JDB - IN ECLIPSE

This chapter explains how to use JDB in Eclipse. Before proceeding further, you need to install Eclipse Indigo. Follow the steps given below to install Eclipse Indigo on your system.

Step 1: Download and Install Eclipse

You can download Eclipse from the following link: http://www.eclipse.org/downloads/packages/eclipse-ide-java-ee-developers/indigosr2

Step 2: Create a New Project and a New Class

- Create a new Java project by following the options **File-> New -> Java project**.
- Name it as **“sampledebug”**.
- Create a new class by right clicking on the **samplebebug** project.
- Select **options ->new -> class**
- Name it as **“Add.java”**

Add.java

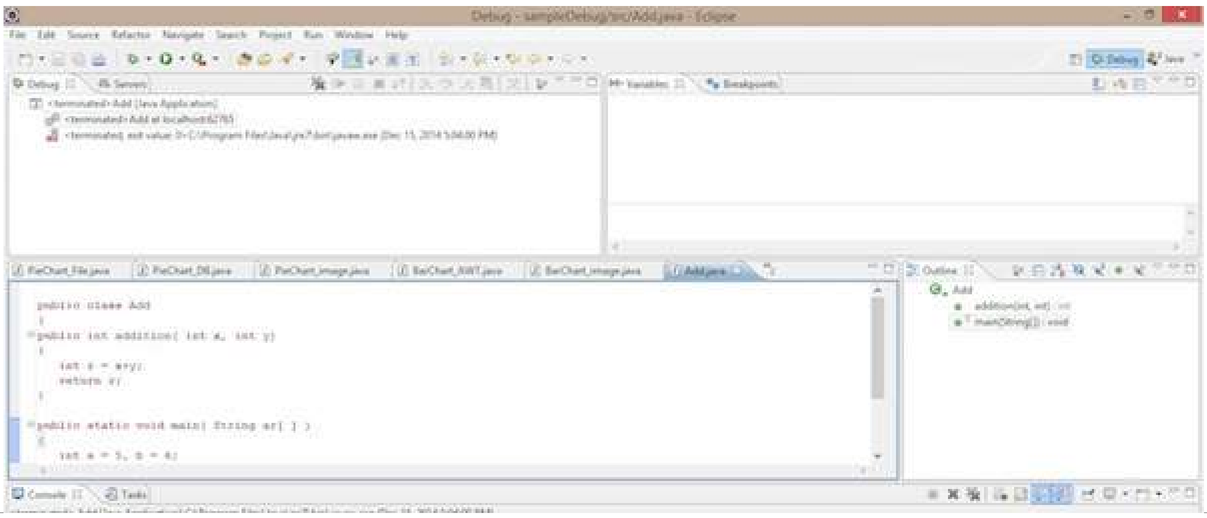
```
public class Add
{
   public int addition( int x, int y)
   {
      int z = x + y;
      return z;
   }
   public static void main( String ar[ ] )
   {
      int a = 5, b = 6;
      Add ob = new Add();

      int c = ob.addition(a,b);
      System.out.println("Add: " + c);
   }
}
```

Step 3: Open the Debug Perspective

Follow the instructions given below to open the debug perspective.

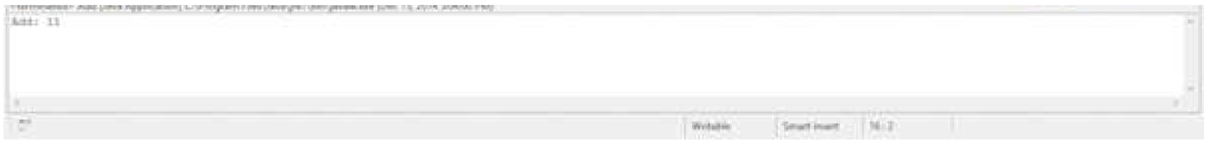
On the Eclipse IDE, go to **Window -> Open perspective -> Debug**. Now you get the debug perspective for the program Add.java. You get to see the following window.



```
<terminated> Add [Java Application]
  <terminated> Add at localhost:62785
  <terminated, exit value: 0> C:\Program Files\Java\jre7\bin\javaw.exe (Dec 11, 2014 5:04:00 PM)
```

```
public class Add
{
public int addition( int x, int y)
{
   int z = x+y;
   return z;
}

public static void main( String ar[ ] )
{
   int a = 5, b = 6;
```



```
<terminated> Add [Java Application] C:\Program Files\Java\jre7\bin\javaw.exe (Dec 15, 2014 5:04:00 PM)
Add: 11
```

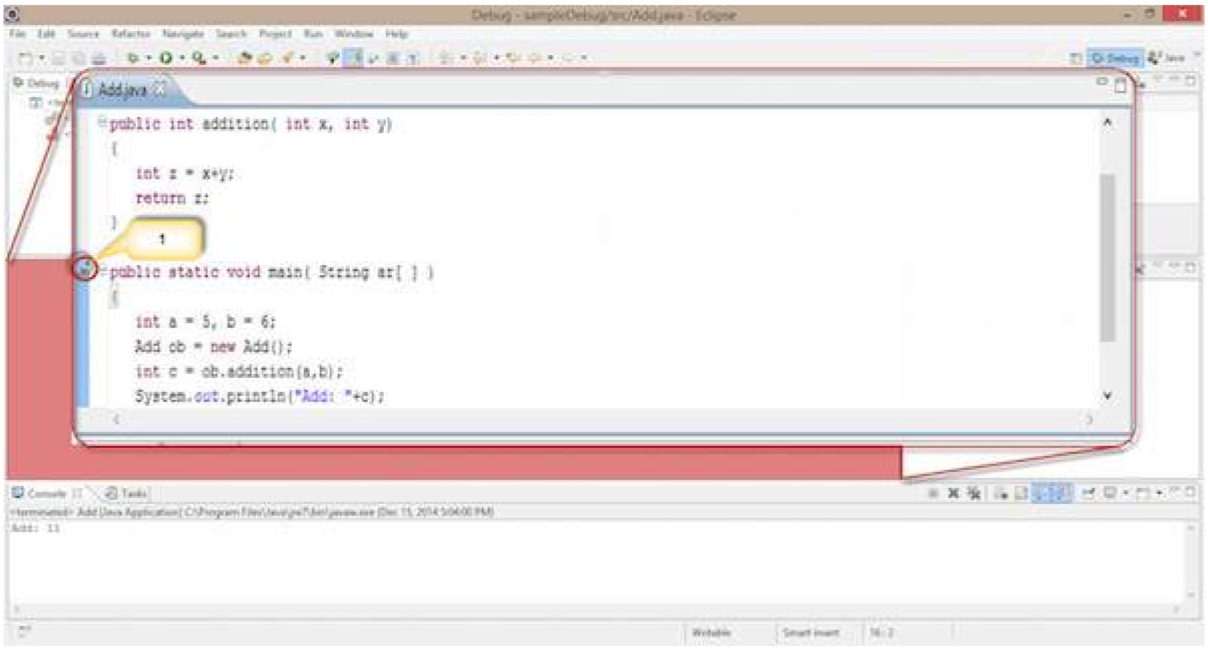
Sections in Debug Perspective

The sections in the Debug perspective are as follows:

Coding Section

Java code is displayed in this section. It is the code you want to debug, that is, **Add.java**. Here we can add a breakpoint on a line by double clicking in front of the line. You find the blue bubble with an arrow symbol to point out the breakpoint of that line. See the following screenshot; you can find the selected area with a red circle pointed as "1".

1. Double click here. You can set the breakpoint for this line.

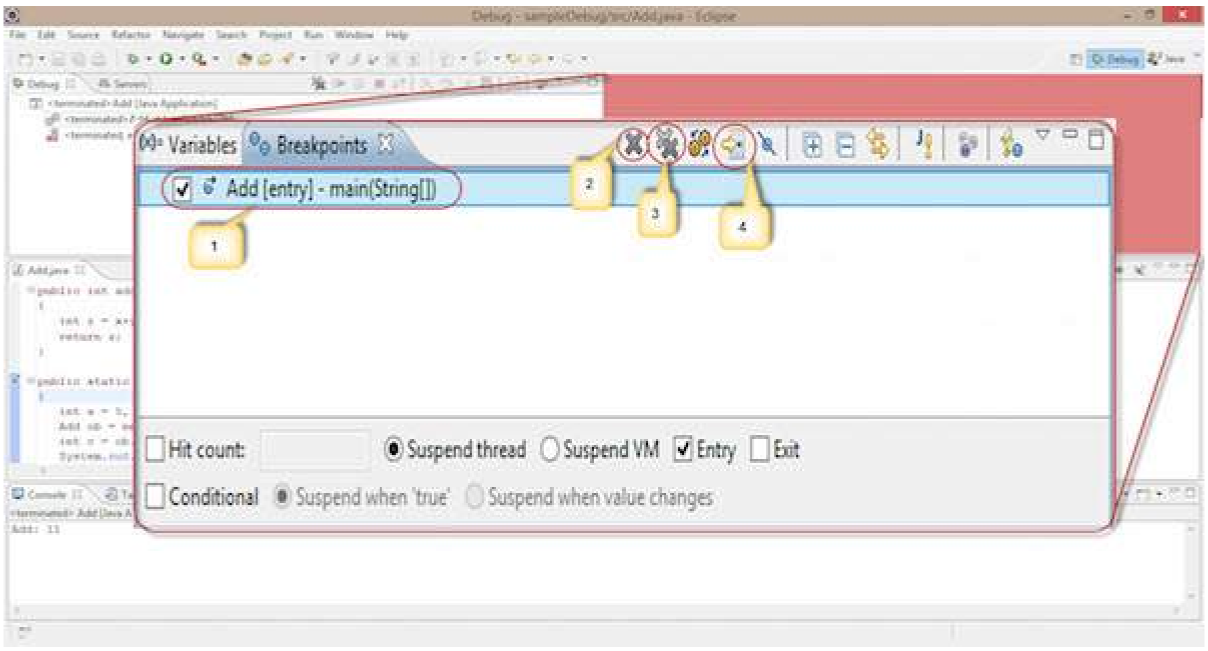


```
public int addition( int x, int y)
{
    int z = x+y;
    return z;
}
public static void main( String ar[ ] )
{
    int a = 5, b = 6;
    Add ob = new Add();
    int c = ob.addition(a,b);
    System.out.println("Add: "+c);
```

```
<terminated> Add [Java Application] C:\Program Files\Java\jre7\bin\javaw.exe (Dec 15, 2014 5:04:00 PM)
Add: 11
```

Breakpoint Section

This section defines the list of breakpoints that are set to the program code. Here we can add, delete, find, and manage the breakpoints. The following screenshot shows the breakpoint section.



[✓] Add [entry] - main(String[])

[ ] Hit count: [✓ Suspend thread] Suspend VM [✓] Entry [ ] Exit

[ ] Conditional [✓ Suspend when 'true'] Suspend when value changes

Observe the following options in the given screenshot:

1. Using the check box in the left, we can select or deselect a breakpoint. Here, we use one breakpoint, i.e., Add class-main method.
2. The single cross icon “X” is used to delete the selected breakpoint.
3. The double cross icon “XX” is used to delete all the breakpoints in your code.
4. The arrow pointer is used to point to the code where the selected breakpoint is applied.

The remaining functionalities in the breakpoint section are as follows:

- **Hitcount** : It shows how many times the control hits this breakpoint. It is used for recursive logic.
- **Suspend thread** : We can suspend the current thread by selecting it.
- **Suspend VM** : We can suspend the VM by selecting it.

Debug Section

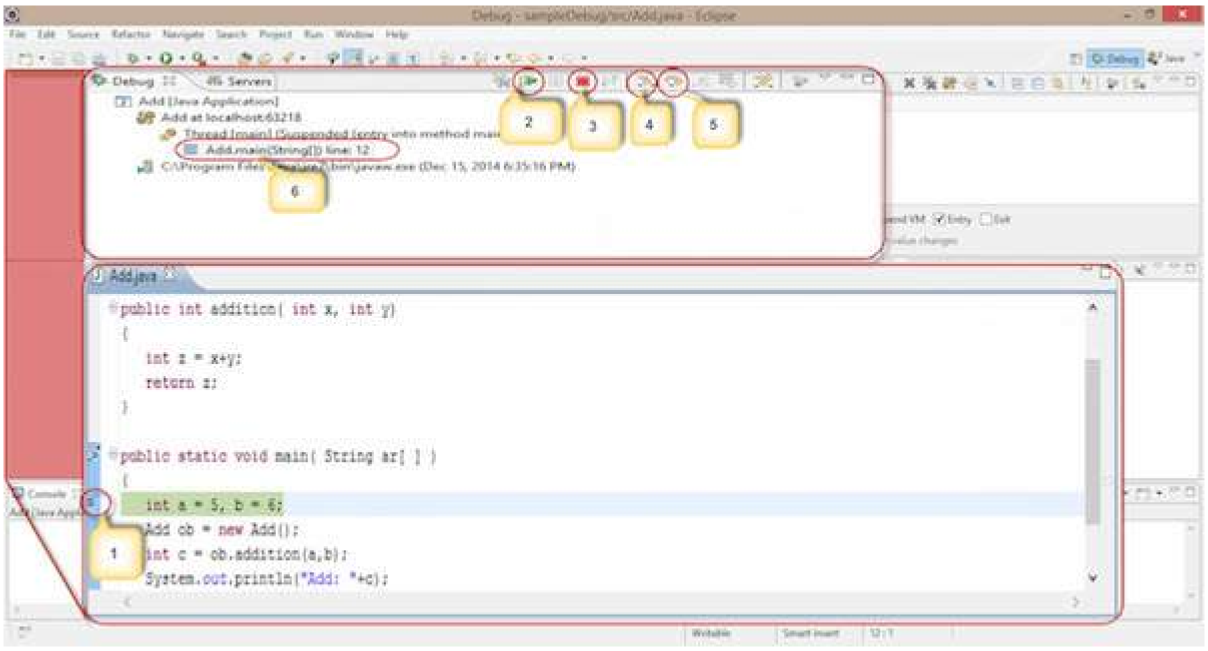
This section is used for the process of debugging. It contains options that are used in debugging.

Start debugging : Follow the instructions given below to start debugging.

Right click on the **code ->** click **Debug as ->** click **1 Java application**.

The process of debugging starts as shown in the following screenshot. It contains some selected options, highlighted using numeric digits.

1. We apply a breakpoint on the Add class main method. When we start debugging, the **controller** gets stuck at the first line of the main method.
2. It is used to **Resume** the debugging process and skip the current breakpoint. It works similar to the **cont** command in the JDB command line.
3. It is used to stop the debugging process.
4. It works similar to the **step in** process in the JDB command line. It is used for moving the control to the next line, i.e., point “1” moves to the next line.
5. It works similar to the **step over** process in the JDB command line.
6. It is used to see on which line the breakpoint is applied.


Debug - sampleDebug/src/Add.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Debug
Servers
Add [Java Application]
Add at localhost:63218
Thread [main] (Suspended (entry into method main
Add.main(String[]) line: 12
(Dec 15, 2014 6:35:16 PM)
Add.java
2
3
4
5
6
1
Writable
Smart Insert
12 : 1

```
public int addition( int x, int y)
 {
   int z = x+y;
   return z;
 }

public static void main( String ar[ ] )
 {
   int a = 5, b = 6;
   Add ob = new Add();
   int c = ob.addition(a,b);
   System.out.println("Add: "+c);
```

Follow the given steps and sections to debug your code in eclipse IDE. By default, every IDE contains this debugging process

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