**ACTIVITY: 1**

**Identify various JAVA IDEs and Explore features of Eclipse IDE.**

Java is one of the most powerful programming languages which is currently used for development in three billion devices and approximately 70 lakh developers use it daily. It has been a vital component in developing a plethora of applications. It offers some amazing features like simple to learn and understand highly secure, platform independence, extremely secure, and a lot more.

Java IDE (Integrated Development Environment) is a software application that provides feasibility to users in writing and debugging Java programs. By using these IDEs you can save a lot of time and effort throughout the development process. There is innumerable IDE of Java that offers astonishing features and choosing the best one from them is really challenging. But don’t worry we are here to rescue you with our list of seven best IDEs.

**Various JAVA IDEs:**

### NetBeans

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NetBeans is an integrated development environment for Java. It is an amazing IDE with a user rating of 4.1 out of 5 and user satisfaction of a massive 82%. It runs on Windows, Linux, macOS, and Solaris. It has the presence of inbuilt tools that add value to the whole software development lifecycle from product design to deployment. Some key features of NetBeans are:

* It detects errors and provides you with smart code compilation features.
* From NetBeans, you can directly create, debug, deploy and test the applications.
* It has really simple and easy management features.
* It has amazing code comparison features that help you to write similar code simultaneously.

**Pros:**

* Has an OS-independent version.
* In-built tools to refactor code.
* Has static analysis tool**s.**
* Offers a GUI Builder.
* Free of cost.

**Cons:**

* Performance can be an issue.
* Can be overwhelming.

1. **BlueJ**

BlueJ is an integrated development environment for the Java programming language. It is a free java IDE that was started in 1999 by John Rosenberg and Michael Kolling. As per the latest survey, BlueJ has a user satisfaction rating of 4.2 and amazing user satisfaction of 80%. It was developed initially for educational and training purposes.

Key features:

* It provides robust debugging options as errors are indicated at the bottom of the screen.
* It is really simple, easy, and convenient to work on.
* It runs on Mac OS, Linux, and windows.
* It offers many innovative features like a code pad, scope coloring, and object bench.

**Pros:**

* Good for educational purposes.
* Contains a portal for teaching resources.
* Interactive creation and testing of objects.
* Free of cost.

**Cons:**

* May not be suitable for more advanced developers.

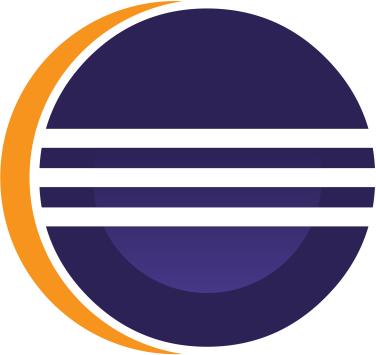


1. **JDeveloper**

JDeveloper is a free integrated development environment supplied by Oracle Corporation. This amazing IDE has a user rating of 4 out and 5 and massive user satisfaction of 80%. It offers extensive features for development in XML, Java, SQL, PL/SQL, JavaScript, HTML, BPEL, and PHP. Some key highlights of this IDE are:

* It has extensive debugging features that allow users to quickly check audit rules and fix minor issues directly.
* It can be used on platforms like Linux, Windows, and macOS.
* It has an amazing web development environment that offers drag-and-drop functionality which makes application design convenient.

1. **Eclipse**

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Eclipse is a popular Java IDE that contributes to around 48% of the market share. It is an astonishing IDE that has a user rating of 4.8 and user satisfaction of 92%. It offers an extensive plugin system that allows developers to customize their own features. It supports more than 100 programming languages including Groovy, JavaScript, C++, Python, and a lot more. Some of the amazing features of Eclipse are:

* It is cross-platform that runs on macOS, Linux, and Windows.
* Eclipse provides features like Editing, Browsing, Debugging, and Refactoring.
* It supports extensive debugging features that allow you to debug both remotely and locally.

**Pros:**

* Several plugins available
* Available on the cloud.
* Good tools for charting, modeling, reporting, and testing.
* Supports other programming languages through plugins.
* Free of cost.

**Cons:**

* Setup can be difficult.
* Not quite as modern compared to other IDEs.

**Features of Eclipse IDE:**

* Almost everything in Eclipse is a plugin.
* We can extend the functionality of Eclipse IDE by adding plugins to the IDE, maybe for additional programming language or version control system or UML.
* Supports various source knowledge tools like folding and hyperlink navigation, grading, macro definition browser, code editing with syntax highlighting.
* Provides excellent visual code debugging tool to debug the code.
* Eclipse has a wonderful user interface with drag and drop facility for UI designing.
* Supports project development and administered framework for different toolchains, classic make framework, and source navigation.
* Java Eclipse IDE has a JavaDoc facility using which we can automatically create documentation for classes in our application