



SDE Readiness Training

Empowering Tomorrow's Innovators



Module I

*Java Software Development:
Effective Problem Solving*

Software Installation

DATE: 12-02-2025




Environmental Setup



- To **run Java applications**, we need to prepare the **environmental setup**. For installing Java we need the following:
 - The Java Runtime Environment (**JRE**) (Includes Java Virtual Machine (JVM))
 - The Java Developer Kit (**JDK**) (Includes the Java Compiler)
 - A text editor
 - If JDK is installed, you automatically get the JRE

It can be **downloaded** here: [Java Downloads | Oracle India](#)

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JDK Development Kit 17.0.11 downloads

JDK 17 binaries are free to use in production and free to redistribute, at no cost, under the [Oracle No-Fee Terms and Conditions](#) (NFTC).

JDK 17 will receive updates under the NFTC, until September 2024. Subsequent JDK 17 updates will be licensed under the [Java SE OTN License](#) (OTN) and production use beyond the [limited free grants](#) of the OTN license will [require a fee](#).

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x64 Compressed Archive	172.83 MB	https://download.oracle.com/java/17/latest/jdk-17_windows-x64_bin.zip (sha256)
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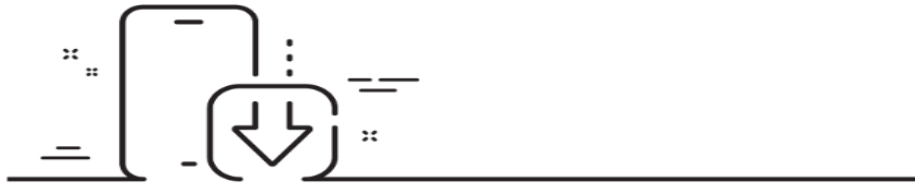
Eclipse IDE

- Using a text editor is the basic way of creating a Java program, but there are tools available to make it easier to create Java programs called **IDEs** like **Eclipse**.
- **Eclipse** is a **third-party open-source IDE** that is very powerful and popular.
 - It can be downloaded here: <http://www.eclipse.org/downloads/>

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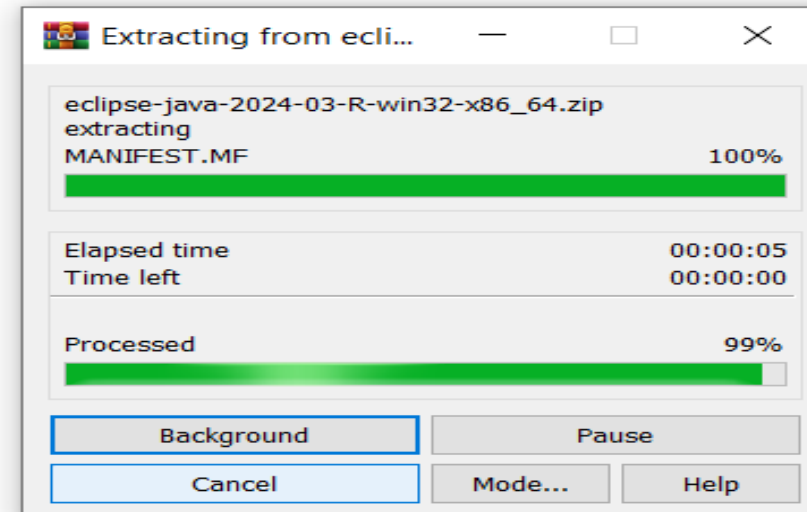
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Eclipse IDE

After download, right click and extract the eclipse file

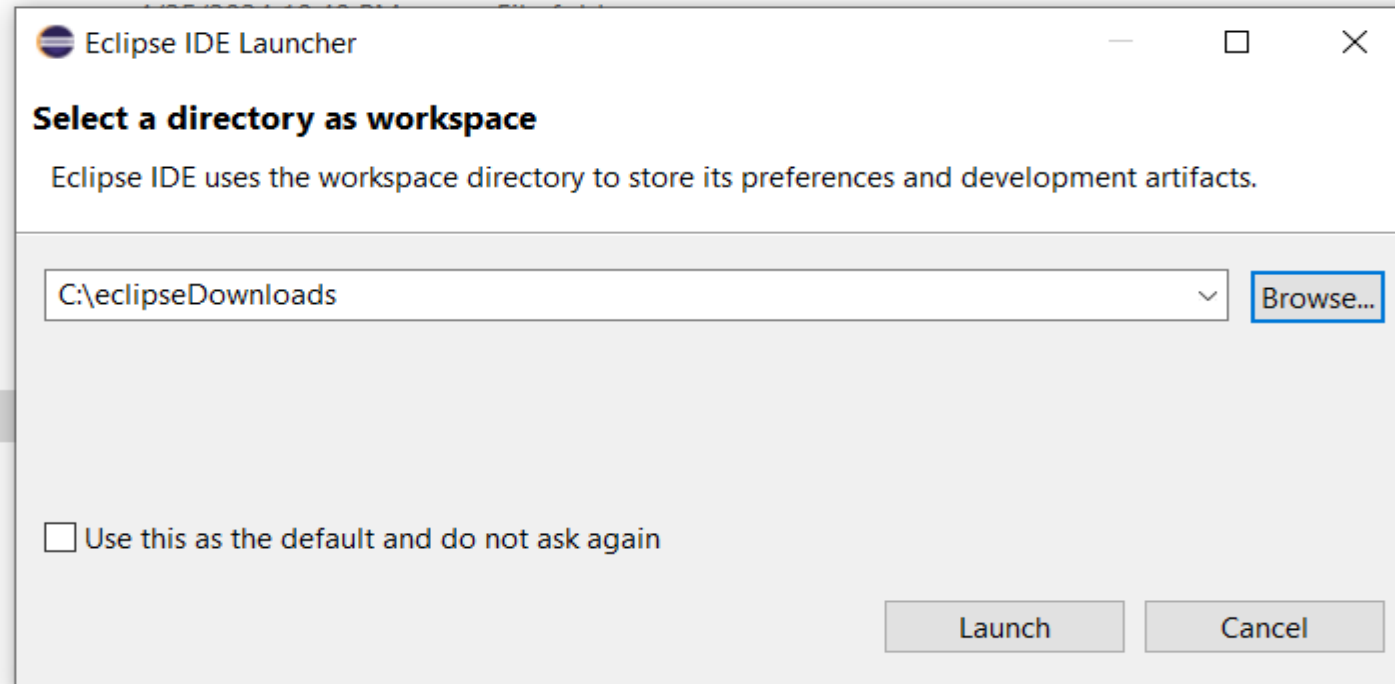
Name	Date modified	Type	Size
 eclipse-java-2024-03-R-win32-x86_64	4/25/2024 10:37 PM	File folder	
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Eclipse IDE

Configuring Eclipse: **Select a directory to create a workspace for projects**

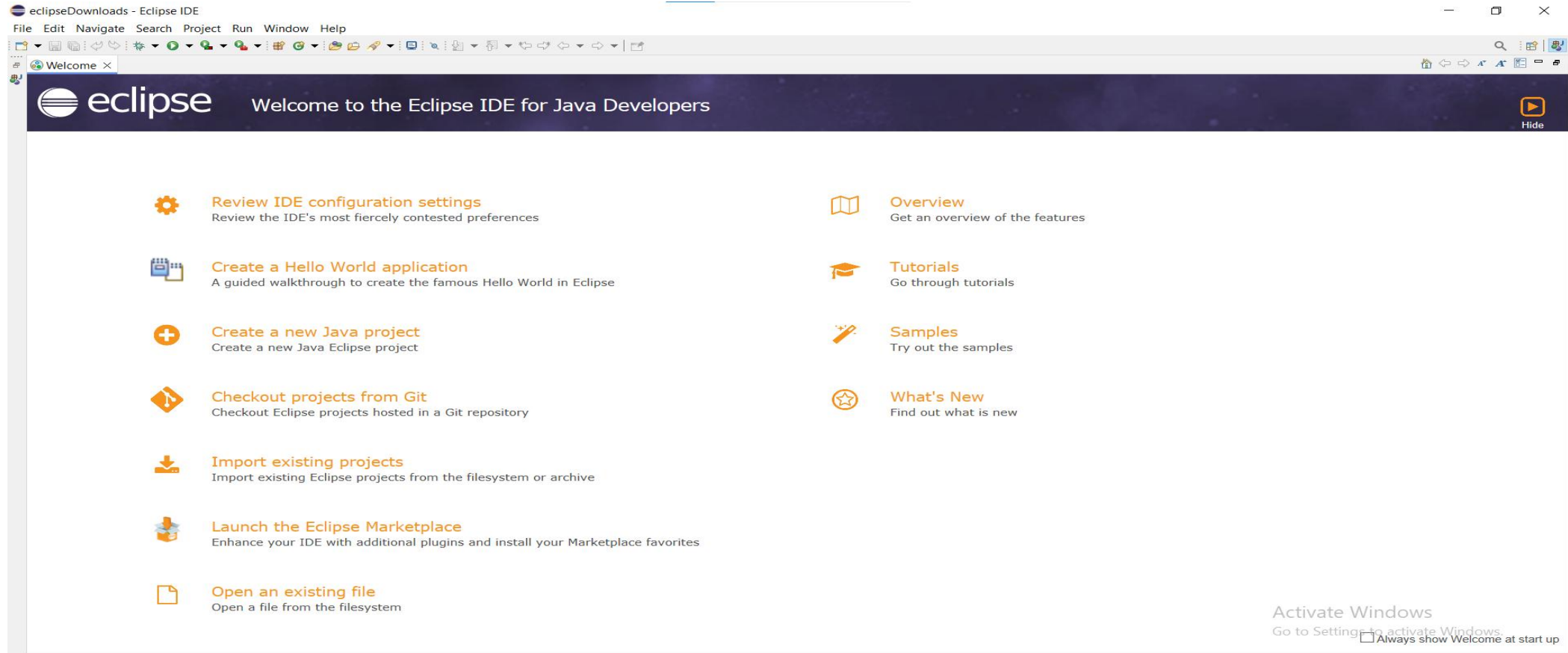
- configuration
- dropins
- features
- p2
- plugins
- readme
- .eclipseproduct
- artifacts
- eclipse**
- eclipse
- eclipsec



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Eclipse IDE

Once the workspace is chosen, you will get the welcome page

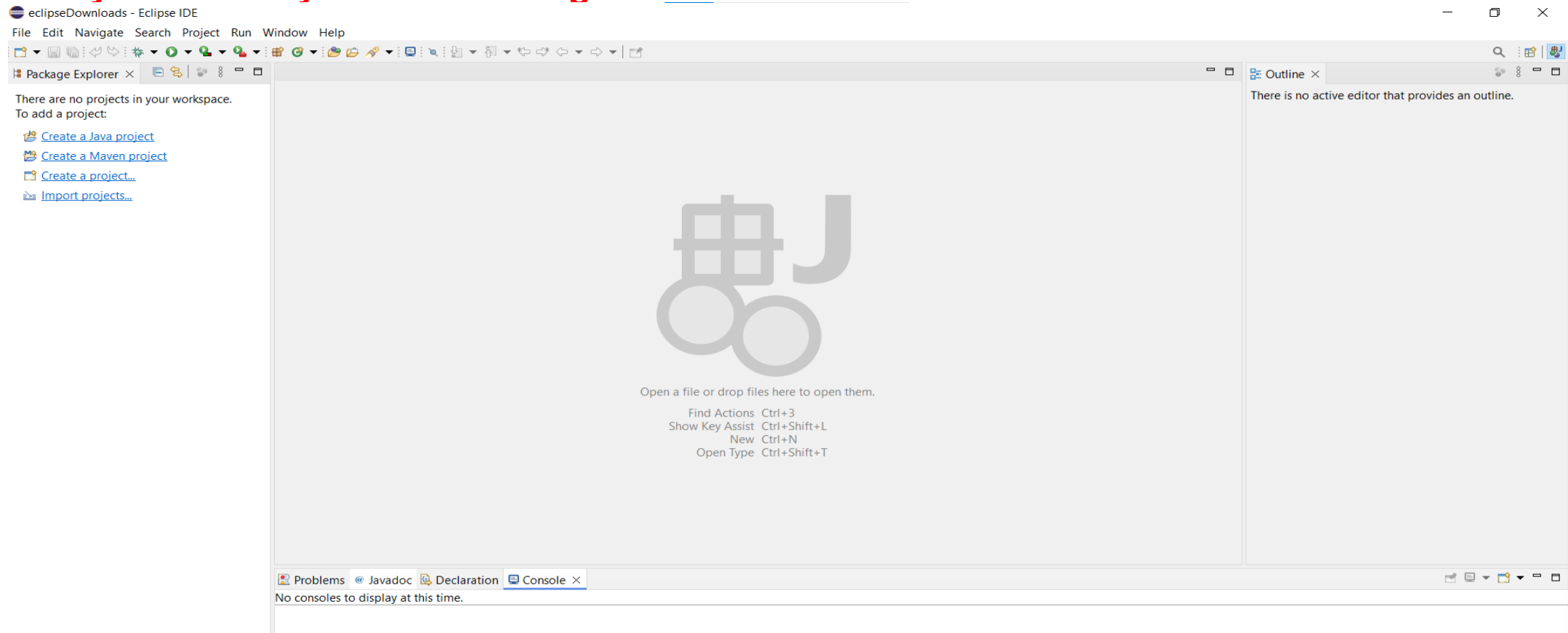


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Eclipse IDE

After closing the welcome screen ,the project explorer and other options will be shown up.

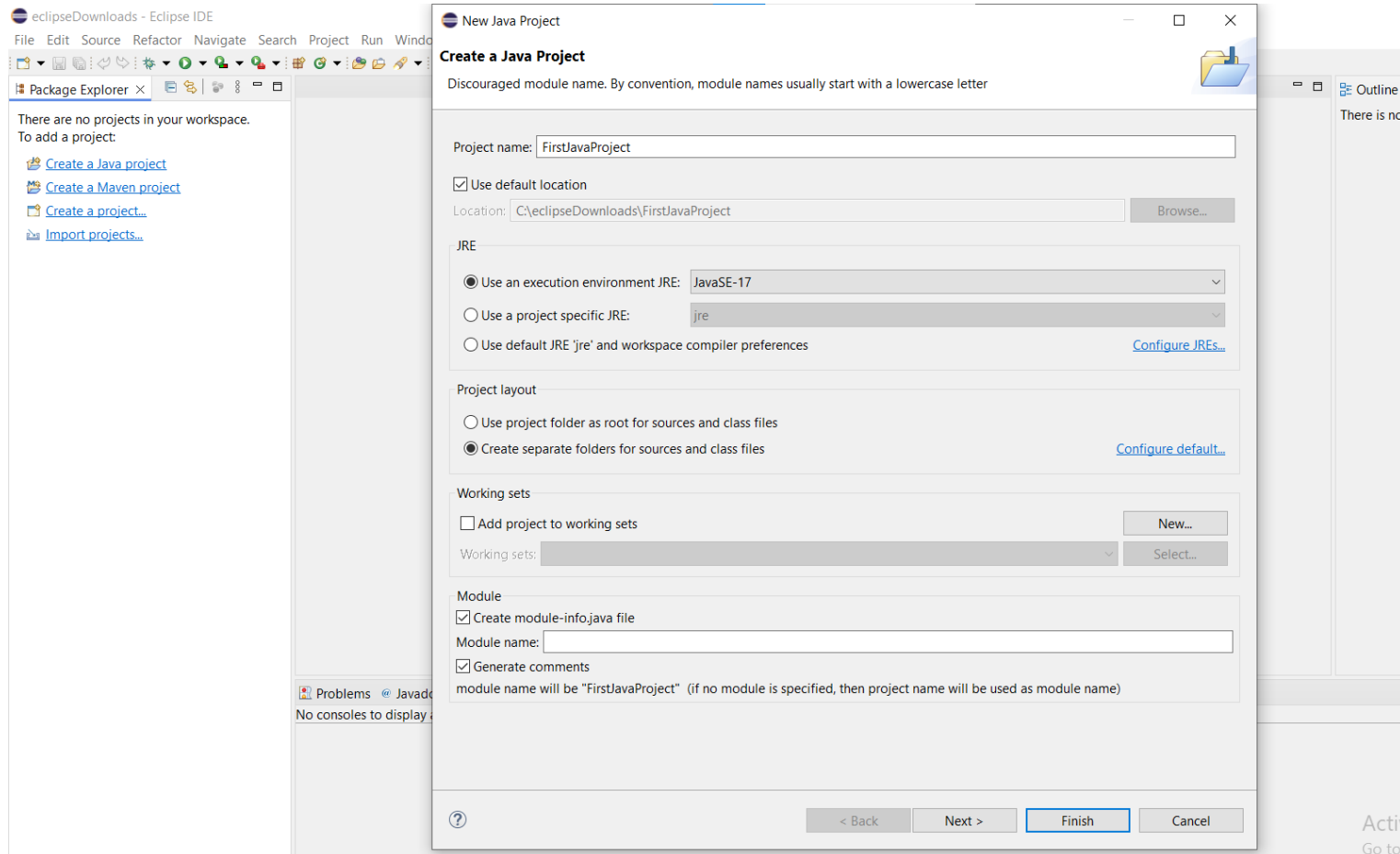
Now you are ready to start working.



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Eclipse IDE

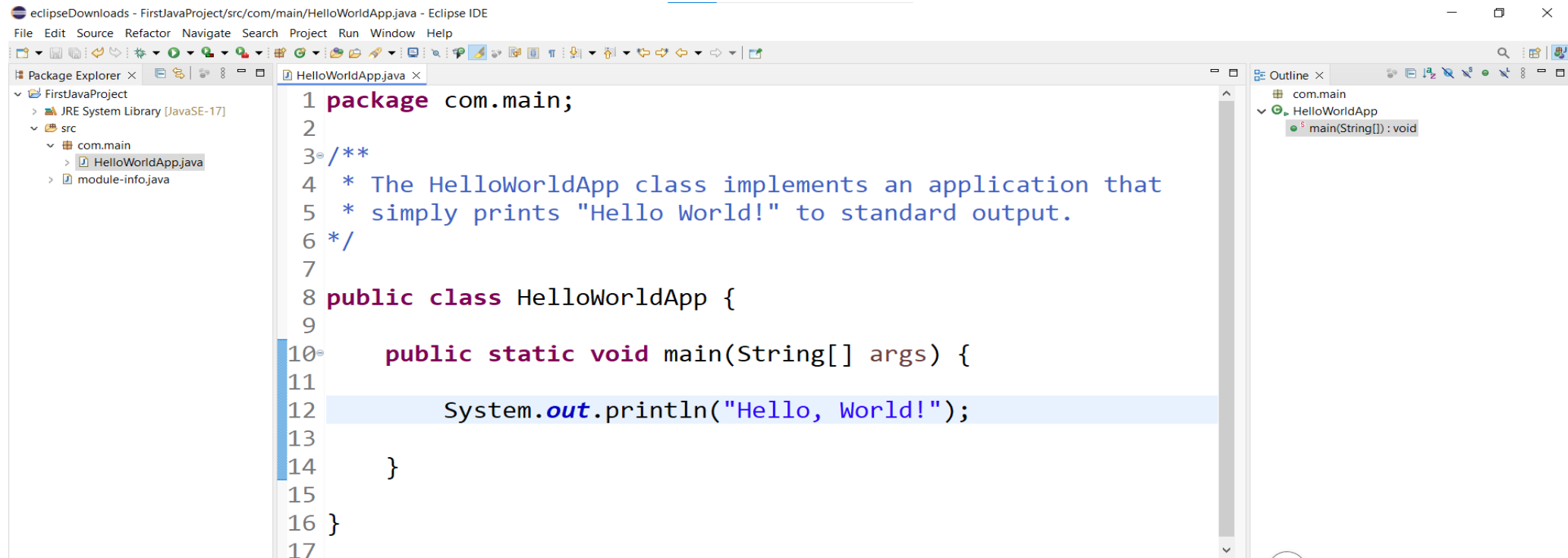
Start working by creating the Java Project as FirstJavaProject



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Eclipse IDE

Create First Java Program with file extension .java Example: HelloWorldApp.java

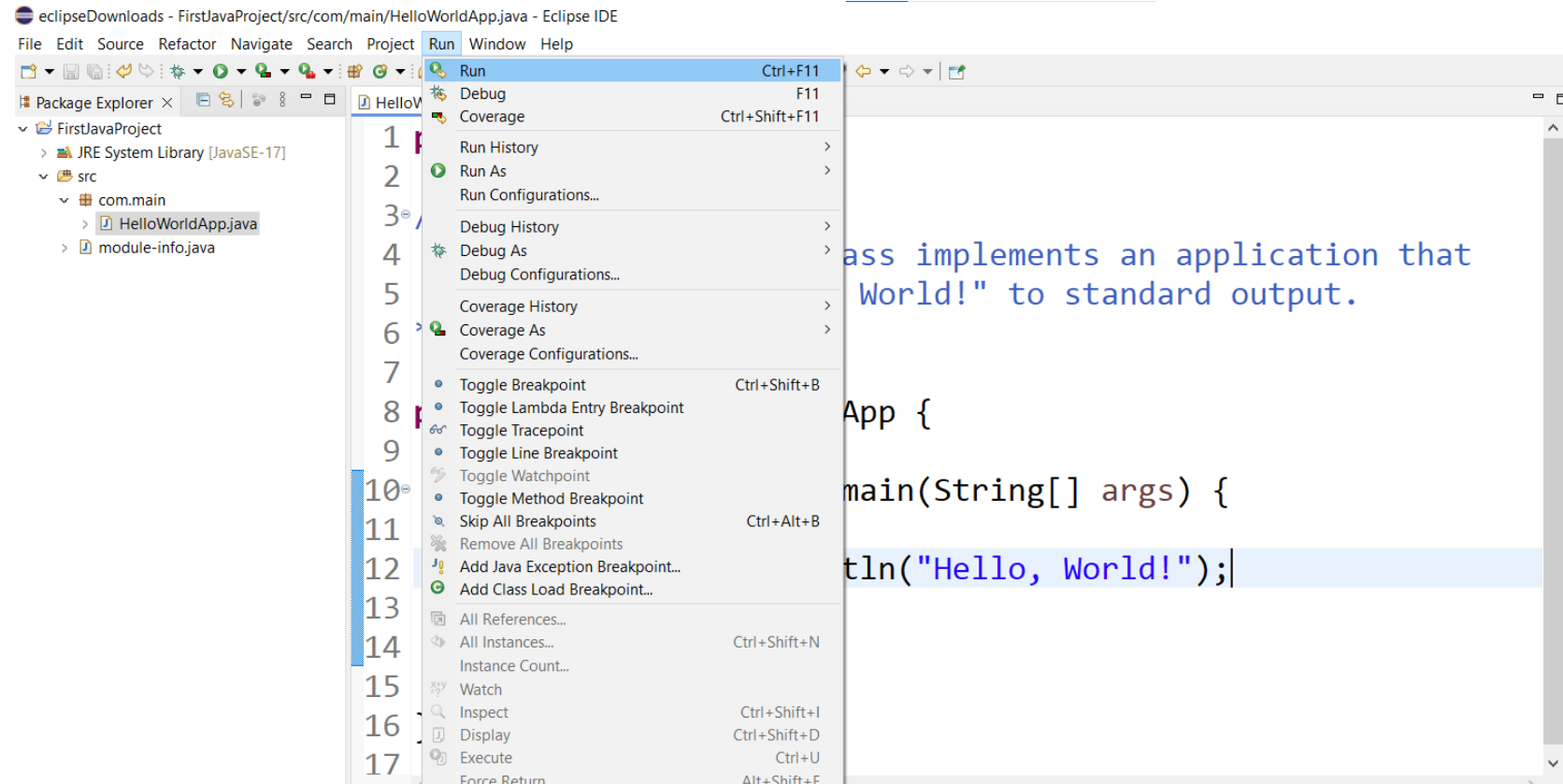


```
1 package com.main;
2
3 /**
4  * The HelloWorldApp class implements an application that
5  * simply prints "Hello World!" to standard output.
6  */
7
8 public class HelloWorldApp {
9
10     public static void main(String[] args) {
11
12         System.out.println("Hello, World!");
13
14     }
15
16 }
17
```

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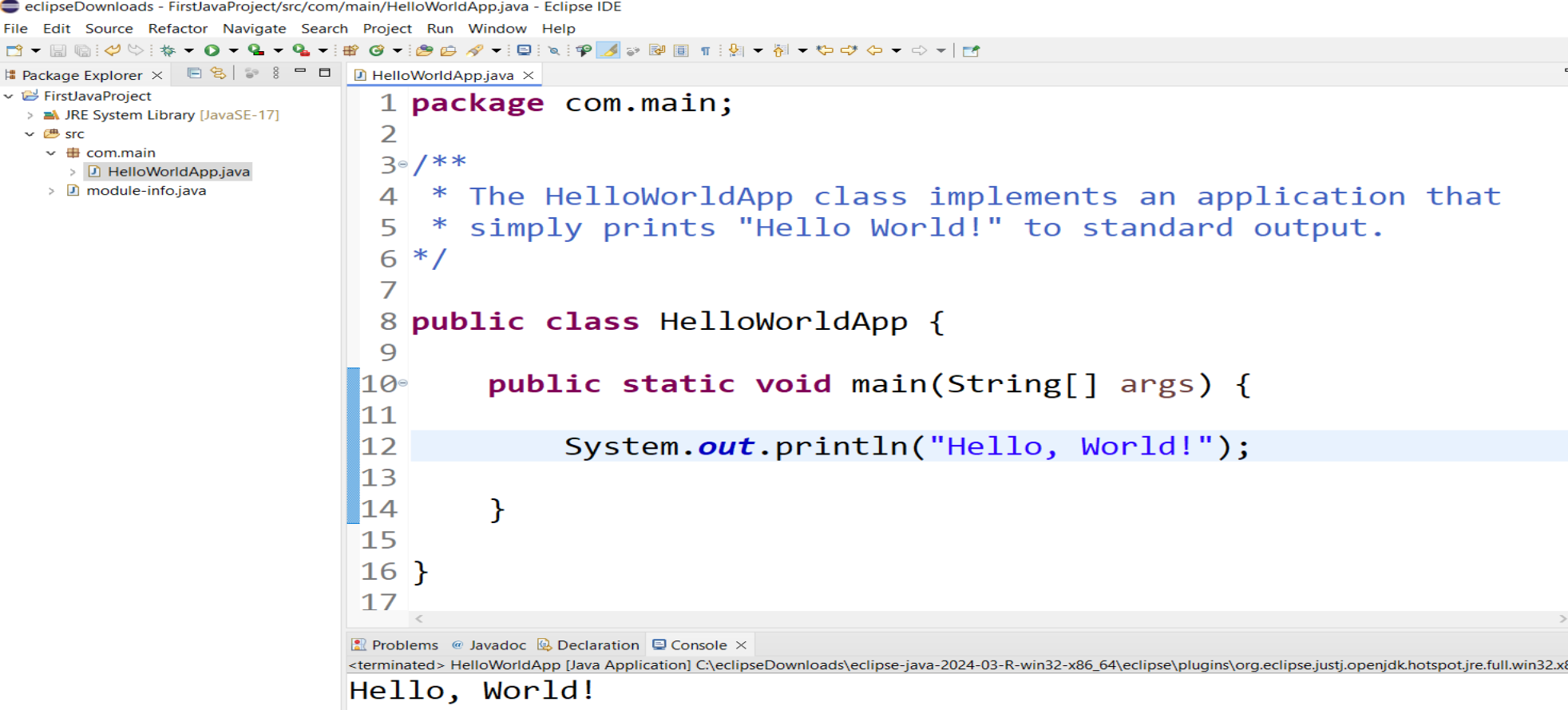
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After creating the application, run the application with a run command



Eclipse IDE

After execution, in the console, the output is displayed as Hello World!



```
1 package com.main;
2
3 /**
4  * The HelloWorldApp class implements an application that
5  * simply prints "Hello World!" to standard output.
6  */
7
8 public class HelloWorldApp {
9
10     public static void main(String[] args) {
11
12         System.out.println("Hello, World!");
13
14     }
15
16 }
17
```

Package Explorer ×

- FirstJavaProject
 - JRE System Library [JavaSE-17]
 - src
 - com.main
 - HelloWorldApp.java
 - module-info.java

Problems @ Javadoc Declaration Console ×

<terminated> HelloWorldApp [Java Application] C:\eclipseDownloads\eclipse-java-2024-03-R-win32-x86_64\eclipse\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64.jre\bin\java.exe

Hello, World!

First Java Program

```
/**  
  
* The HelloWorldApp class implements an application that  
  
* simply prints "Hello World!" to standard output.  
  
*/  
  
class HelloWorldApp {  
  
    public static void main(String[] args){  
  
        System.out.println("Hello World!"); // Display the Hello World!  
  
    }  
  
}
```

”

Success is the sum of
all efforts, repeated
day-in and day-out

- R. Collier

THANK YOU