Pemrograman I – Java

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This file is freely for fork on https://github.com/arissetyawan-campus/java-programming-basic.git

1. Introduction

- **JVM (java virtual machine)**

  provides runtime environment in which java bytecode can be executed.

- **JRE (java runtime environment)**

  the implementation of JVM.It physically exists.It contains set of libraries + other files that JVM uses at runtime.

- **JDK (Java Development Kit)**

  contains JRE + development tools.

```
$ sudo apt-get install openjdk-7-jdk

$ java -version

$ javac -version

$ javac Hello.java

$ java Hello
```

2. Elements

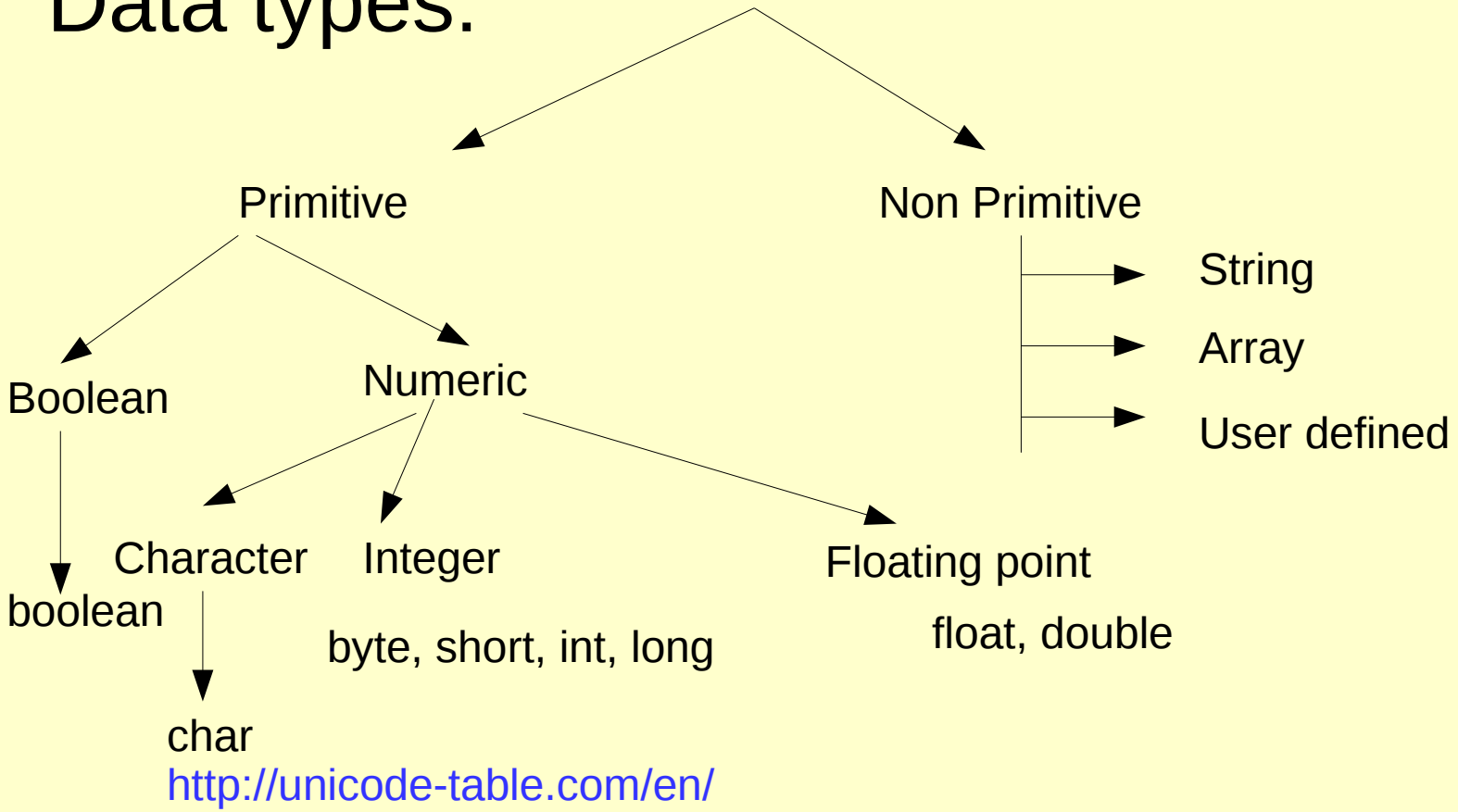
1. Statement
2. Block
3. Comments
4. Whitespaces
5. Identifiers (Variables, Contants, Package, Class, etc). Not allowed: http://java.about.com/od/javasyntax/a/reservedwords.htm

2. Elements

```
/** Basic.java
 *  Statements
 *  Expression
 *  Block
 *  Comments
 *  Whitespaces
 */
public class Basic {   // start of block1
   public static void main(String args[]) { // start of block 2
      String text = "Hello, basic element"; /*declare a variable with data type is string,
this is also called as an expression (a statement that returning values) */
      int size = 10; //this also called as an expression
      System.out.println(text);   // statement
      System.out.print(    size );   // statement, with white spaces
      int newSize = size + 1; //expression;
      System.out.printf("new size: %d", newSize);
      System.out.println();
   } //end of block 2
} // end of block 1
```

3. Data types

Data types:



3. Data types

type	value	Default size
boolean	false	1 bit
char	'\u0000'	2 byte
byte	0	1 byte
short	0	2 byte
int	0	4 byte
long	0L	8 byte
float	0.0f	4 byte
double	0.0d	8 byte

Examples: TipeData.java, TipeData1.java, TipeData2.java

4.Variable,Constant, Literal

Variable

- Local: declared inside the method
- Instant: declared inside the class but outside the method is called instance variable . It is not declared as static.
- Static: declared as **static**. It cannot be local.

  See **Application.java** on this repo under project folder

Constant

- Fixed value in variable declaration: final int MAX_VALUE = 100;

Literal (**Literal.java**)

- Integer
- Floating point (float, double)
- Character
- String