Java for Beginners

PRIMITIVE DATA TYPES

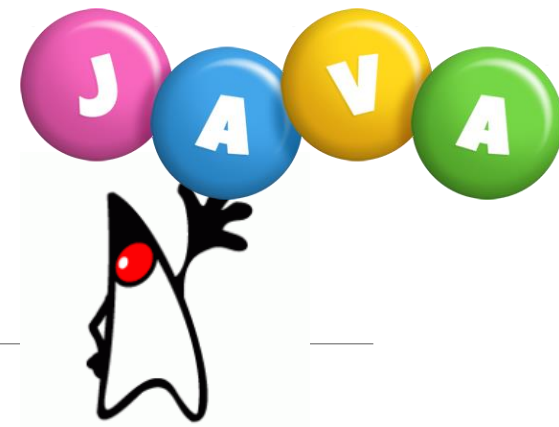ERIC Y. CHOU, PH.D.   IEEE SENIOR MEMBER

7 Primitive Data Types

| byte (8-bit signed integers) | → | short (16-bit signed integers) | → | int (32-bit signed integers) | → | long (64-bit signed integers) | → | float (32-bit floating-point) | → | double (64-bit floating-point) |

char (16-bit unsigned)
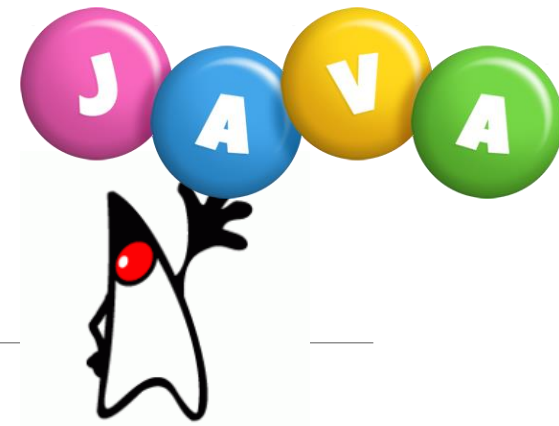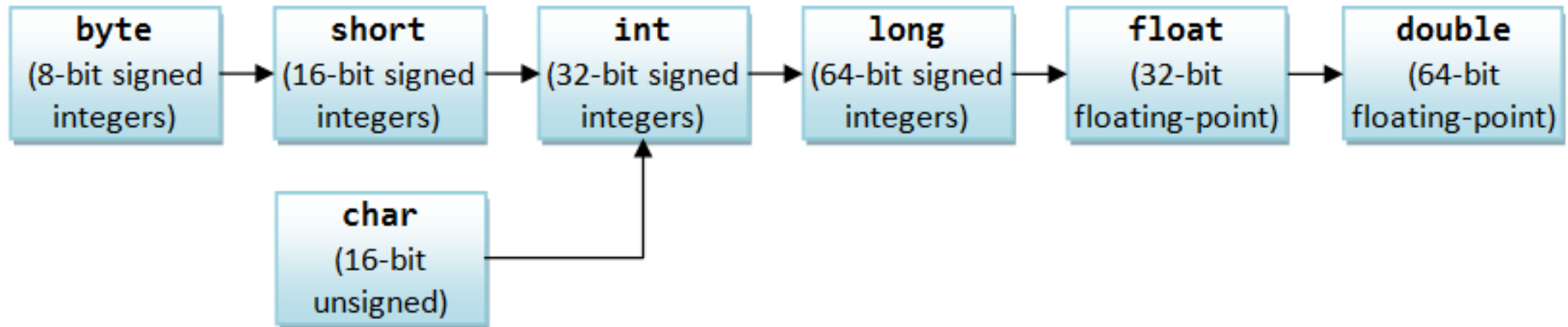
Orders of Implicit Type-Casting for Primitives

Range for Primitive Data Types

Name	Data	Range	Default Value	Size
byte	signed integer	[-128, 127]	0	8 bits
short	signed integer	[-32768, 32767]	0	16 bits
int	signed integer	[-2147483648, 2147483647]	0	32 bits
long	signed integer	[-9223372036854775808, 9223372036854775807]	0	64 bits
float	floating-point	**MIN: ±1.4E-45 MAX: ±3.4028235E+38**	0.0	32 bits
double	floating-point	**MIN: ±4.9E-324 MAX: ±1.7976931348623157E+308**	0.0	64 bits
char	Unicode	['\u0000', '\uFFFF']	'\u0000'	16 bits
boolean	logical value	{false, true}	false	≥ 1 bit