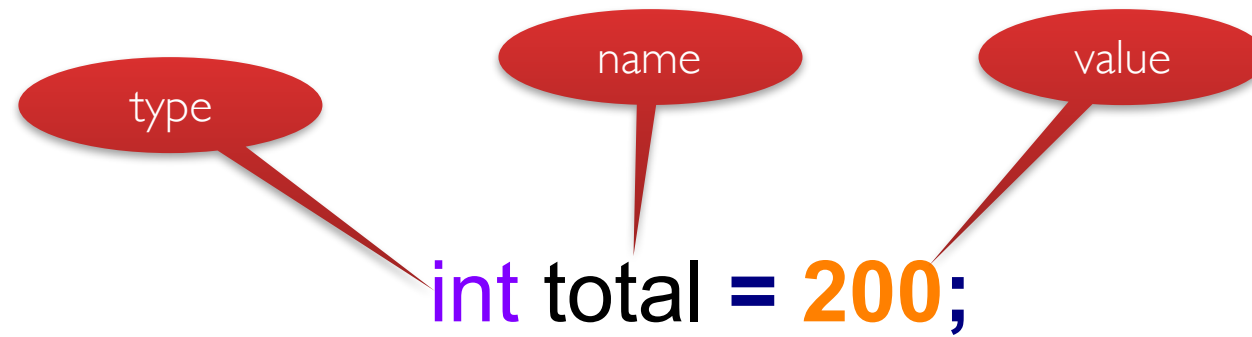


Java Basics Summary

What we will NOT cover

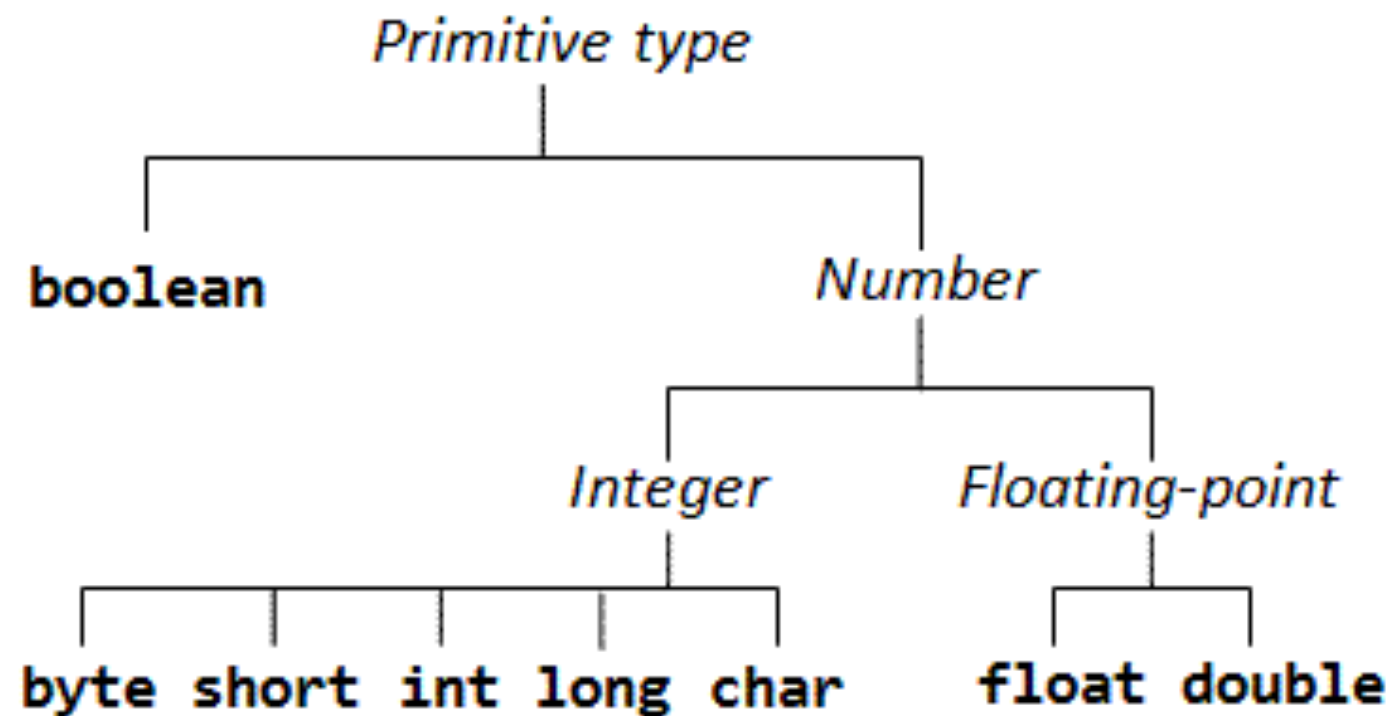
- How to install Java (Java 8 is required)
 - What is the difference between JRE and JDK?
 - What is x64 and x86 or linux/mac/windows
- How to install Eclipse, IDEA, Netbeans or J****, it is up to you to decide what you want to use.
- How to install any additional editors, tools or software

Variables



Primitive Types

- Primitive types in java
 - byte, short, int, long
 - float, double
 - boolean
 - char



Primitive Types size

- Numeric types are byte, short, long, int, double, float

- byte – 8b (-128 : 127)

```
byte b = 100;
```

- short – 16b (-32768 : 32767)

```
short s = 10000;
```

- int – from integer, 32b (-2^{31} : $2^{31}-1$)

```
int i = 10000;
```

- char is used for 16b unicode character

Char values are embedded in ' '

```
char ch = 'c';
```

- boolean has two values - true or false

```
boolean bool = false;
```

Default values

Data type	Default value
● byte	0
● short	0
● int	0
● long	0
● float	0.0
● double	0.0
● char	'\u0000'
● boolean	false

Arithmetic operators

Operator	Result
+	Addition
-	Subtraction (also unary minus)
*	Multiplication
/	Division
%	Modulus
++	Increment
+=	Addition assignment
-=	Subtraction assignment
*=	Multiplication assignment
/=	Division assignment
%=	Modulus assignment
--	Decrement

Compound assignment operators

Control Flow

- if, else, else if, switch, ?

Conditional Statements & Unary Operator

- Unary NOT operator !
- Conditional AND &&
- Conditional OR ||

x	y	x AND y	x OR y	NOT x
TRUE	TRUE	TRUE	TRUE	FALSE
TRUE	FALSE	FALSE	TRUE	FALSE
TRUE	NULL	NULL	TRUE	FALSE
FALSE	TRUE	FALSE	TRUE	TRUE
FALSE	FALSE	FALSE	FALSE	TRUE
FALSE	NULL	FALSE	NULL	TRUE
NULL	TRUE	NULL	TRUE	NULL
NULL	FALSE	FALSE	NULL	NULL
NULL	NULL	NULL	NULL	NULL

Arrays

Loops

- For, do while, while, *”for each”

Break & Continue

Strings

Object oriented programming

- **Classes**
- **Fields**
- **Methods**
- **Constructors**
- **Static members**
- **Inheritance**
- **Access modifiers**
- **Interfaces & Abstract classes**
- **Polymorphism**
- **Inner classes, static classes**
- **Upscaling / Downscaling**

Exceptions

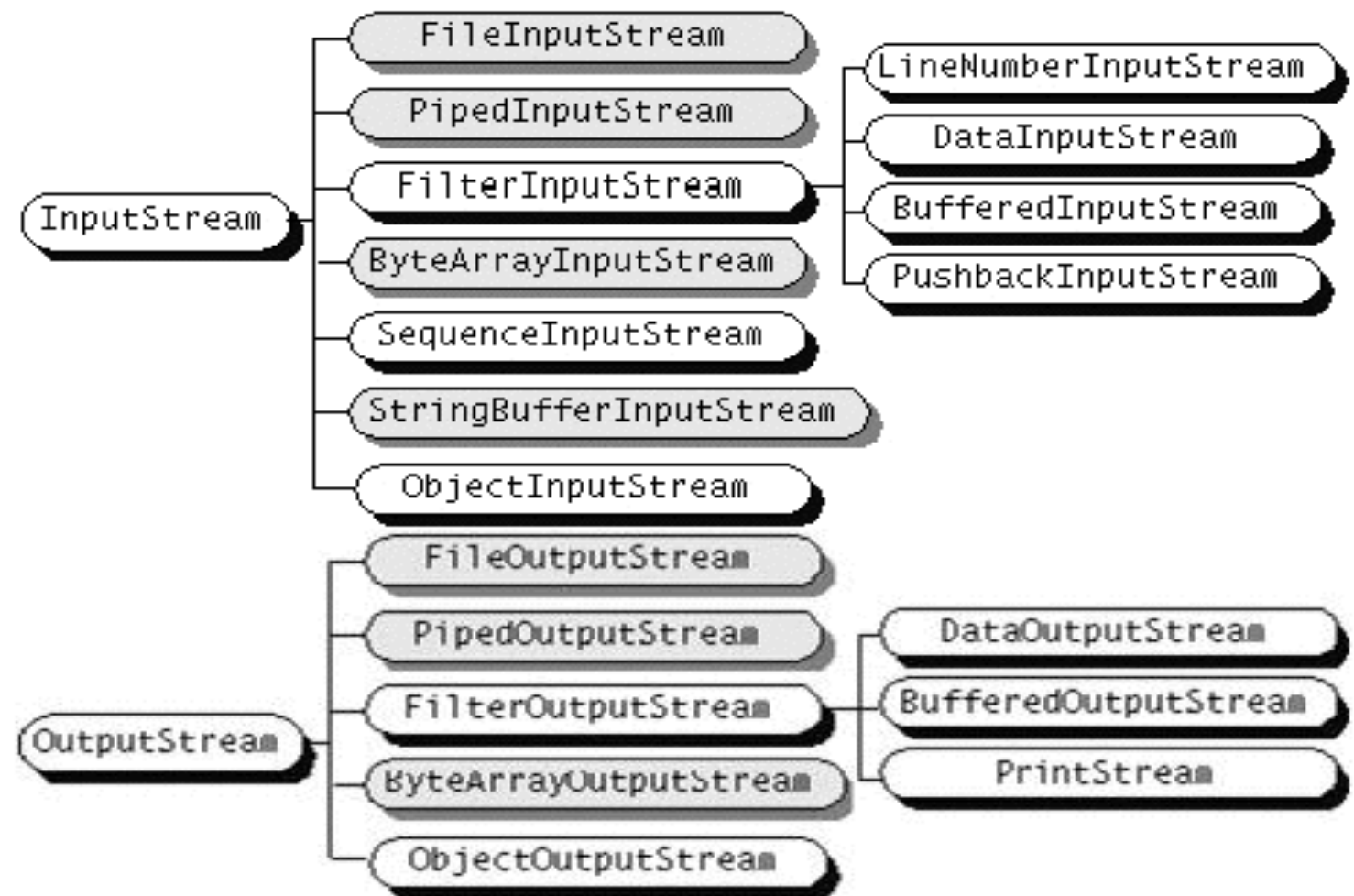
- throwing, catching, writing

Generics

Collections

Streams

- Binary streams
- Text Streams
- Files
- Serialisation



Swing

Lambdas

Now ... the advanced
Java course.