

Understanding the JVM

JVM and the main method

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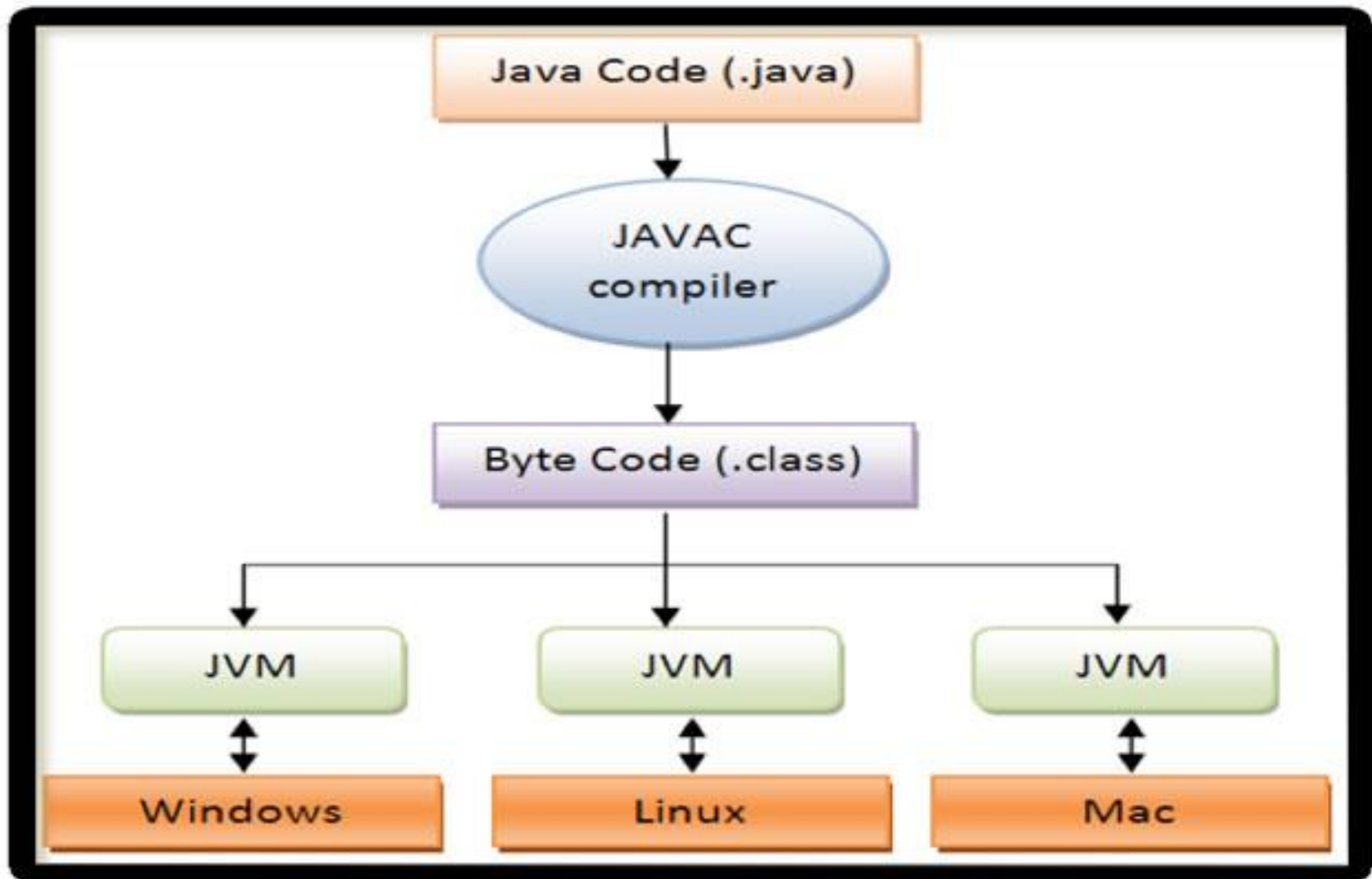
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Topics list

- Files in Java.
- Java Virtual Machine.
- main method.
- Installing JDK 9.

Files in Java (1)



Files in Java (2)

- Java code is written in **.java** file.
 - This code contains one or more Java language constructs like Classes, Methods, Variable, Objects etc.
- When you compile this code a **.class** file is generated.
 - A class file is also known as “**byte code**”; it is the input to Java Virtual Machine (JVM).
 - The JVM reads this code, interprets it and executes the program.

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Java Virtual Machine (JVM)

- Java Virtual Machine (JVM) is a “virtual” computer that resides in the “real” computer as a software process.
- The JVM gives Java the flexibility of platform independence.
- The **.class** files can be run on any operating system, once a JVM has been installed (i.e. it is installed when you install the JDK).

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main method

- When you want to run a java project, the Java Virtual Machine (JVM) invokes the **main method** in the project.
- For the JVM to recognise it, the main method must have a specific method signature.

```
public static void main(String[] args)
{
    . . .
}
```


main method

- “main” must exist
- “main” must be public
- “main” must be static (class method)
- “main” must have a String array parameter
- Only “main” can be invoked automatically.

```
public static void main(String[] args)
{
    . . .
}
```

main method

```
public static void main(String[] args)
{
    Driver driver= new Driver();
    driver.runMenu();
}
```

- The main method should
 - create an object
 - call the first method

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What is a JDK?

- Java Development Kit (JDK).
- It includes tools for developing Java applications.
- It also includes a Runtime Environment (JRE) which is the implementation of the JVM.
- Free from Oracle website.

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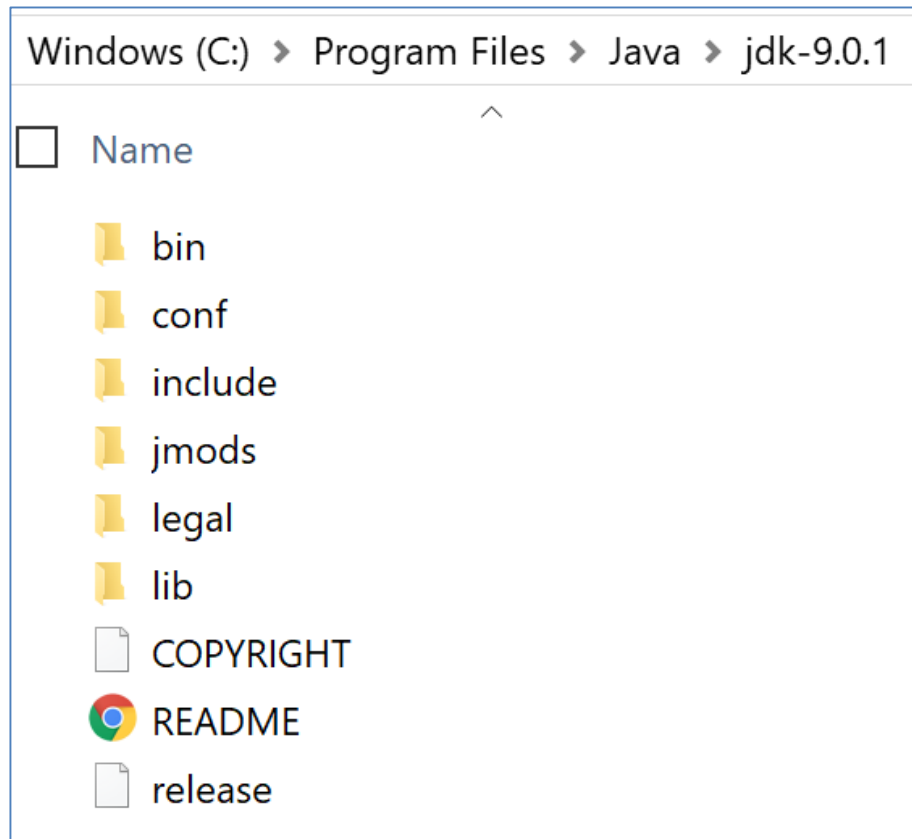
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