Introduction to Programming Basics

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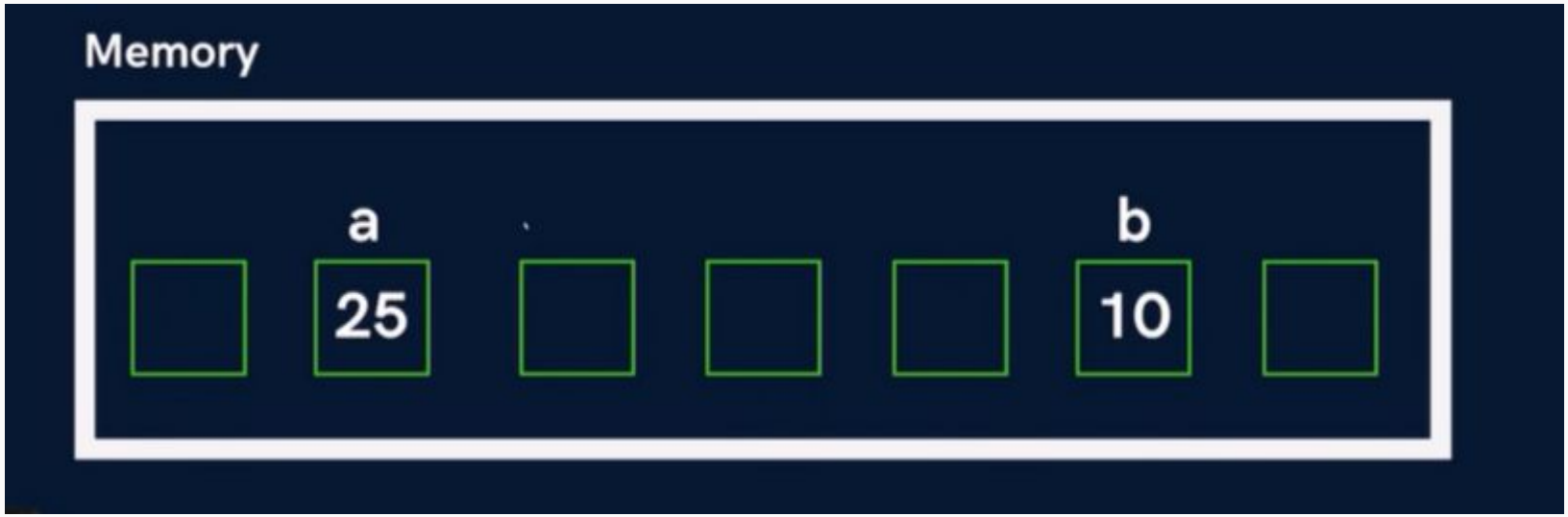
Agenda

- Keywords
- Variables
- Constants
- Data types
- Typecasting
- Input
- Operators
- Control Flow

Java keywords

short	if	implements	finally	throw
boolean	void	int	long	while
case	do	switch	private	interface
abstract	default	byte	else	try
for	double	class	catch	extends
final	transient	float	instanceof	package
continue	native	public	break	char
protected	return	static	super	synchronized
this	new	throws	import	volatile

TYPE	DESCRIPTION	DEFAULT	SIZE	EXAMPLE LITERALS	RANGE OF VALUES
boolean	true or false	false	1 bit	true, false	true, false
byte	twos complement integer	0	8 bits	(none)	-128 to 127
char	unicode character	\u0000	16 bits	'a', '\u0041', '\101', '\\', '\'','\n',' β'	character representation of ASCII values 0 to 255
short	twos complement integer	0	16 bits	(none)	-32,768 to 32,767
int	twos complement integer	0	32 bits	-2, -1, 0, 1, 2	-2,147,483,648 to 2,147,483,647
long	twos complement integer	0	64 bits	-2L, -1L, 0L, 1L, 2L	-9,223,372,036,854,775,808 to 9,223,372,036,854,775,807
float	IEEE 754 floating point	0.0	32 bits	1.23e100f, -1.23e-100f, .3f, 3.14F	upto 7 decimal digits
double	IEEE 754 floating point	0.0	64 bits	1.23456e300d, -1.23456e-300d, 1e1d	upto 16 decimal digits


Memory
a
25
b
10

Precedence in Java

Type	Operators	Precedence	Associativity
	Parenthesis, dot (.), [ ]	.[]()	Left to Right
Unary	Postfix	++ --	Right to Left
Unary	Prefix	++ -- + - ~ !	Right to Left
Arithmetic	Multiplicative	* / %	Left to Right
Arithmetic	Additive	+ -	Left to Right
Bitwise	Shift	<< >> >>>	Left to Right
Relational	Relational	< > <= >= instanceof	Left to Right
Relational	Equality	== !=	Left to Right
Bitwise	bitwise AND	&	Left to Right
Bitwise	bitwise exclusive OR	^	Left to Right
Bitwise	bitwise inclusive OR	|	Left to Right
Logical	logical AND	&&	Left to Right
Logical	logical OR	||	Left to Right
Ternary	Conditional	? :	Right to Left
Assignment	Assignment	= += = *= /= %= &=	Right to Left

All the best for assignments