Working with Java Data Types and String APIs

(Java SE 11 Developer Certification 1Z0-819)

Overview

Richard Monson-Haefel
Sr. Software Engineer

www.monsonhaefel.com

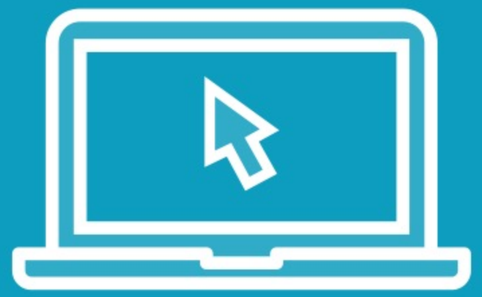
Course Overview

- Understanding Primitive Types and Variables
- Using Operators and Math APIs
- Using Primitive Wrappers
- Understanding Variable Rules and Scope
- Working Strings, Dates and Times

Module Overview

- The eight primitive types in detail:
- boolean, byte, short, int, long, double, float, and char
- Narrowing and widening
- Underscores
- Number systems
- Scientific Notation
- Review

Demo



- Fields vs local variables
- Primitives vs references
- The eight primitive types in detail:
  - boolean, byte, short, int, long, double, float, and char
- Narrowing and widening
- Underscores
- Number systems
- Scientific Notation
- Review

Primitive Types

boolean

byte

short

int

long

double

float

char

The boolean Primitive

The byte, short, int, and long Primitives

The float and double Primitives

The char Primitive

Narrowing, Widening and Casting

Underscores in Numeric Literals

Alternative Number Systems

Alternative Number Systems

Arabic (base-10)

Octal (base-8)

Hexadecimal (base-16)

Binary (base-2)

Scientific Notation

Examples of Scientific Notation

Light Year = 5,880,000,000,000 = 5.88×10^{12}

Decimal Exponent

```
double lightSpeed = 5.88e12;
```

Diameter of H = 0.00000005

= 5.0×10^{-8}

Decimal Exponent

```
float diameterHydr = 5.0e-8f;
```

Module Overview

- The eight primitive types in detail:
  - boolean, byte, short, int, long, double, float, and char
- Narrowing and widening
- Number systems including
  - Base-2, Hex (base-16), Oct (base-8)
- Scientific Notation

Up Next:
Using Operators and Math APIs