Chapter 3
# Getting Started with IDE

IDE (Integrated Development Environment)

An integrated development environment (IDE) (also known as integrated design environment, integrated debugging environment or interactive development environment) is a software application that provides comprehensive facilities to computer programmers for software development. An IDE normally consists of:

- A source code editor
- Build automation tools
- A debugger

Some IDEs contain compiler and/or an interpreter, such as Microsoft Visual Studio and Eclipse; others do not, such as Sharp Develop and Lazarus.
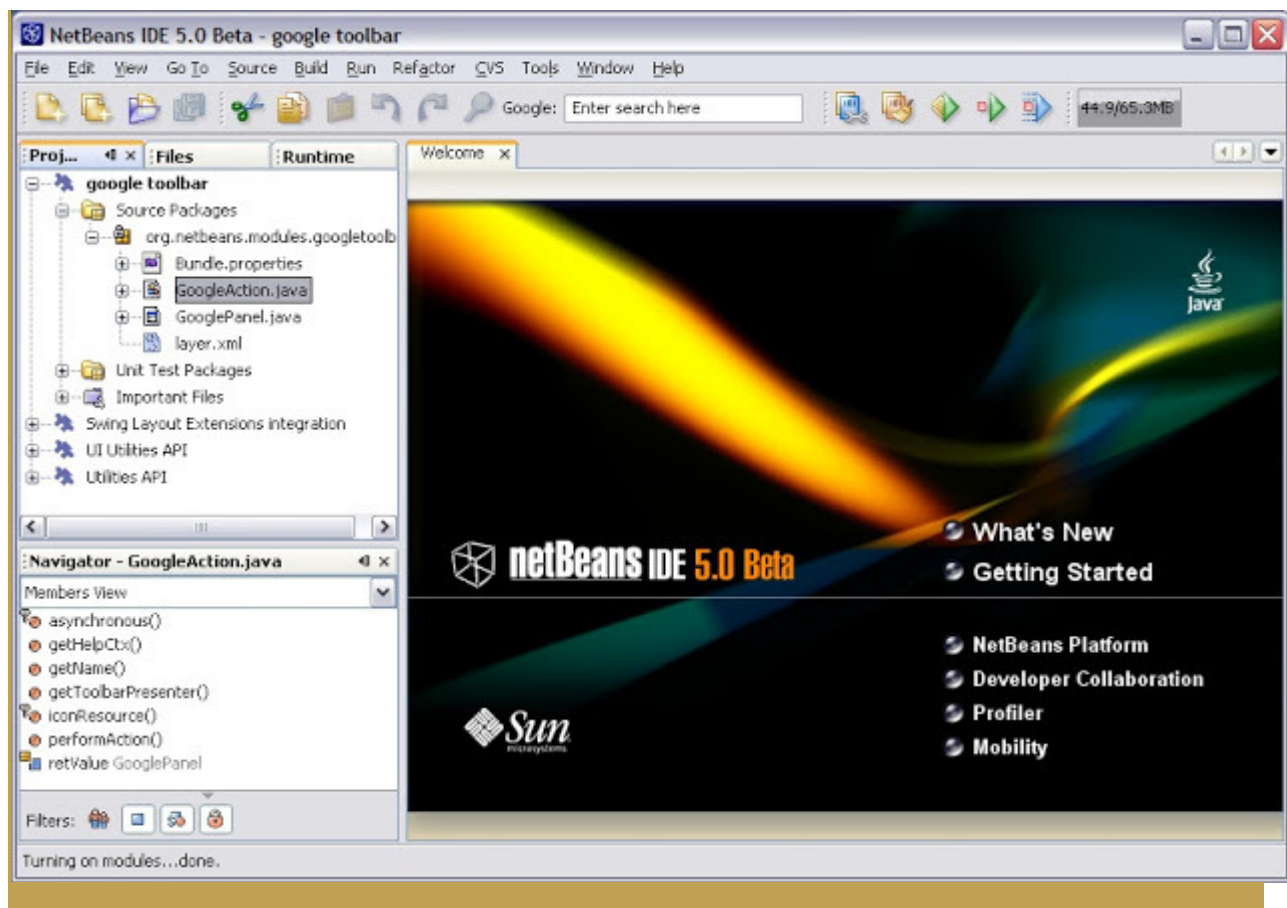
Programming using IDE

Using an Integrated Development Environment (IDE) for developing applications saves you time by managing windows, settings, and data. In addition, an IDE can store repetitive tasks through macros and abbreviations. Drag-and-drop features make creating graphical user interface (GUI) components or accessing databases easy, and highlighted code and debugging features alert you to errors in your code.

The NetBeans IDE is open source and is written in the Java programming language. It provides the services common to creating desktop applications -- such as window and menu management, settings storage -- and is also the first IDE to fully support JDK 6.0 features. The NetBeans platform and IDE are free for commercial and noncommercial use, and they are supported by Sun Microsystems.
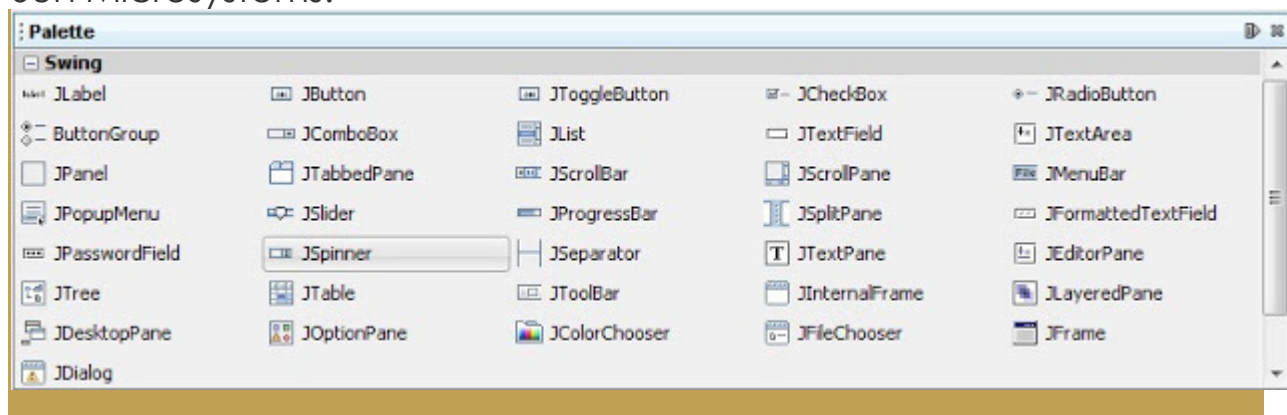
- **RAD:** Rapid Application Development is software programming technique that allows quick development of software application.

- **Integrated Development Environment (IDE):** It is a software tool to help programmer to edit, compile, interpret and debug the program in the same environment. i.e Eclipse,NetBeans, VB etc.

- **Byte code:** A byte code is machine instruction that the Java compiler generates and Java interpreter executes. When the compiler compiles a .java file, it produces a series of byte codes and stores them in a .class file. The Java interpreter (JVM) can execute the byte codes stored in the .class file.

- **JVM:** Java Virtual Machine (JVM) is a program which behaves as interpreter and translates the byte code into machine language as they go called just in time compilation.

- **Source Code:** The core program or text which is written in a language like C,C++ or Java is called source code.

- **Object Code:** The program which only is understood by the computer in the form of machine instructions or binary instructions called object code. In Java JVM is used to generate object code in the form of byte code.

- **GUI:** A graphical user interface (GUI) presents a pictorial interface to a program. GUI allows the user to spend less time trying to remember which keystroke sequences do what and spend more time using the program in a productive manner.