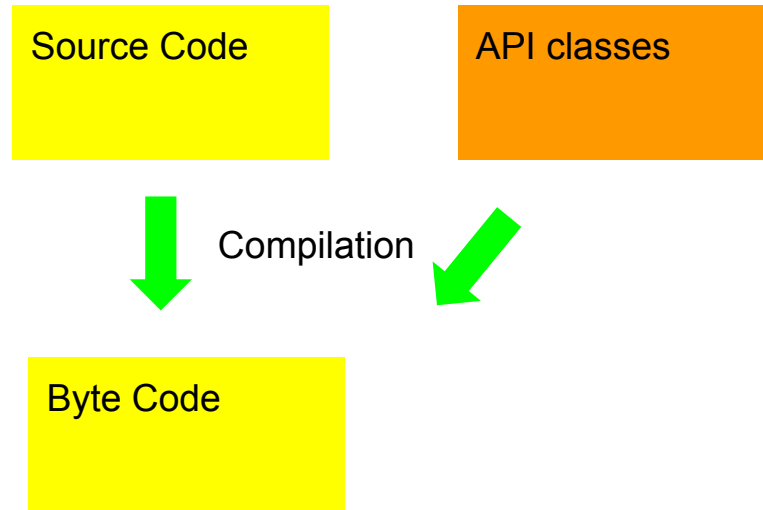


Tinker Academy

AP Computer Science Prep (Java Programming)
Lecture 2 - Java Fundamentals 2
(Java Compilation)

Winter 2015

Lecture 2 - Java Fundamentals 2



Token Generation

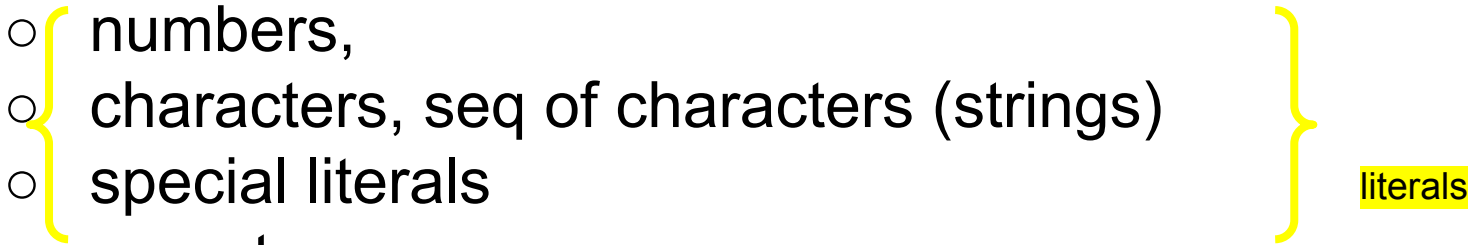
Lecture 2 - Java Fundamentals 2

Compilation In Java

- Program Source Code is converted to bytecode
- This process is called compilation
- The compilation is done by a compiler
- The Java Compiler is called `javac`

Lecture 2 - Java Fundamentals 2

Compilation Process - Token Generation

- Java source code split into “token” sequence
- Tokens are either
 - numbers,
 - characters, seq of characters (strings)
 - special literalsliterals
- operators
- language keywords
- identifiers
- punctuation, comments, whitespace

Token Analysis

Lecture 2 - Java Fundamentals 2

Compilation Process - Token Analysis

- Tokens are now combined to generate language structures
- Language structures are analyzed for correctness
- Source code that fail analysis will be rejected

Bytecode Generation

Lecture 2 - Java Fundamentals 2

Compilation Process - Bytecode Generation

- The structures are translated into bytecode
- Each Java source code file (.java) gets a generated class file (.class) containing Java bytecode