Key Point: *A Java program is executed from the* **main** *method in the class.*

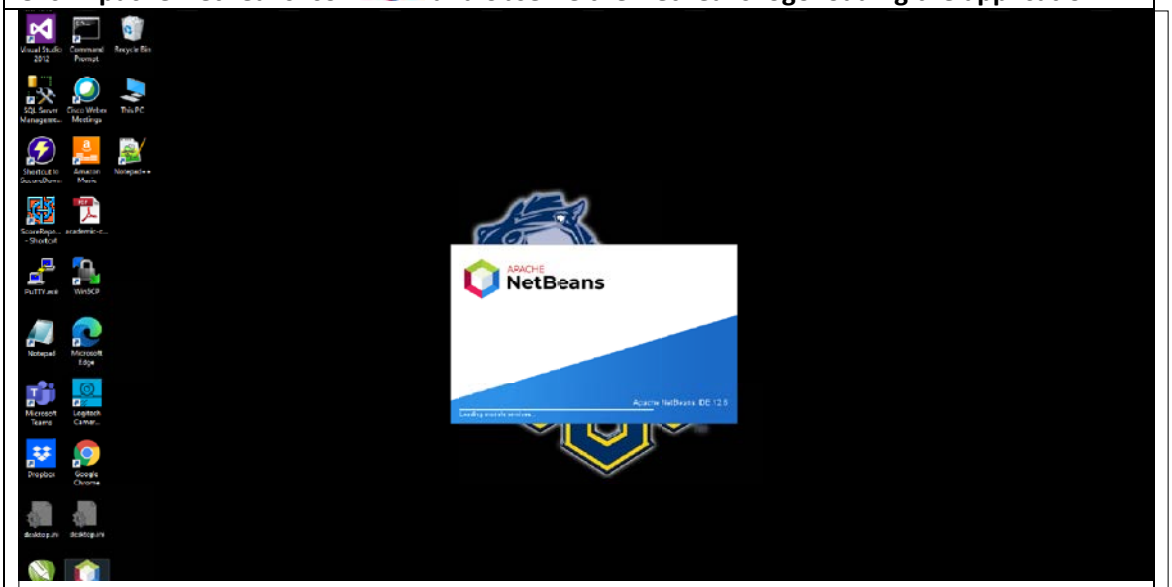
### Listing 1.1 Welcome.java

```
1   public class Welcome
2       public static void main(String[] args) {
3           //Display message Welcome to Java! on the console
4           System.out.println("Welcome to Java!");
5       }
6   }
```

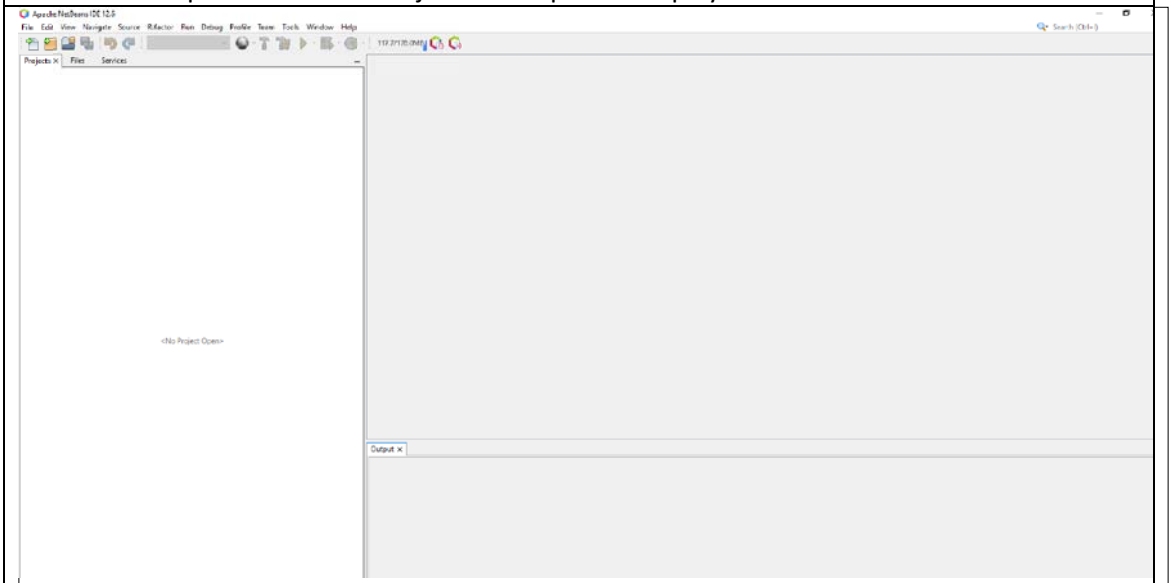
```
Welcome to Java!
```

| Line | Description |
|---|---|
| 1 | Line 1 defines a class. Every Java program must have at least one class. Each class has a name. By convention, *class names* start with an uppercase letter. In this example, the class name is **Welcome**. |
| 2 | Line 2 defines the **main** method. The program is executed from the **main** method. A class may contain several methods. The **main** method is the entry point where the program begins execution.<br><br>A method is a construct that contains statements. The main method in this program contains the **System.out.println** statement. This statement displays the string **Welcome to Java!** on the console (line 4). Every statement in Java ends with a semicolon (;), known as the *statement terminator*.<br><br>*Reserved words* have a specific meaning to the compiler and cannot be used for other purposes in the program. For example, when the compiler sees the word **class**, it understands that the word after class is the name for the class. |
| 3 | Line 3 is a comment. A line comment begins with two slashes (//) and is terminated at the end of the line. A block comment begins with /* and ends with */. A block comment can extend over several lines. |
| | A pair of braces in a program forms a *block* that groups the program's components. In Java each block begins with an opening brace ({) and ends with a closing brace (}). Blocks can be nested. |

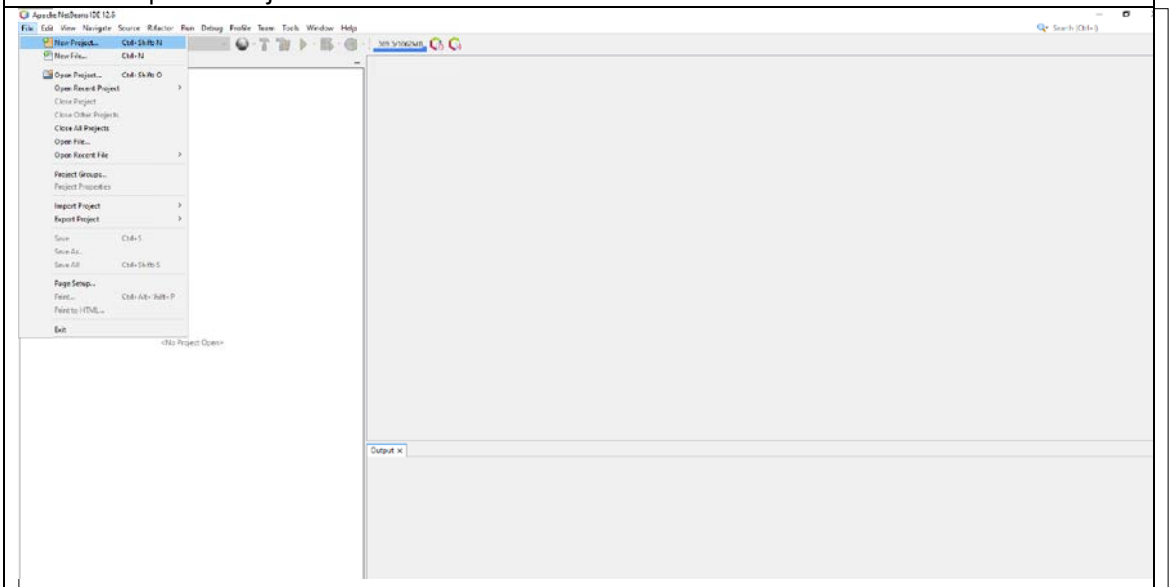
**Click Apache NetBeans Icon**  **and observe the NetBeans logo loading the application.**



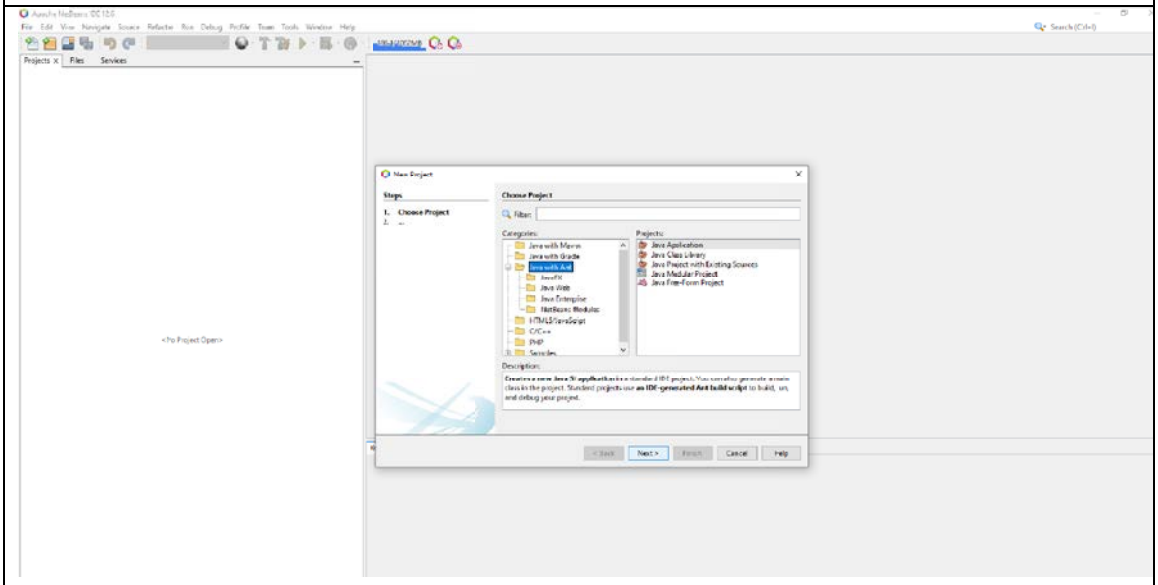

Observe the Apache NetBean Project Development Display



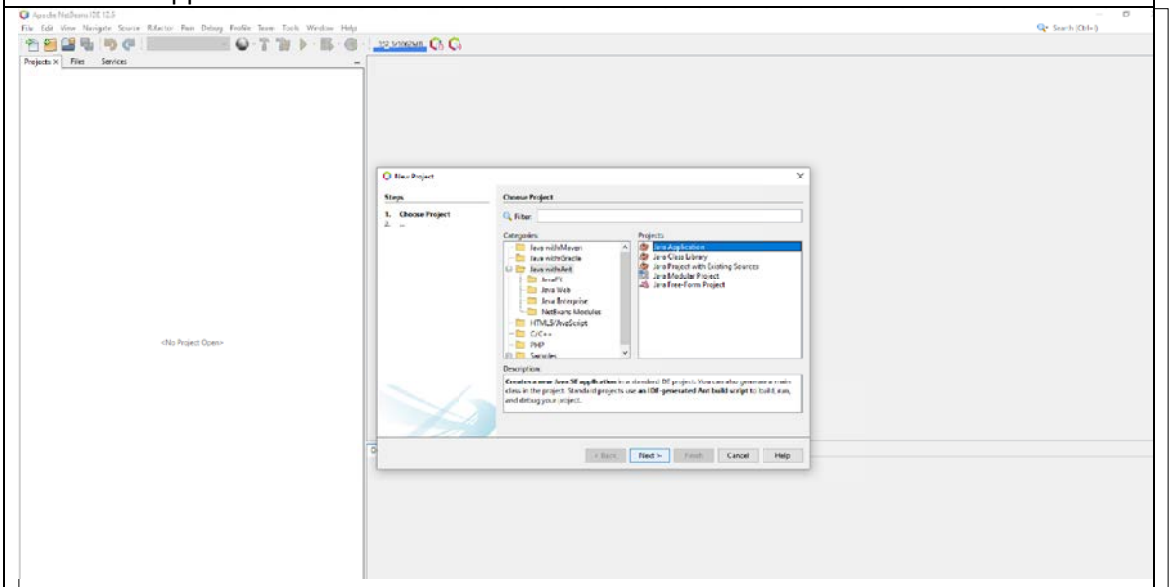
Select File | New Project



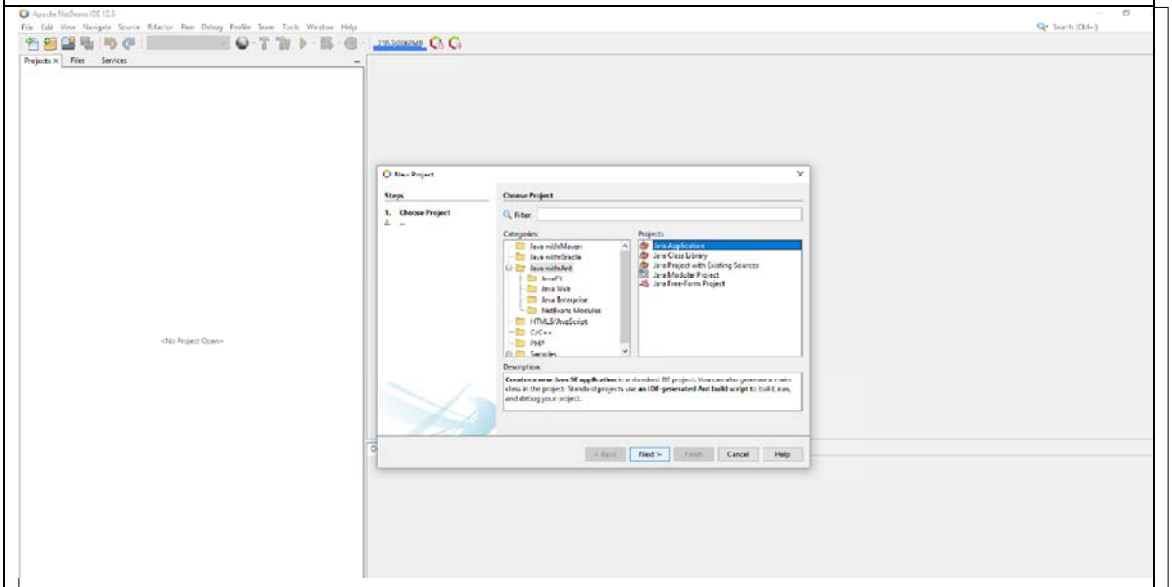
Select Java with Ant



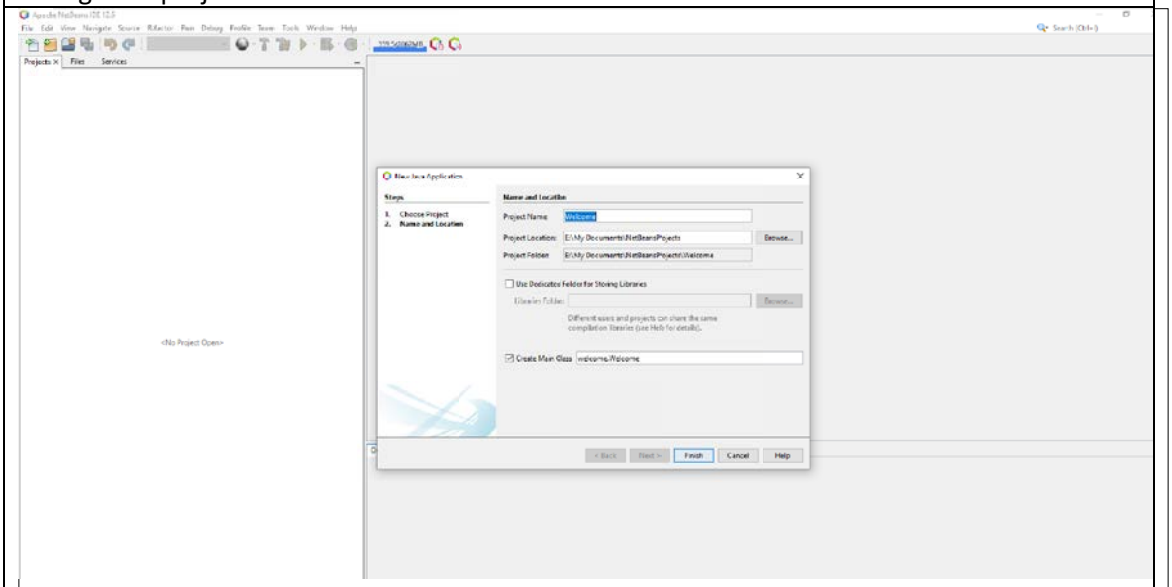
Select Java Application



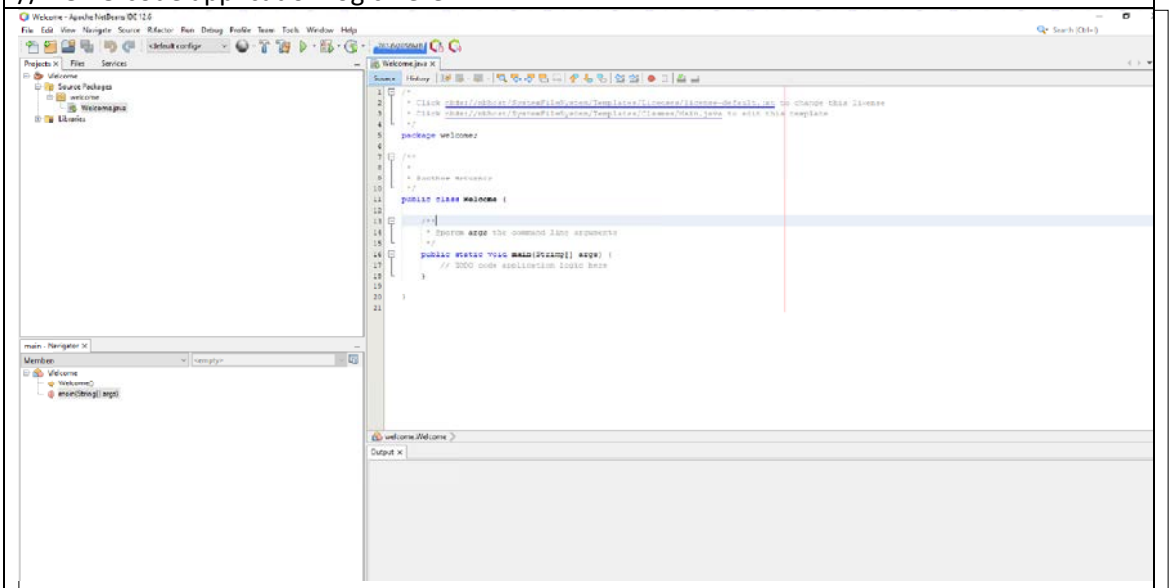
Select Next



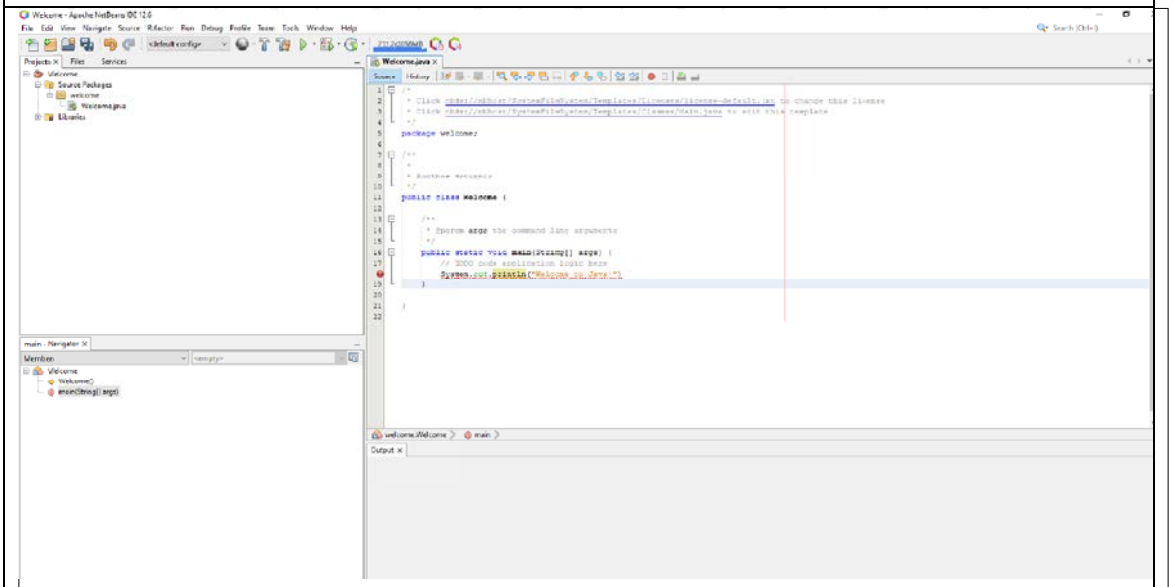
Change the project name to Welcome and Select Finish



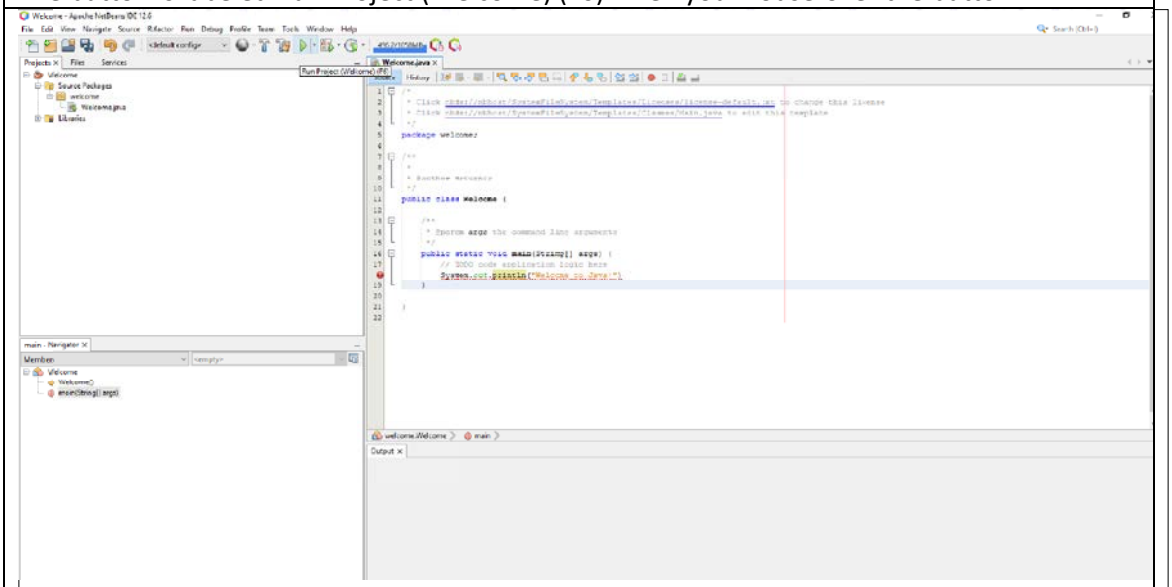

Observe the Welcome.java window and put your cursor just after the comment
// TODO code application logic here



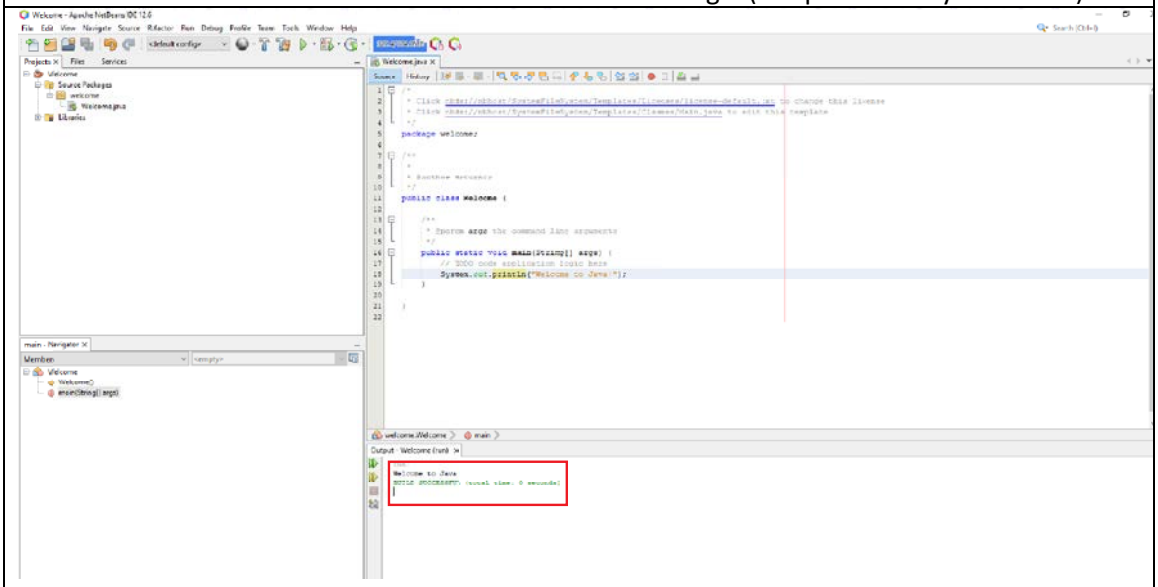
Enter
Sytem.out.println("Welcome to Java");
below the comment.



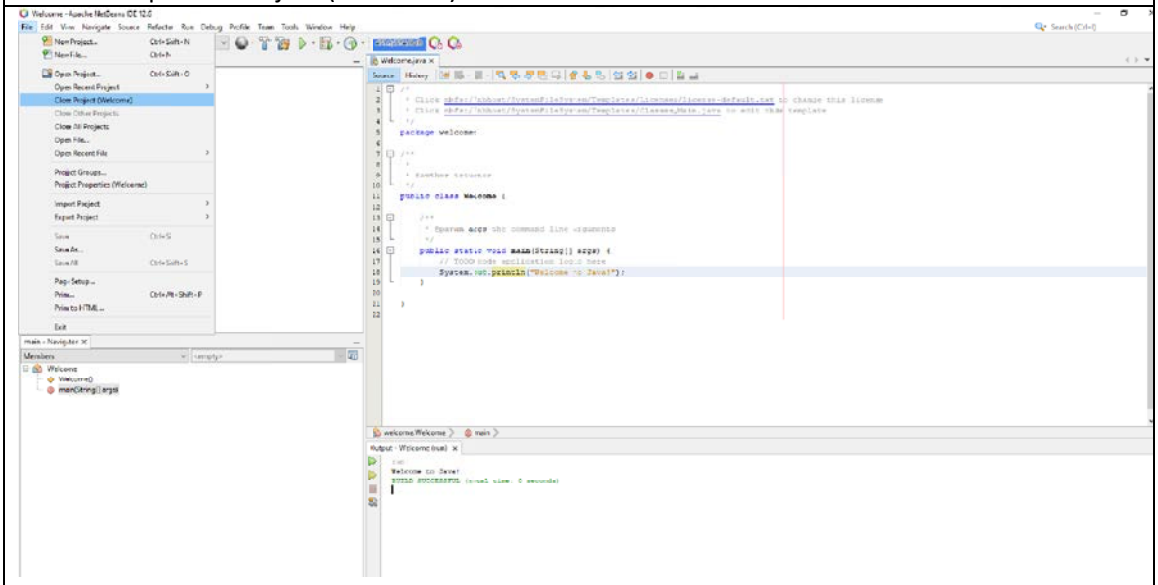
Depress the green arrow button just below and between the Tools and Window menu items
The button is labeled Run Project (Welcome) (F6) when you mouse-over the button



Note the text “Welcome to Java!” that is in the red rectangle (not produced by NetBeans).



Select File | Close Project (Welcome)



### Listing 1.2 WelcomeWithThreeMessages.java

```
1   public class WelcomeWithThreeMessages {
2       public static void main(String[] args) {
3           System.out.println("Programming is fun!");
4           System.out.println("Fundamentals First!");
5           System.out.println("Problem Driven");
6       }
7   }
```

```
Programming is fun!
Fundamentals First
Problem Driven
```

### Listing 1.3 ComputeExpression.java

```
1   public class ComputeExpression
2       public static void main(String[] args) {
3           System.out.print("(10.5 + 2 * 3) / (45 – 3.5) = ");
4           System.out.println((10.5 + 2 * 3) / (45 – 3.5));
5       }
6   }
```

```
(10.5 + 2 * 3) / (45 – 3.5) = 0.39759036144578314
```