

AppPerfect Java Unit Test

Overview

AppPerfect Java Unit Test is a complete unit testing system. It automates the generation and execution of unit tests. Unit testing forms the basis of software testing at the developer level. It is sometimes referred to as "developer testing". AppPerfect Java Unit Tester is ideal for implementing Agile development and testing methodology in your organization.

AppPerfect Java Unit Test uses the JUnit testing framework for generation and execution of test cases for Java source files. It uses the HtmlUnit framework for generation and execution of test cases for JSP files. AppPerfect Java Unit Test builds on concepts of mock objects and provides a complete framework to define and manage reusable simulated objects defined in your applications.

While most developers recognize the importance of unit testing, it is a very resource intensive process. Unfortunately, most organizations do not unit tests their code in a comprehensive and consistent manner. AppPerfect Java Unit Test goes beyond generating simple stub classes for JUnit testing. It generates fully functional, highly intelligent test classes that understand your application and test your source files thoroughly.

AppPerfect Java Unit Test also provides complete code coverage data after test execution. This enables you to view the code path taken by the test case and adjust the test case as needed. The true measure of an automated unit tester's usefulness is the level of code coverage the product provides out-of-the-box. AppPerfect Unit Tester, on average provides the highest level of code coverage compared to similar products in the market.

With AppPerfect Java Unit Test the efforts you, as a programmer, have to put into unit testing is greatly reduced. It automates Test Case generation and execution with extensive reporting for reference and analysis purpose. In addition it also provides comprehensive test-case management tools. AppPerfect Java Unit Test offers you a variety of features to ease and streamline your process of Unit Testing.

Screenshot

The screenshot displays the AppPerfect Java Unit Test - NewProject interface. The main window shows an "Execution Summary" chart and a summary table. The chart displays the results of the test execution, including the number of successful and failed test cases, and the percentage of lines covered. The summary table provides a detailed breakdown of the results.

Execution Summary Chart Data:

Category	Successful	Failed	Coverage
Test Classes	8	14	64%
Test Cases	185	134	58%
Lines covered	185	134	58%

Summary Table:

Summary of	Successful	Failed
Lines covered	58% (185/319)	42% (134/319)
Test Cases	58% (185/319)	42% (134/319)
Test Classes	36% (8/22)	64% (14/22)

Project Structure (Left Panel):

- NewProject
 - Server Pages
 - /Users/indravardha
 - Struts Actions
 - com.appperfect.pet
 - CreateAction.jav
 - CreateCheckActi
 - CreateLoginActi
 - EditAction.java
 - ForwardAction.ja
 - ShippingAction.j
 - Source Files [Gen-319]
 - com.appperfect.pet
 - CheckForm.java
 - CheckForm [C
 - Constants.java [C
 - CreditCardInfo.ja
 - Customer.java [C
 - CustomerForm.ji
 - CustomerInfo.jav
 - CustomerList.jav
 - CustomerModel,
 - EditForm.java [G
 - Login.java [Gen-
 - LoginForm.java [
 - LoginVariable.jav
 - Node.java [Gen-
 - Personallnf.java
 - PreferenceInfo.ja
 - ShippingForm.ja
 - com.appperfect.pet
 - Data.java [Gen-5
 - Node.java [Gen-

Key Features

- **Automated unit test case generation:** AppPerfect Java Unit Test automatically generates full test cases, by going through code and understanding it. AppPerfect Java Unit Test goes beyond generating simple stub classes for JUnit testing. It generates fully functional, highly intelligent test classes that understand your application and test your source files thoroughly. It automatically maintains these test cases as your code changes, so if you delete any method in your source, AppPerfect Java Unit Tester will take care of deleting the corresponding test cases from test class files and so on.
- **Client-side testing:** AppPerfect Java Unit Test uses JUnit framework, the most commonly used framework, to generate and test Java source. To unit test server-side Java source (JSP/Servlets/EJB) it uses HtmlUnit framework.
- **Server-side testing:** It uses HtmlUnit implementation by providing browser-based test recording for JSP applications which provides in-container testing without the complexity involved with setting with an in-container environment. It also provides support for templates based frameworks such as Apache Struts. For sophisticated enterprise applications using EJBs, AppPerfect Java Unit Tester provides support for in-container testing.
- **High Code Coverage:** AppPerfect Java Unit Test cases provide high level of code coverage out of the box. It also provides tools to increase the code coverage significantly without much effort.
- **Object Repository:** AppPerfect Java Unit Test uses concept of mock objects to unit test your source code. It generates mock objects and stores them in a repository called Object Repository. You can manage these objects using Object Repository Manager.
- **Supports Stubbing:** AppPerfect Java Unit Test supports stub code generation, this is useful when some part of application is not available or is not developed yet. For example your application requires a database connection but same is not available then you can stub getConnection call and return some dummy connection object in place, unit tester will take care to execute your stubbed code in place of actual getConnection call while unit testing the code.
- **Mock Database support:** AppPerfect Java Unit Test supports mock database functionality. A mock database replaces the actual database during unit testing. Most often, users do not have access to the database layer during testing. But without a database, most database dependent applications will fail to execute. The mock database solves this issue.
- **Importing of existing JUnit tests:** AppPerfect Java Unit Test can import a existing JUnit test cases and and execute them along with Unit Tester generated test cases and can report the results.
- **Support for basic authentication, cookies, SSL:** With the AppPerfect Java Unit Test, you can unit test JSP applications that require basic authentication as well as those using HTTPS by allowing the configuration of the SSL Provider. It also handles the sending of cookies with the appropriate requests and supports URL rewriting if your application uses it. Two way SSL authentication is also supported.
- **Informative reports:** The application provides reports to show successful and failed test cases with reason why test case failed. These reports are available through the GUI and can be exported into various formats like HTML, PDF, CSV, XLS, XML etc.
- **Scheduling & Notification:** You can automate your testing by scheduling them using the [AppPerfect Test Manager](#) product. You can also use the Notifications manager module of the [AppPerfect Test Manager](#) product to send an email, SMS or file notification when a test is complete.
- **IDE Integration:** AppPerfect Java Unit Tester supports IDE integration with most commonly used IDEs. This enhances ease-of-use and productivity.
- **ANT Integration and Command line execution:** AppPerfect Unit Test supports ANT integration so it can be easily integrated into most development/build environments. Unit Tester also supports command line execution so you can unit test your source code by invoking product from a bat or sh file.

Online Demos

- [Unit Testing a project in Standalone Mode](#)
- [Unit Testing a project inside Eclipse IDE](#)
- [Advanced Features of Java Unit Test](#)

Tutorials

- [Unit Testing a project](#)
- [Unit Testing Struts Action Classes](#)
- [Unit Testing EJBs](#)
- [Unit Testing Eclipse Plugin](#)

Supported Products

- JDK : JDK 1.3 and higher, JRocket 1.4.2 and higher, IBM JDK 1.3.1 and higher
- OS : Windows 2000/XP/2003/Vista, Linux x86, Mac OS X
- IDE : Eclipse 2.1.3 and higher, IBM RAD 6.x and higher, NetBeans 4.0 and higher
- AppServer : Tomcat 4.0 and higher; WebLogic 7.0 and higher; IBM WebSphere 5.x and higher; JBoss 3.0 and higher, OracleAS 10g

AppPerfect Java Testing Services

AppPerfect is more than just your software provider. We can help you implement them. Our team of highly trained experts can shorten implementation time and provide fast results. Our services include:

- "Start Pack": Initial setup and training
- Test Design: Build tests to achieve your functional objectives
- Results Analysis: Analyze results and recommend actions
- Test Automation: Automate tests so they become part of your development process
- Custom enhancements: Extend any AppPerfect product with your needs

Please visit our [Professional Services](#) center for more details

Licensing & Download

A free full-featured professional version of the AppPerfect Java Unit Test can be downloaded from our [Download Center](#). The evaluation version is limited to 3 files per project.

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