Introduction to Java

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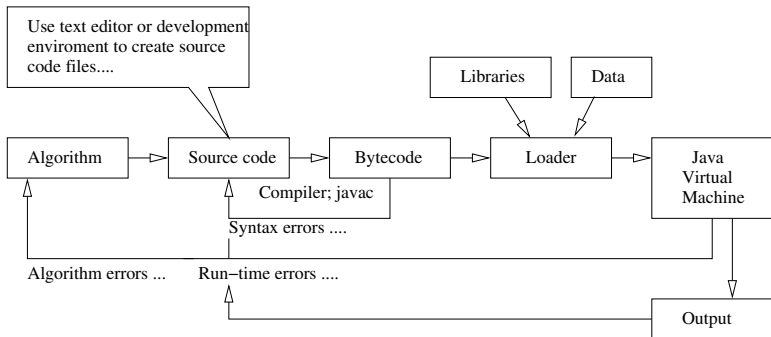
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Overview

Part 2

First Java Program

Flowchart for Software Development in Java

Step-by-Step Procedure:

1. Write, compile, fix, run, fix, run, validate → success!

First Java Application Program

Source Code:

```
 1  /*
 2   * ==========================================
 3   * Peace.java: My first Java program ....
 4   * ==========================================
 5   */
 6
 7  public class Peace {
 8      public static void main ( String args[]  ) {
 9          System.out.println( "*** Peace on Earth!" );
10      }
11  }
```

Compile and Run:

```
prompt >> javac Peace.java
prompt >> java Peace
*** Peace on Earth!
prompt >>
```

First Java Program

Key Points:

- The source code contains a definition for a class called Peace. It needs to be in a file called Peace.java

- The java compiler is called javac. The java virtual machine is called java.

- The command javac Peace.java compiles the source code into a bytecode file called Peace.class.

- The command java Peace executes the bytecode.

- Java supports three styles of comment statement. The syntax /* ... */ is the C-style.

- The fragment of code: public class Peace { .. body of the class .. } announces the class Peace and sets up the boundaries for the body of the class.

First Java Program

More Key Points:

- Peace contains one user-defined method called `main()`, i.e.,

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

  The method declaration is defined by three keywords: (1) public $\rightarrow$ method can be accessed by the public, (2) static $\rightarrow$ it's a class method – no need to create an object first, and (3) void $\rightarrow$ thet method does not return a value.

- The statement:

  ```
  System.out.println( "*** Peace on Earth!" );
  ```

  calls the method println(), within the class out, within the System package.