github.com/jtilander/unittestcg>) *google.com*. Retrieved 2016-07-27.
141. "MXUnit - Unit Test Framework and Eclipse Plugin for Adobe ColdFusion" (<http://mxunit.org>). *mxunit.org*.
142. "clojure.test - Clojure v1.4 API documentation" (<http://clojure.github.com/clojure/clojure-re-test-api.html>) Clojure.github.com Retrieved 2012-11-12.
143. weavejester "weavejester/fact · GitHub" (<https://github.com/weavejester/fact/tree/>) GitHub.com Retrieved 2012-11-12.
144. "marick/Midje · GitHub" (<https://github.com/marick/Midje>) GitHub.com Retrieved 2012-11-12.
145. "Clojure Testing Framework - SpecJ" (<http://specj.com>) *specj.com*.
146. "COBOLUnit" (<http://sites.google.com/site/cobolunit/>) Sites.google.com Retrieved 2012-11-12.
147. "cobol-unit-test" (<https://github.com/neopragma/cobol-unit-test>) GitHub.com Retrieved 2015-08-20.
148. savignano software solutions. "Better Software in Less Time: - savignano software solutions" (<http://www.savignano.net/savvytest>) Savignano.net Retrieved 2012-11-12.
149. "z/OS Automated Unit Testing Framework (zUnit)" (http://www-01.ibm.com/support/knowledgecenter/SSQ2R2_8.5.1/com.ibm.etools.rdz.zunit.doc/topics/c_zunit_intro.html) ibm.com.
150. "The Micro Focus Unit Testing Framework" (http://www.microfocus.com/docs/links.asp?vc=mf_unit_testing) microfocus.com.
151. "CLiki: CLUnit" (<http://www.cliki.net/CLUnit>) *cliki.net*.
152. "Archived copy" (<https://web.archive.org/web/20071231055754/http://cybertiggyr.com/gene/lut/>) Archived from the original (<http://cybertiggyr.com/gene/lut/>) on 2007-12-31. Retrieved 2008-01-15.
153. "FiveAM" (<http://common-lisp.net/project/bese/FiveAM.html>) Common-lisp.net. 2004-11-16. Retrieved 2012-11-12.
154. "FREt" (<http://common-lisp.net/project/fret/>) Common-lisp.net Retrieved 2012-11-12.
155. "Grand-prix" (<http://common-lisp.net/project/grand-prix/>) Common-lisp.net Retrieved 2012-11-12.
156. "HEUTE - Common LISP Unit Test Package" (<http://www.rdrop.com/~jimka/lisp/heute/heute.html>) Rdrop.com Retrieved 2012-11-12.
157. "LIFT - the LISP Framework for Testing" (<http://common-lisp.net/project/lift/>) Common-lisp.net Retrieved 2012-11-12.
158. "lisp-unit" (<http://www.cs.northwestern.edu/academics/courses/325/readings/lisp-unit.html>) Cs.northwestern.edu Retrieved 2012-11-12.
159. "Package: lang/lisp/code/testing/rt/" (<http://www.cs.cmu.edu/afs/cs/project/ai-repository/ai/lang/lisp/code/testing/rt/0.html>) Cs.cmu.edu Retrieved 2012-11-12.
160. "stefil" (<http://common-lisp.net/project/stefil/>) Common-lisp.net Retrieved 2012-11-12.
161. "CLiki: xlunit" (<http://www.cliki.net/xlunit>) *cliki.net*.
162. "Crotest" (<https://github.com/emancu/crotest>) *github.com*.
163. "CurlUnit 1.0" (<http://curlunit.sourceforge.net/>). *sourceforge.net*.
164. "DUNIT: An Xtreme testing framework for Delphi programs" (<http://dunit.sourceforge.net/>). *sourceforge.net*.
165. "DUnit2 | Free software downloads at" (<http://sourceforge.net/projects/dunit2/>) Sourceforge.net. Retrieved 2012-11-12.
166. "DUnitX" (<https://github.com/VSoftTechnologies/DUnitX/>) Retrieved 2014-07-09.
167. Last edited 2010-12-11 11:44 UTC by Jari Aalto (diff) (2010-12-11). "El Unit" (<http://www.emacswiki.org/cgi-bin/wiki/ElUnit>) EmacsWiki. Retrieved 2012-11-12.
168. Last edited 2010-03-18 14:38 UTC by Lennart Borgman (diff) (2010-03-18). "Elk Test" (<http://www.emacswiki.org/cgi-bin/wiki/ElkTest>). EmacsWiki. Retrieved 2012-11-12.
169. Last edited 2009-05-13 06:57 UTC by Free Ekanayaka (diff) (2009-05-13). "unit-test.el" (<http://www.emacswiki.org/cgi-bin/wiki/unit-test.el>) EmacsWiki. Retrieved 2012-11-12.
170. [6] (<http://svn.process-one.net/contribs/trunk/eunit/doc/overview-summary.html>) Archived (<https://web.archive.org/web/20080719040633/http://svn.process-one.net/contribs/trunk/eunit/doc/overview-summary.html>) July 19, 2008, at the Wayback Machine
171. "nasarb's funit-0.11.1 Documentation" (<http://nasarb.rubyforge.org/funit/>). *rubyforge.org*.
172. "FORTRAN Unit Test Framework (FRUIT) | Free Development software downloads at" (<http://sourceforge.net/projects/fortranxunit>) Sourceforge.net. Retrieved 2012-11-12.
173. "flibs/ftunit - flibs" (<http://flibs.sf.net/ftunit.html>) Flibs.sf.net. Retrieved 2012-11-12.
174. "pFUnit | Free Development software downloads at" (<http://sourceforge.net/projects/pfunit/>). Sourceforge.net. Retrieved 2014-01-16.
175. "ObjexxFtk - Objexx Fortran Toolkit | Objexx Engineering" (<http://objexx.com/ObjexxFtk.html>). Objexx.com. Retrieved 2012-11-12.
176. "Fog" (<http://foq.codeplex.com/>) *CodePlex*.
177. "FsCheck: A random testing framework - Home" (<http://www.codeplex.com/fscheck/>) Codeplex.com. Retrieved 2012-11-12.
178. "andriniaina/FsMocks" (<https://github.com/andriniaina/FsMocks>) *GitHub*.
179. "FsTest" (<http://www.codeplex.com/FsTest>). *CodePlex*.
180. "FsUnit" (<http://fsunit.codeplex.com/>) *CodePlex*.
181. [7] (<http://bitbucket.org/forki/naturalspec/wiki/Home>) Archived (<https://web.archive.org/web/20100510053019/http://bitbucket.org/forki/naturalspec/wiki/Home>) May 10, 2010, at the Wayback Machine
182. "unquote - Write F# unit test assertions as quoted expressions, get step-by-step failure messages for free" (<https://github.com/swensenssoftware/unquote>) github.com. Retrieved 2016-07-27.
183. "go - The Go Programming Language" (<https://golang.org/cmd/go/>) *golang.org*. Retrieved 2016-10-06.
184. "tebeka/go2xunit" (<https://github.com/tebeka/go2xunit>) *GitHub*. Retrieved 2016-10-06.
185. "easyb" (<http://www.easyb.org/>). *easyb.org*.
186. "spock - the enterprise ready specification framework" (<https://github.com/spockframework>) github.com. Retrieved 2016-07-27.
187. "gmock - A Mocking Framework for Groovy - Google Project Hosting" (<https://code.google.com/p/gmock/>) Code.google.com. 2011-12-13. Retrieved 2012-11-12.
188. "GXUnit" (<http://wiki.gxtechnical.com/commwiki/servlet/hwiki?GXUnit>) Wiki.gxtechnical.com Retrieved 2012-11-12.
189. "HUnit -- Haskell Unit Testing" (<http://hunit.sourceforge.net>). *sourceforge.net*.
190. "HUnit-Plus: A test framework building on HUnit. - Hackage" (<https://hackage.haskell.org/package/HUnit-Plus>) *haskell.org*.
191. "nick8325/quickcheck" (<https://github.com/nick8325/quickcheck>) *GitHub*.
192. "feuerbach/smallcheck" (<https://github.com/feuerbach/smallcheck>) *GitHub*.
193. "hspec/hspec" (<https://github.com/hspec/hspec>) *GitHub*.
194. "marcotmarcot/chuchu" (<https://github.com/marcotmarcot/chuchu>) *GitHub*.
195. "humane-software/haskell-bdd" (<https://github.com/humane-software/haskell-bdd>) *GitHub*.
196. "massiveinteractive/MassiveUnit · GitHub" (<https://github.com/massiveinteractive/MassiveUnit>) GitHub.com Retrieved 2012-11-12.
197. Michael Galloy "mgunit" (<https://github.com/mgalloy/mgunit>) GitHub.com Retrieved 2015-09-27.
198. [8] (<http://www.barnett.id.au/idl/UnitRun.html>) Archived (<https://web.archive.org/web/20070304194538/http://www.barnett.id.au/idl/UnitRun.html>) March 4, 2007, at the Wayback Machine
199. Mike Bowler "HtmlUnit – Welcome to HtmlUnit" (<http://htmlunit.sourceforge.net/>). *sourceforge.net*.
200. "ieunit - Unit test framework for web pages. - Google Project Hosting" (<https://code.google.com/p/ieunit/>) Code.google.com Retrieved 2012-11-12.
201. "Canoo WebTest" (<http://webtest.canoo.com/>) *canoo.com*.
202. "SoapUI - The Home of Functional Testing" (<http://www.soapui.org/>). *soapui.org*.
203. "API Testing" (<http://www.parasoft.com/solution/api-testing/>) *Parasoft*.
204. "API Testing" (<http://www.parasoft.com/solution/api-testing/>) *Parasoft.com* Retrieved 2015-04-15.
205. "Arquillian - Write Real Tests" (<http://arquillian.org/>). *arquillian.org*.
206. "beanSpec | Free Development software downloads at" (<http://sourceforge.net/projects/beanspec>) Sourceforge.net. Retrieved 2012-11-12.
207. "abreksa4/BeanTest" (<https://github.com/abreksa4/BeanTest>). *GitHub*.
208. "Specification by Example - Concordion" (<http://www.concordion.org/>). *concordion.org*.
209. "Concetest" (<http://www.concetest.org/>). *concetest.org*.
210. "cucumber/cucumber-jvm · GitHub" (<https://github.com/cucumber/cucumber-jvm>) GitHub.com. Retrieved 2012-11-12.
211. "A test framework for Java 8" (<http://cuppa.fogerock.org/>). Retrieved 2016-03-23.
212. "東京の税理士を探すなら税理士紹介ドットコム" (<http://www.dbunit.org/>). *dbunit.org*.
213. "EasyMock" (<http://www.easymock.org/>). *easymock.org*.
214. "10. Testing" (<http://static.springsource.org/spring/docs/3.1.x/spring-framework-reference/html/testing.html#testing-resources>) *springsource.org*. Retrieved 23 June 2015.

215. "ETLUNIT Home"(<https://etlunit.atlassian.net/wiki/display/ETLUNIT/ETLUNIT+Home>). *atlassian.net*
216. "Etl-unit Home Page."(<https://etlunit.atlassian.net/wiki/display/ETLUNIT/ETLUNIT+Home>).
217. Fraser, Gordon; Arcuri, Andrea (2011). "Evosuite: automatic test suite generation for object-oriented software"(<http://dl.acm.org/citation.cfm?id=2025179>) *Proceedings of the 19th ACM SIGSOFT symposium and the 13th European conference on Foundations of software engineering*. doi:10.1145/2025113.2025179 (<https://doi.org/10.1145/2025113.2025179>).
218. Tim Lavers. "GrandTestAuto" (<http://grandtestauto.org/>). *grandtestauto.org*.
219. "GroboUtils - GroboUtils Home Page"(<http://groboutils.sourceforge.net/>). *sourceforge.net*.
220. "havarunner/havarunner"(<https://github.com/havarunner/havarunner>) *GitHub*.
221. "instinct - Instinct is a Behaviour Driven Development (BDD) framework for Java - Google Project Hosting"(<https://code.google.com/p/instinct/>) *Code.google.com* Retrieved 2012-11-12.
222. shyiko (2010-11-17). "Home · shyiko/jsst Wiki · GitHub" (<https://github.com/shyiko/jsst/wiki>). *GitHub.com* Retrieved 2012-11-12.
223. "What is JBehave?" (<http://jbehave.org/>). *jbehave.org*.
224. "JDave" (<http://www.jdave.org/>). *jdave.org*.
225. "SCG: JExample" (<http://scg.unibe.ch/research/jexample/>) Scg.unibe.ch. 2009-04-21. doi:10.1007/978-3-540-68255-4_8(https://doi.org/10.1007/978-3-540-68255-4_8) Retrieved 2012-11-12.
226. "JGiven" (<http://jgiven.org>). *jgiven.org*.
227. "jMock - An Expressive Mock Object Library for Java"(<http://www.jmock.org/>). *jmock.org*.
228. "Google Project Hosting"(<http://jmockit.org/>). *google.com*.
229. Sebastian Benz. "Jnario" (<http://jnario.org>). *jnario.org*.
230. "Java testing tools: static code analysis, code reviewunit testing" (<http://www.parasoft.com/jsp/products/jtest.jsp?itemId=14>) Parasoft. 2012-10-08 Retrieved 2012-11-12.
231. <http://jukito.org/>
232. "JUnit - About" (<http://junit.org/>). *junit.org*.
233. "junitee.org" (<http://www.junitee.org/>). *junitee.org*.
234. "JWalk software testing tool suite - Lazy systematic unit testing for agile methods"(<http://staffwww.dcs.shef.ac.uk/people/A.Simons/jwalk/>) The University of Sheffield. Retrieved 2014-09-04
235. "mockito - simpler & better mocking - Google Project Hosting"(<https://github.com/mockito/mockito>) *github.com*. 2016-07-27 Retrieved 2012-11-12.
236. "Mock classes for enterprise application testing"(<http://mockrunner.github.io/>) Retrieved 2014-09-04
237. "Needle - Effective Unit Testing for Java EE - Overview"(<http://needle.spree.de/>) *spree.de*.
238. "JavaLib" (<http://www.ccs.neu.edu/javalib>) *neu.edu*.
239. <http://openpojo.com/>
240. "powermock - PowerMock is a Java framework that allows you to unit test code normally regarded as untestable. - Google Project Hosting"(<http://www.powermock.org/>). *powermock.org*.
241. "Randoop" (<http://mernst.github.io/randoop/>) *mernst.github.io* Retrieved 23 June 2015.
242. "Sprystone.com" (<http://www.sprystone.com/>) *sprystone.com*
243. "Sureassert UC" (<http://www.sureassert.com/>) *sureassert.com*
244. "Test NG Website" (<http://testng.org/>). Retrieved 2014-09-04
245. "TestNG makes Java unit testing a breeze"(<http://www.ibm.com/developerworks/java/library/j-testng/>) *Ibm.com*. 2005-01-06 Retrieved 2012-11-12.
246. "Google Testing Blog: ToIT: TestNG on the Toilet" (<http://googletesting.blogspot.com/2008/03/tott-testng-on-toilet.html>) Googletesting.blogspot.com Retrieved 2012-11-12.
247. "Unitils - Index" (<http://www.unitils.org/>). *unitils.org*.
248. "<XmlUnit>" (<http://xmlunit.sourceforge.net/>). *sourceforge.net*.
249. "AVA" (<https://ava.li>) *ava.li*.
250. "monolithed/Suittest · GitHub"(<https://github.com/monolithed/Suittest>) *GitHub.com* Retrieved 2012-11-12.
251. Authors. "D.O.H.: Dojo Objective Harness - The Dojo Toolkit - Reference Guide"(<http://www.dojotoolkit.org/reference-guide/util/doh.html>) Dojotoolkit.org. Retrieved 2012-11-12.
252. "lbrtw/ut" (<https://github.com/lbrtw/ut/>) *GitHub*.
253. "JavaScript unit test framework, part 1"(<http://lbrtw.com/javascript-unit-test-framework-k-part-1>). *lbrtw.com*.
254. "jsunit.net" (<http://www.jsunit.net/>). *jsunit.net*.
255. Steve Fenton. "JavaScript Enhance Test Framework - Steve Fenton : The Internet, Web Development, JavaScript, Photography"(<http://www.stevfenton.co.uk/Content/JavaScript-Enhance-Test-Framework/>) Steve Fenton Retrieved 2012-11-12.
256. "QUnit" (<http://qunitjs.com/>) *qunitjs.com*.
257. "Unit testing framework for JavaScript"(<http://unitjs.com>) *unitjs.com*.
258. <http://www.iankent.co.uk/rhunit/>
259. [9] (<http://thefrontside.net/crosscheck>) Archived (<https://web.archive.org/web/20060705043652/http://thefrontside.net/crosscheck>) July 5, 2006, at the Wayback Machine
260. "J3Unit" (<http://j3unit.sourceforge.net/>). *sourceforge.net*.
261. "Mocha" (<http://mochajs.org/>). *mochajs.org*.
262. <https://github.com/theintern/intern>
263. "Specification Frameworks and Tools" (<http://www.valleyhighlands.com/testingframeworks/>) Valleyhighlands.com. 2010-11-26. Retrieved 2012-11-12.
264. "YUI 2: YUI Test" (<http://developer.yahoo.com/yui/yuittest/>) Developer.yahoo.com. 2011-04-13. Retrieved 2012-11-12.
265. "Archived copy" (<https://web.archive.org/web/20071215012137/http://janja.pe.kr/aw/moin.cgi/JSSpec>) Archived from the original (<http://janja.pe.kr/aw/moin.cgi/JSSpec>) on 2007-12-15 Retrieved 2007-12-29.
266. "Home - Scriptaculous Documentation"(<https://github.com/madrobby/scriptaculous/wiki/unit-testing>) *GitHub.com* Retrieved 2012-11-12.
267. "Archived copy" (<https://web.archive.org/web/20090426072817/http://visionmedia.github.com/jspec/>) Archived from the original (<http://visionmedia.github.com/jspec/>) on 2009-04-26 Retrieved 2009-04-08.
268. "Archived copy" (<https://web.archive.org/web/20100812040654/http://pivotal.github.com/jasmine/>) Archived from the original (<http://pivotal.github.com/jasmine/>) on 2010-08-12. Retrieved 2010-08-10.
269. "nkallen/screw-unit · GitHub"(<https://github.com/nkallen/screw-unit/tree/master>) *GitHub.com* Retrieved 2012-11-12.
270. "substack/tape" (<https://github.com/substack/tape>) Retrieved 2015-01-29.
271. TAP output can easily be transformed into JUnit XML via the CPAN module TAP::Formatter::JUnit.
272. "JSAN - Test.Simple" (<http://openjsan.org/doc/t/th/theory/Test/Simple/>) Openjsan.org. 2009-08-21. Retrieved 2012-11-12.
273. "JSAN - Test.More 0.21" (<http://openjsan.org/doc/t/th/theory/Test/Simple/0.21/lib/Test/More.html>) Openjsan.org. Retrieved 2012-11-12.
274. Bruce Williams <<http://codefluency.com>>, for Ruby Central <<http://rubycentral.org>>. "TestCase: Project Info"(<http://rubyforge.org/projects/testcase/>) RubyForge. Retrieved 2012-11-12.
275. "DouglasMeyer/test_it · GitHub"(https://github.com/DouglasMeyer/test_it) *GitHub.com* Retrieved 2012-11-12.
276. <https://github.com/atesgoral/jsunity>
277. "willurd/JSTest · GitHub" (<https://github.com/willurd/JSTest>). *GitHub.com* Retrieved 2012-11-12.
278. "JSTest.NET - Browserless JavaScript Unit Test Runner" (<http://jstest.codeplex.com/>) *CodePlex*.
279. <http://jsunity.com/>
280. "rhinounit - Javascript Testing Framework using Rhino - Google Project Hosting"(<http://code.google.com/p/rhinounit/>) *Code.google.com* Retrieved 2012-11-12.
281. "jasproject - Javascript Agile Suite - Google Project Hosting"(<https://code.google.com/p/jasproject/>) *Code.google.com* Retrieved 2012-11-12.
282. "FireUnit: Firebug Unit Testing for Firefox" (<http://fireunit.org/>). *fireunit.org*.
283. "js-test-driver - Remote javascript console - Google Project Hosting"(<https://code.google.com/p/js-test-driver/>) *Code.google.com* Retrieved 2012-11-12.
284. <http://js-testrunnercodehaus.org/>
285. <http://sinonjs.org/>
286. "Vows" (<http://vowsjs.org>). *vowsjs.org*.
287. "caolan/nodeunit · GitHub"(<https://github.com/caolan/nodeunit>) *GitHub.com* Retrieved 2012-11-12.
288. "Tyrte :: Javascript Unit Testing Framework" (<http://spadgos.github.com/tyrte>) *github.com*.
289. "WebReflection/wru · GitHub"(<https://github.com/WebReflection/wru>) *GitHub.com* Retrieved 2012-11-12.
290. "Welcome! BusterJS is... - BusterJS 0.7 documentation" (<http://busterjs.org>). *busterjs.org*.
291. "asvd/lighttest" (<https://github.com/asvd/lighttest>) *GitHub*.
292. "Home - Chai" (<http://chaijs.com/>) *chaijs.com*.
293. "JSUS" (<http://crisstanza.github.io/jsus/>) *crisstanza.github.io*
294. <http://wallabyjs.com/>
295. "zeroloop/l-unit8" (<http://www.l-unit.org/>). *GitHub*.
296. "Comprehensive TEX Archive Network: Package qstest"(<http://www.ctan.org/pkg/qstest>) *Ctan.org*. Retrieved 2013-07-04
297. JKI (2012-11-07). "VI Tester - Home Page - JKI Discussion Forums"(<http://jkisoft.com/vi-tester/>) *Jkisoft.com* Retrieved 2012-11-12.
298. JKI (2015-11-08). "Caraya - Git repository - GitHub"(<https://github.com/JKISoftware/JKI-VI-Tester>). *Jki.net*. Retrieved 2016-05-24
299. "lgtunit" (<https://github.com/LogtalkDotOrg/logtalk3/tree/master/tools/lgtunit>) *logtalk.org*. Retrieved 2013-10-14
300. "Luaunit" (<http://phil.freehackers.org/programs/luauunit/index.html>) Phil.freehackers.org. Retrieved 2012-11-12.
301. "lunit - Unit Testing Framework for Lua - Homepage"(<http://www.nessie.de/mroth/lunit/>). *Nessie.de*. 2009-11-05. Retrieved 2012-11-12.
302. axelberres. "mlUnit" (<http://sourceforge.net/projects/mlunit/?source=directory>) *SourceForge*.
303. "mlunit_2008a - File Exchange - MATLAB Central" (<http://www.mathworks.com/matlabcentral/fileexchange/21888>) *Mathworks.com* Retrieved 2012-11-12.
304. "MUnit: a unit testing framework in Matlab - File Exchange - MATLAB Central" (<http://www.mathworks.com/matlabcentral/fileexchange/7845-munit>) *Mathworks.com* Retrieved 2012-11-12.
305. "MUnit: a unit testing framework in Matlab - File Exchange - MATLAB Central" (<http://www.mathworks.com/matlabcentral/fileexchange/loadFile.do?objectId=1006&objectType=File>) *Mathworks.com* Retrieved 2012-11-12.
306. "MATLAB xUnit Test Framework - File Exchange - MATLAB Central" (<http://www.mathworks.com/matlabcentral/fileexchange/22846-matlab-xunit-test-framework>) *Mathworks.com* Retrieved 2012-11-12.
307. "tgs / Doctest for Matlab - Bitbucket"(<https://bitbucket.org/tgs/doctest-for-matlab/overview>). *bitbucket.org*.
308. Smith, Thomas. "Doctest - embed testable examples in your function's help comments" (<https://bitbucket.org/tgs/doctest-for-matlab/overview>). Retrieved 5 August 2011.
309. "Unit Testing Framework"(<http://www.mathworks.com/help/matlab/matlab-unit-test-framework.html>) *mathworks.com*
310. nno. "MOxUnit: An xUnit framework for Matlab and GNU Octave"(<https://github.com/nno/MOxUnit>) Retrieved 2016-05-16
311. "atata-framework/atata"(<https://github.com/atata-framework/atata>) *GitHub.com*
312. "DbUnit.NET" (<http://dbunit-net.sourceforge.net/>). *sourceforge.net*.
313. "ErrorUnit" (<http://ErrorUnit.com/>) *ErrorUnit.com*.
314. "fixie/fixie" (<https://github.com/plioi/fixie>) *GitHub*.
315. "mb-unit - The Gallio test automation platform and MbUnit unit testing framework. - Google Project Hosting"(<http://gallio.org>). *gallio.org*.
316. "mb-unit - The Gallio test automation platform and MbUnit unit testing framework. - Google Project Hosting"(<http://mbunit.com>) *mbunit.com*.
317. "moq - The simplest mocking library for .NET and Silverlight"(<https://github.com/Moq/moq4>) *google.com*.
318. "NBI" (<http://nbi.codeplex.com/>) *CodePlex*.
319. "nmate - Open Source Unit-Test Code Generation and Integration Add-in for Visual Studio - Google Project Hosting"(<https://code.google.com/p/nmate/>) *google.com*

320. "Pex, Automated White box Testing for .NET - Microsoft Research"(http://research.microsoft.com/en-us/projects/Pex/) *microsoft.com*. Microsoft. Retrieved 23 June 2015.
321. "Home" (http://www.qgonestudio.com/) *qgonestudio.com*. Retrieved 23 June 2015.
322. http://www.quickunit.com/
323. "abb-iss/Randoop.NET"(https://github.com/abb-iss/Randoop.NET) *GitHub*. Retrieved 23 June 2015.
324. Next Page. "Ayende @ Rahien" (http://www.wayende.com/projects/rhino-mocks.aspx) *Ayende.com*. Retrieved 2012-11-12.
325. "Roaster unit test" (http://www.codeplex.com/roaster) *CodePlex*. Retrieved 23 June 2015.
326. TechTalk. "SpecFlow" (http://specflow.org/). *SpecFlow*. Retrieved 23 June 2015.
327. "Specter Framework" (http://spectersf.net/). *sf.net*. Retrieved 23 June 2015.
328. "TestDriven.Net > Home" (http://www.testdriven.net/) *testdriven.net*.
329. "NET testing tools: Static code analysis, code review, unit testing with Parasoft dotTEST" (http://www.parasoft.com/jsp/solutions/dotnet_solution.jsp?itemId=342) *Parasoft.com*. Retrieved 2012-11-12.
330. "TickSpec: An F# BDD Framework"(http://tickspec.codeplex.com/) *CodePlex*.
331. "Smart Unit Testing - Made easy with Typemock" (http://www.typemock.org/). *typemock.org*.
332. [10] (http://www.prettyobjects.com/en/Products/TSharp) Archived (https://web.archive.org/web/20110227025822/http://www.prettyobjects.com/en/Products/TSharp) February 27, 2011, at the Wayback Machine
333. "xUnit.net - Unit testing framework for C# and .NET (a successor to NUnit) - Home" (http://xunit.codeplex.com) *CodePlex*.
334. "gabriel/gh-unit · GitHub" (https://github.com/gabriel/gh-unit) *GitHub.com*. Retrieved 2012-11-12.
335. philssquared (2012-06-02). "Home · philssquared/Catch Wiki · GitHub" (https://github.com/philssquared/Catch/wiki/Catch-forObjective-C). *GitHub.com*. Retrieved 2012-11-12.
336. "pivotal/cedar · GitHub" (https://github.com/pivotal/cedar) *GitHub.com*. Retrieved 2012-11-12.
337. "kiwi-bdd/Kiwi" (https://github.com/kiwi-bdd/Kiwi) *GitHub*.
338. "specta/specta" (https://github.com/specta/specta) *GitHub*.
339. "modocache/personal-fork-of-Quick" (https://github.com/modocache/Quick) *GitHub*.
340. "ObjcUnit" (http://oops.se/objcunit/) *Oops.se*. Retrieved 2012-11-12.
341. "Sente - OCUnit" (http://www.sente.ch/software/ocunit/) *Sente.ch*. Retrieved 2012-11-12.
342. "witebox - A more visually-oriented Unit Testing system exclusively for iPhone development! - Google Project Hosting" (https://code.google.com/p/witebox/) *Code.google.com*. Retrieved 2012-11-12.
343. "WOTest" (http://test.wincent.com/) *wincent.com*.
344. "Xcode - Features - Apple Developer" (https://developer.apple.com/xcode/features/) *Apple Inc*. Retrieved 2014-11-04.
345. "mirage/alcotest" (https://github.com/mirage/alcotest) *GitHub.com*. Retrieved 2015-11-17.
346. "OUnit" (http://ounit.fojocamlcore.org/). *ocamlcore.org*.
347. Xavier Clerc (30 August 2012). "Kaputt - Introduction" (http://kaputt.x9c.fr/) *x9c.fr*.
348. "Archived copy" (https://web.archive.org/web/20070219143354/http://www.iinteractive.com/ocaml/) Archived from the original (http://www.iinteractive.com/ocaml/) on 2007-02-19. Retrieved 2007-02-26.
349. "FORT | Free Development software downloads at" (http://sourceforge.net/projects/fort) *Sourceforge.net*. Retrieved 2012-11-12.
350. "Index" (http://camelos.sourceforge.net/fpcUnit.html) *Camelos.sourceforge.net*. Retrieved 2012-11-12.
351. "Pascal TAP Unit Testing Suite | Free software downloads at" (http://sourceforge.net/projects/tap4pascal) *Sourceforge.net*. Retrieved 2012-11-12.
352. "graemeg/fptest · GitHub" (https://github.com/graemeg/fptest) *GitHub.com*. Retrieved 2012-11-12.
353. "PRUnit SourceForge Project Homepage" (http://prunit.sourceforge.net/). *sourceforge.net*.
354. https://web.archive.org/web/20070929103231/http://search.cpan.org/perldoc/TAP. Archived from the original (http://search.cpan.org/perldoc/TAP) on September 29, 2007. Retrieved August 2, 2006. Missing or empty |title= (help)
355. "Test::Harness" (https://metacpan.org/module/Test::Harness) *metacpan.org*. Retrieved 2012-11-12.
356. "Test::More" (https://metacpan.org/module/Test::More) *metacpan.org*. Retrieved 2012-11-12.
357. "Test::Class" (https://metacpan.org/module/Test::Class) *metacpan.org*. Retrieved 2012-11-12.
358. "Test::Builder" (https://metacpan.org/module/Test::Builder) *metacpan.org*. Retrieved 2012-11-12.
359. "Test::Unit" (https://metacpan.org/module/Test::Unit) *metacpan.org*. Retrieved 2012-11-12.
360. "PerlUnit: unit testing framework for Perl" (http://perlunit.sourceforge.net/). *sourceforge.net*.
361. "Re: Test::Unit, ::Class, or ::Inline?" (http://www.nntp.perl.org/group/perl.qa/2005/02/msg3562.html) *nntp.perl.org*. Retrieved 2012-11-12.
362. "Re: Test::Unit, ::Class, or ::Inline?" (http://www.nntp.perl.org/group/perl.qa/2005/02/msg3571.html) *nntp.perl.org*. Retrieved 2012-11-12.
363. "Test::DBUnit" (https://metacpan.org/module/Test::DBUnit) *metacpan.org*. Retrieved 2012-11-12.
364. "Test::Unit::Lite" (https://metacpan.org/module/Test::Unit::Lite) *metacpan.org*. Retrieved 2012-11-12.
365. "Test::Able" (https://metacpan.org/module/Test::Able) *metacpan.org*. Retrieved 2012-11-12.
366. "PHPUnit - The PHP Testing Framework" (http://www.phpunit.de/). *phpunit.de*.
367. "PHP Unit Testing Framework" (http://php-unit-test.sourceforge.net/). *sourceforge.net*.
368. "SimpleTest - Unit Testing for PHP" (http://simpletest.org/). *simpletest.org*.
369. "/tools/lime/trunk - symfony - Tac" (http://trac.symfony-project.com/trac/browser/tools/lime/trunk) *Trac.symfony-project.com*. Retrieved 2012-11-12.
370. "shiflett/testmore · GitHub" (http://shiflett.org/code/test-more.php) *Shiflett.org*. Retrieved 2012-11-12.
371. Chris Shiflett. "Test::Simple for PHP" (http://shiflett.org/blog/2006/jan/test-simple-for-php). *shiflett.org*.
372. "OjesUnit" (http://ojessunit.blogspot.com/) *ojessunit.blogspot.com*.
373. "Jakobo/snaptest" (http://www.snaptest.net) *GitHub*.
374. "atoum/atoum · GitHub" (https://github.com/atoum/atoum) *GitHub.com*. Retrieved 2012-11-12.
375. README. "jamm/Tester · GitHub" (https://github.com/jamm/Tester). *GitHub.com*. Retrieved 2012-11-12.
376. "ptrofimov/phpinlinetest · GitHub" (https://github.com/ptrofimov/phpinlinetest) *GitHub.com*. Retrieved 2012-11-12.
377. "phpspec" (http://www.phpspec.net/). *phpspec.net*.
378. "nette/tester · GitHub" (https://github.com/nette/tester) *GitHub.com*. Retrieved 2014-04-22.
379. "cryslead/kahlan · GitHub" (https://github.com/cryslead/kahlan) *GitHub.com*. Retrieved 2015-03-19.
380. "01-Introduction" (http://codeception.com/docs/01-Introduction) *Codeception*. Retrieved 2015-10-07.
381. "Internet Archive Wayback Machine" (https://web.archive.org/web/20090728170628/http://geocities.com/pbunit/) *Web.archive.org*. 2009-07-28. Archived from the original (http://geocities.com/pbunit/) on July 28, 2009. Retrieved 2012-11-12.
382. "GitHub - pester/Pester" (https://github.com/pester/Pester) *Microsoft*. Retrieved 2017-06-21.
383. "Welcome to ProUnit! -- The Progress - OpeEdge unit tests framework" (http://prounit.sourceforge.net/). *sourceforge.net*.
384. "CameronWills/OEUnit" (https://github.com/CameronWills/OEUnit). *GitHub*.
385. "Prolog Unit Tests" (http://www.swi-prolog.org/pldoc/package/plunit.html) *Swi-prolog.org*. Retrieved 2012-11-12.
386. http://autotest.github.io/
387. "25.3. unittest - Unit testing framework - Python 2.7.10 documentation" (https://docs.python.org/2/library/unittest.html) *python.org*. Retrieved 23 June 2015.
388. "Note to Users - nose 1.3.7 documentation" (https://nose.readthedocs.io/en/latest/) Retrieved 29 December 2016.
389. "pytest: helps you write better programs" (http://pytest.org/). *pytest.org*. Retrieved 23 June 2015.
390. "TwistedTrial - Twisted" (http://twistedmatrix.com/trac/wiki/TwistedTrial). *Twistedmatrix.com*. Retrieved 2012-11-12.
391. "Should-DSL documentation" (http://www.should-dsl.info/) *should-dsl.info*. Retrieved 23 June 2015.
392. "Green is a clean, colorful, fast python test runner" (https://github.com/CleanCut/green). Retrieved 28 April 2017.
393. "R Unit Test Framework | Free software downloads at" (http://sourceforge.net/projects/runit/). *Sourceforge.net*. Retrieved 2012-11-12.
394. "CRAN - Package testthat" (https://cran.r-project.org/web/packages/testthat/index.html) *CRAN.r-project.org*. 2012-06-27. Retrieved 2012-11-12.
395. "3 RackUnit API" (http://docs.racket-lang.org/rackunit/api.html?q=rackunit) *Docs.racket-lang.org*. Retrieved 2012-11-12.
396. Neil Van Dyke. "Overeasy: Racket Language Test Engine" (http://www.neilvandyke.org/overeasy/). *Neilvandyke.org*. Retrieved 2012-11-12.
397. "RBUnit is now Free!" (http://logicalvue.com/blog/2007/02/rbunit-is-now-free/) *LogicalVue*. Retrieved 2012-11-12.
398. "REBOL.org" (http://www.rebol.org/). *rebol.org*.
399. "RPGUnit.org - Summary" (http://rpgunit.sourceforge.net/). *sourceforge.net*.
400. "Module: Test::Unit (Ruby 1.9.3)" (http://www.ruby-doc.org/stdlib/libdoc/test/unit/rdoc/classes/Test/Unit.html) *Ruby-doc.org*. 2012-11-08. Retrieved 2012-11-12.
401. "Ruby 2.2 - GitHub" (https://github.com/ruby/ruby/blob/v2_2_0/NEWS)
402. "Ruby 2.2.0 Released" (https://www.ruby-lang.org/en/news/2014/12/25/ruby-2-2-0-released/).
403. "Module: Test::Unit (Ruby 2.1.0) - Ruby-Doc.org" (http://ruby-doc.org/stdlib-2.1.0/libdoc/test/unit/rdoc/Test/Unit.html)
404. "Community: open source ruby on rails development" (http://www.thoughtbot.com/projects/shoulda) *thoughtbot*. Retrieved 2012-11-12.
405. "Documentation for minitest (2.0.2)" (http://rubydoc.info/gems/minitest/2.0.2/frames) *Rubydoc.info*. Retrieved 2012-11-12.
406. [11] (http://blog.zenspider.com/minitest/) Archived (https://web.archive.org/web/20110718152315/http://blog.zenspider.com/minitest/) July 18, 2011, at the Wayback Machine.
407. "Github page for TMF" (https://github.com/browsersenior/tmf) *GitHub.com*. Retrieved 2013-01-24.
408. "FUTS - Framework for Unit Testing SAS" (http://thotwave.com/resources/futs-framework-unit-testing-sas/) *ThotWave*. Retrieved 2012-11-12.
409. "ScUnit" (http://www.sascommunity.org/mwiki/index.php?title=ScUnit&redirect=no) *sasCommunity*. 2008-10-26. Retrieved 2012-11-12.
410. "SASUnit | Free Development software downloads at" (https://sourceforge.net/project/sasunit/). *Sourceforge.net*. Retrieved 2012-11-12.
411. "Reharsal - A testing framework for Scala" (http://reharsal.sourceforge.net/). *sourceforge.net*.
412. "scalacheck - ScalaCheck: Property-based testing for Scala" (https://www.scalacheck.org/).
413. "ScalaTest" (http://www.scalatest.org/). *scalatest.org*.
414. "scunit - A unit testing framework for Scala - Google Project Hosting" (https://code.google.com/p/scunit/) *Code.google.com*. Retrieved 2012-11-12.
415. "specs2 - Software Specifications for Scala" (https://etorreborre.github.io/specs2/)
416. "A tiny, portable testing library for Scala - GitHub" (https://github.com/lihaoyi/utest) *github.com*. Retrieved 2016-05-17.
417. "test_run - Launch tests" (http://help.scilab.org/docs/current/en_US/test_run.html) *Help.scilab.org*. 2011-11-21. Retrieved 2012-11-12.
418. main.ss. "PLaneT Package Repository : PLaneT > schematics > schemeunit.plt" (http://planet.plt-scheme.org/display.ss?package=schemeunit.plt&owner=schematics) *Planet.plt-scheme.org*. Retrieved 2012-11-12.
419. Neil Van Dyke. "Testeez: Lightweight Unit Test Mechanism for R5RS Scheme" (http://www.neilvandyke.org/testeez/). *Neilvandyke.org*. Retrieved 2012-11-12.

420.

lehmanno/assert.sh · GitHub(https://github.com/lehmanno/assert.sh)Github.com Retrieved 2012-11-12.

421.

sstephenson/bats · GitHub(https://github.com/sstephenson/bats)Github.com Retrieved 2012-11-12.

422.

shadowfen. "jshu" (http://sourceforge.net/projects/jshu) *SourceForge*.

423.

"Roundup - Prevent shell bugs. (And: Are you a model Unix citizen?) - It's Bonus!http://itsbonus.herokuapp.com/p/2010-11-01-roundup). Itsbonus.herokuapp.com. 2010-11-01. Retrieved 2012-11-12.

424.

haran. "ShUnit" (http://shunit.sourceforge.net/). *sourceforge.net*.

425.

"shunit2 - shUnit2 - xUnit based unit testing for Unix shell scripts - Google Project Hosting" (https://code.google.com/p/shunit2/)Code.google.com Retrieved 2012-11-12.

426.

Stefan Merten. "filterunit" (http://www.merten-home.de/FreeSoftware/filterunit/)Merten-home.de Retrieved 2012-11-12.

427.

http://mlunit.sourceforge.net/index.php/The_slUnit_Testing_Framework

428.

"SQLUnit Project Home Page"(http://sqlunit.sourceforge.net/). *sourceforge.net*.

429.

"fitnesse.info" (http://www.fitnesse.info/dbfit) *fitnesse.info*.

430.

"STK Documentation" (http://stk.wikidot.com/) *wikidot.com*.

431.

"MyTAP" (http://theory.github.com/mytap/) *github.com*.

432.

"utMySQL" (http://utmysql.sourceforge.net/). *sourceforge.net*.

433.

"Welcome to the utPLSQL Project"(http://utplsql.sourceforge.net/). *sourceforge.net*.

434.

"Code Tester for Oracle" (http://software.dell.com/products/toad-development-suite-for-oracle/code-tester-for-oracle.aspx) software.dell.com/ Retrieved 2014-02-13

435.

"Automated PL SQL Code Testing – Code Tester from Quest Software"(http://www.quest.com/toad-development-suite-fororacle/code-tester-for-oracle.aspx) quest.com Retrieved 2013-09-30.

436.

"Unit Testing with SQL Developer"(http://docs.oracle.com/cd/E15846_01/doc.21/e15222/unit_testing.htm) Docs.oracle.com Retrieved 2012-11-12.

437.

"PL/Unit - Test Driven Development for Oracle"(http://plunit.com/) *plunit.com*.

438.

"pluto-test-framework - PL/SQL Unit Testing for Oracle"(https://github.com/rlove/pluto-test-framework) github.com Retrieved 2016-07-27.

439.

"rsim/ruby-plsql-spec · GitHub"(https://github.com/rsim/ruby-plsql-spec) Github.com Retrieved 2012-11-12.

440.

Jake Benilov "DbFit" (http://benilovj.github.io/dbfit/) *benilovj.github.io*

441.

"angoca/db2unit" (https://github.com/angoca/db2unit)*GitHub*.

442.

http://www.epictest.org/

443.

"pgTAP" (http://pgtap.org/). *pgtap.org*.

444.

"pgtools | Free Development software downloads at"(http://sourceforge.net/projects/pgtools/) Sourceforge.net. Retrieved 2012-11-12.

445.

"dkLab | Constructor | PGUnit: stored procedures unit-test framework for PostgreSQL 8.3" (http://en.dklab.ru/lib/dklab_pgunit/)En.dklab.ru Retrieved 2012-11-12.

446.

"tSQLt - Database Unit Testing for SQL Server"(http://tsqlt.org/). *tSQLt - Database Unit Testing for SQL Server*.

447.

Red Gate Software Ltd."SQL Test - Unit Testing for SQL Server"(http://www.red-gate.com/products/sql-development/sql-test/)Red-gate.com Retrieved 2012-11-12.

448.

aevdokimenko."TSQUnit unit testing framework"(http://tsqlunit.sourceforge.net/). *SourceForge*.

449.

"TSQUnit" (http://sourceforge.net/apps/trac/tsqlunit/) Sourceforge.net. Retrieved 2012-11-12.

450.

"utTSQL" (http://utTSQL.sourceforge.net/). *sourceforge.net*.

451.

"Download Visual Studio 2005 Team Edition for Database Professionals Add-on from Official Microsoft Download Center"(http://www.microsoft.com/downloads/details.aspx?FamilyID=7DE00386-893D-4142-A778-992B69D482AD&displaylang=en) Microsoft.com. 2007-01-08 Retrieved 2012-11-12.

452.

"Download Alcyone SQL Unit"(http://alcyonesqlunit.com/downloads/)Retrieved 2014-08-18

453.

"T.S.T. the T-SQL Test Tool" (http://TSTCodeplex.com/) *CodePlex*.

454.

vassilvk (2012-06-15)."Home · vassilvk/slacker Wiki · GitHub"(https://github.com/vassilvk/slacker/wiki/) Github.com Retrieved 2012-11-12.

455.

"Quick/Quick" (https://github.com/Quick/Quick) *GitHub*.

456.

"railsware/Sleipnir"(https://github.com/railsware/Sleipnir)*GitHub*.

457.

"SVUnit Sourceforge page" (http://sourceforge.net/projects/svunit/) Retrieved 2014-05-06

458.

"Tcl Bundled Packages - tcltest manual page"(http://www.tcl.tk/man/tcl8.4/TclCmd/tcltest.htm). Tcl.tk. Retrieved 2012-11-12.

459.

"TclUnit | Free Development software downloads at"(http://sourceforge.net/projects/tclunit/). Sourceforge.net. Retrieved 2012-11-12.

460.

"t-unit - a unit test framework for the tcl programming language - Google Project Hosting" (https://code.google.com/p/t-unit/)Code.google.com Retrieved 2012-11-12.

461.

http://www.lavalampmotemasters.com/

462.

"tsUnit - TypeScript Unit Testing Framework"(https://tsunit.codeplex.com/) *CodePlex*.

463.

"Oscar - Test harness for TypeScript" (http://oscaradriencadet.com/) *adriencadet.com*

464.

"Alsatian - Test harness for TypeScript" (https://github.com/alsatian-test/alsatian) *github.com*.

465.

https://github.com/LarsAsplund/vunit

466.

"Archived copy" (https://web.archive.org/web/20050402130049/http://www.foxunit.org/). Archived from the original (http://www.foxunit.org/) on 2005-04-02 Retrieved 2005-07-11.

467.

Maass Computertechnik."vbUnit 3 - Unit Test Framework for Visual Basic and COM objects" (http://vbunit.com/) *vbunit.com*.

468.

http://vbunitfree.sourceforge.net/

469.

"Vba Unit" (http://www.c2.com/cgi/wiki?VbaUnit) C2.com. 2007-05-15 Retrieved 2012-11-12.

470.

"excelvbaunit - xUnit type test harness for Excel VBA code - Google Project Hosting" (https://code.google.com/p/excelvbaunit/)Code.google.com Retrieved 2012-11-12.

471.

"TinyUnit: The Simplest Unit Test Framework that Can Possibly Work" (http://www.w-p.dds.nl/tinyunit.htm) W-p.dds.nl. Retrieved 2012-11-12.

472.

"SimplyVBUnit" (http://simplyvbunit.sourceforge.net/). *sourceforge.net*.

473.

"VB Lite Unit Home Page"(http://vb-lite-unit.sourceforge.net/). *sourceforge.net*.

474.

"vl-unit - Visual Lisp Unit testing framework - Google Project Hosting"(https://code.google.com/p/vl-unit/) Code.google.com Retrieved 2012-11-12.

475.

"RefleX" (http://reflex.gforge.inria.fr/xunit.html) Reflex.gforge.inria.fr. Retrieved 2012-11-12.

476.

"RefleX" (http://reflex.gforge.inria.fr/wunit.html) Reflex.gforge.inria.fr. Retrieved 2012-11-12.

477.

"vauto - Extensible - Data driven - Automation framework. - Google Project Hosting" (https://code.google.com/p/vauto/)Code.google.com Retrieved 2012-11-12.

478.

"Apache Ant - Apache AntUnit"(http://ant.apache.org/antlibs/antunit/) Ant.apache.org. 2011-08-16. Retrieved 2012-11-12.

479.

"juxy.tigris.org" (http://juxy.tigris.org/). *tigris.org*.

480.

"Tennison Tests (XSLT Unit Testing) - Build the Site"(http://tennison-tests.sourceforge.net/). *sourceforge.net*.

481.

"Unit Testing Framework - XSI" (http://utf-x.sourceforge.net/). *sourceforge.net*.

482.

"XSLTUnit" (http://xsltunit.org/). *xsltunit.org*.

483.

"expath/xspec" (https://github.com/expath/xspec) *GitHub*.

484.

White, L.J. (27–30 Sep 1993)."Test Manager: A regression testing tool"(http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=366928&fromcon) *Software Maintenance, 1993. CSM-93, Proceedings. Conference on* 338. doi:10.1109/ICSM.1993.366928(htt ps://doi.org/10.1109%2FICSM.1993.366928) Retrieved 2012-11-12.

485.

TriVir. "IdMUnit.org" (http://idmunit.sourceforge.net/). *sourceforge.net*.

486.

"Unit Test Your Code" (https://msdn.microsoft.com/en-us/library/dd264975.aspx/) *MSDN , Visual Studio 2015*

External links

- Oracle Unit Testing - tutorial site
- OpenSourceTesting.org lists many unit testing frameworks, performance testing tools and other tools programmers/developers may find useful
- Testing Framework

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