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This session gives you an overview about the commonly used IDE in industry.

You can find a demonstration of the IDE features in the next video activity.

What is a IDE?

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IDE stands for Integrated Development Environment (IDE) is a software tool that provides features for developing software with ease.

What does it have?

- **Source code editor** – Used for Creating/editing java source code.
- **Compiler and/or Interpreter** – Converts high level source code into low level assembly language.
- **Build Automation tools** – Tools for packaging & deployment.
- **Debugger** – Used for identifying run time errors in the source code.

Common IDE's

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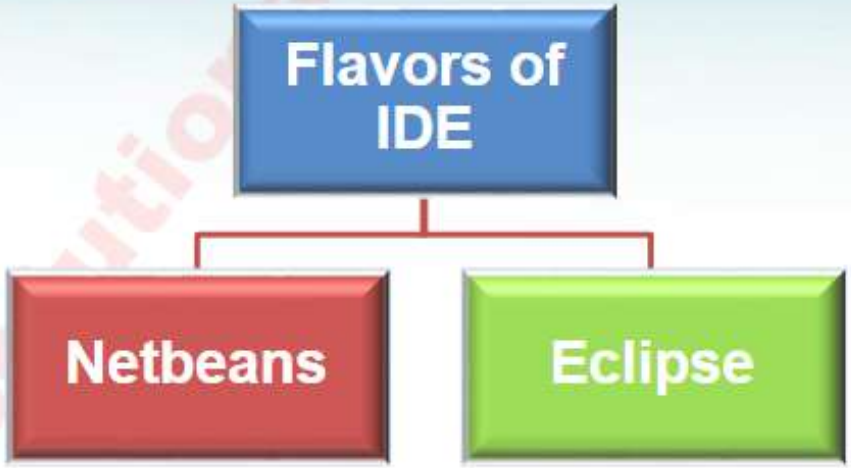

These are the commonly used IDE's.

Other Examples:

- BlueJ
- Jcreator

Eclipse Installation path: https://www.eclipse.org/downloads/

Advantages of IDE

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1. Ease of use.
2. Developing complex applications using IDE.
3. Auto completion and generation of code can be done in some IDEs.
4. Code formatting becomes simpler.
5. Debugging code is an easy task using IDEs.

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Plug-In

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Plug-in are small utility that are installed in IDE which can be used to perform a particular functionality.

Few Example: unit testing , code formatter..

Why plugins?

- To improve productivity
- Improves quality
- Reduces the cost of software development

IDE Plugins & Tools

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Code Analyzer

Analyzes java code for performance and coding standard issues.

Examples:
- PMD
- CPD
- Checkstyle

Testing

Scripts used for testing applications that developers build.

Examples:
- Junit

Build Tool

Tools used by developer for building, packaging applications.

Examples:
- ANT
- Maven

Config Mgmt

Used for managing the source codes developed by the developer.

Examples:
- Clear case
- SVN

IDE Workspace Vs Project

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Project:

- A ***project*** is a repository which stores java classes and other related files needed for building the application.
- This can be a standalone (or) web project etc.

Workspace:

A ***workspace*** is a repository where one or more projects is created. It logically groups projects of a same application or multiple applications.

IDE Project types

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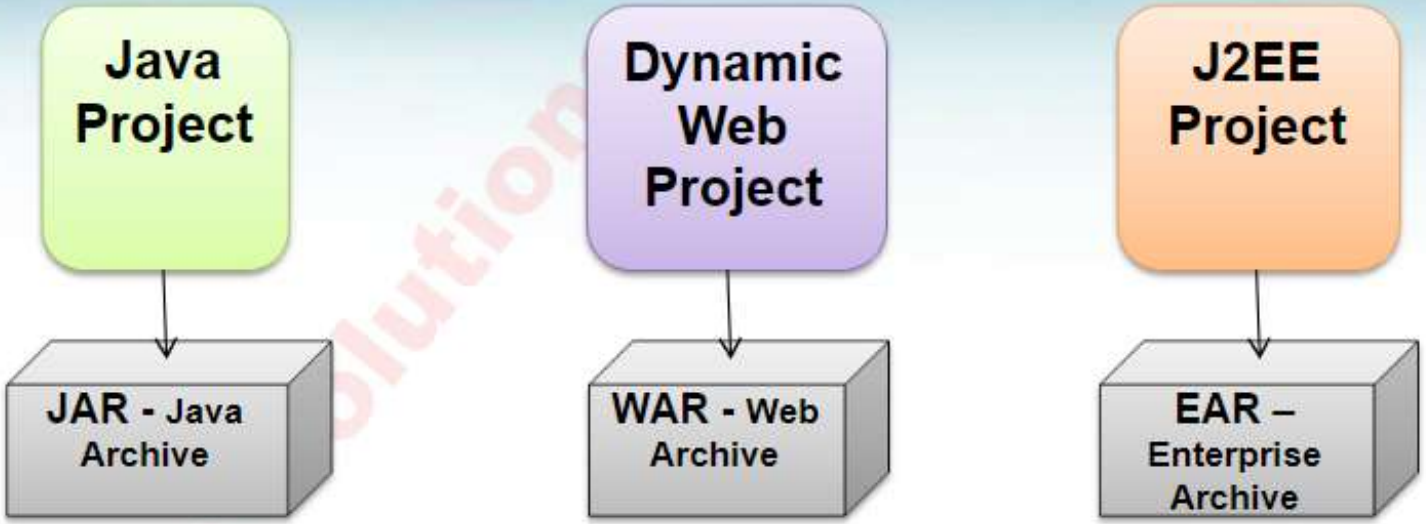

This project is used to create a java standalone application. The output of the java project will be a jar file.

This project is used to develop a web application. It generates a War file which is a collection of class, JSP, JAR and XML files.

This project is used to develop an enterprise application. It generates an EAR file which is a collection of JAR, WAR and EJBs.

Tina got into a problem

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Tina was a software developer he developed an application using eclipse.

The application had more than 300 java files. Now Tina wanted to share the application to Jerry. She zips the file and passes it to Jerry. Jerry takes 1 hour to set the project in his workspace.

Now if Tina has to share this with 5 developers.

Using Import/export feature of IDE you can get this done in few seconds.

Exporting & Importing a project

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- The easiest way to share your projects to the rest of the world is by using the Eclipse Export Wizard
  - The projects can be exported as an archive file (.zip or .tar format) or an application file (.jar, .war, .ear)
- The exported project can be imported by any other developer using the same IDE in another machine.

- Creating a java class.
- Compiling and running the cla
- Formatting the code.
- Accessing the java documentation.
- Changing the name of a class or variable or method.
- Commenting the code.
- Auto finish the code.
- Organize imports.
- Adding our own documentation.

Formatting the code.
Ctrl + shift +f

Organize imports :
ctrl + shift + o