# CODENAMEONE

*"Codename One is developed in NetBeans IDE and has a huge portion of its users within the NetBeans community. The speed with which we have been able to develop the Codename one plugin in the IDE is a testament to the efficiency of the tools it provides."*

**Company:** Codename One

**Location:** Tel Aviv, Israel

**Url:** http://www.Codenameone.com

**Industry:** Cloud Based
         Mobile Development

**Oracle Products & Services:**

- NetBeans IDE
- Java
- Java EE
- Swing
- LWUIT

## Executive Summary

Codename One is an open source platform that allows Java developers to build native mobile applications that run on all mobile devices, such as iOS, iPhone/iPad, Android, RIM, and Windows Phone. Codename One is the only solution that allows the "write once, run anywhere" experience for Java developers, without the limitations of HTML5 or web based technologies.

Codename One integrates seamlessly with the NetBeans IDE to provide a familiar development environment for Java developers.

## Organization

Codename One is a rapidly growing startup, while also boasting an open source developer community that is responsible for code contributions and support. Codename One has made its way into Fortune 500 companies, as well as multiple startups and independent developer hands.

The Codename One product includes a service that supports Java developers when developing native applications using native platform tools.

## The Business Issue

- Codename One needed a single tool that could help maintain its large code base for its GUI builder, the Codename One Designer.
- Codename One had a strong requirement to develop code using an IDE, while also being able to customize their build scripts extensively for release distribution.
- Since the core Codename One project is open source, it was of utmost importance that the build process could be adapted to work with completely free and open source tools.

## Key Challenges

- Not all 3rd party developers use NetBeans IDE, so the build process had to be usable from 3rd party tools and from the command line.
- Due to the architecture of Codename One, the classpath needed heavy manipulation.

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- Running and debugging withing the Codename One simulator had to be seamless. The Codename One team expects a developer to press "run" or "debug" and that should "just work".
- Integration with the Codename One Designer and its generated code had to be seamless.

### Solution

- The ability to customize source code via Ant scripts in the IDE was invaluable to the Codename One team. It allowed the Codename One simulator to launch when running an application and to send server builds seamlessly.
- Being able to build the Codename One plugin using the Matisse GUI Builder has made the development of the user interface fast, while its maintenance is especially easy.
- The NetBeans IDE refactoring and coding environment is familiar and intuitive. Developers can simply download the IDE, install the Codename One plugin, and have everything they need immediately available, which makes the setup procedure especially fast.
- The ease of working with and integrating with the NetBeans update center is crucial and allows the Codename One team to deliver an update every two to three weeks and continually have its users up to date.
- The Codename One team uses Subversion for versioning project source files. The fact that NetBeans IDE integrates Subversion support out of the box has proved very helpful.
- The refactoring tools in NetBeans IDE have proved to be helpful to the Codename One team. The team has found that the refactoring tools are especially helpful when dealing with a large and multi-tiered code bases.
- The Codename One team has found that the NetBeans Java Editor works intuitively and supports their daily tasks well. The Java Editor is consistent across the various platforms that the team needs to work with, which is really important for "finger memory", when moving constantly between different platforms.

**Credits:**

Shai Almog
Chen Fishbein

### Business Value

- The Codename One development process requires working on Windows, Mac, and Linux operating systems. Codename One has found that these operating systems are well supported by NetBeans IDE, while the IDE also enables applications to be structured clearly and intuitively.
- By standardizing on the NetBeans IDE project system, with structures such as an Ant files and source directories, Codename One was able to move much faster and effectively than would otherwise have done.
- The Codename One Designer was built entirely via the NetBeans Matisse GUI Builder, together with multiple supporting technologies that are only available in NetBeans IDE. The initial version of the designer was written in two weeks.
- While the tools that Codename One is developing in NetBeans IDE are continually going through revisions, the Codename One team considers the speed with which it is using NetBeans IDE to be a testament to the efficiency of the tools provided by the IDE.

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