Basic Elements of Java

Java 2

Lesson 3 ICS2602 (1CSC) Prof. Darlene Alberto

Preview from Notesale.co.uk Preview from 8 of 20 Isting in Java (or two Type Casting in Java (or type conversion)

It is a method or process that converts a data type into another data type in both ways manually and automatically.

The automatic conversion is done by the compiler and manual conversion performed by the programmer

Two types of type casting:

It is very important to keep in mind the following points:

- 1. Widening Type Casting
 - > Converting a lower data type into a higher one.
 - ➤ It is also known as implicit conversion. ½=0 1/2.0=0.5
 - \succ It is done automatically.
 - ➤ It is safe because there is no chance to lose data.

Java Group of

- **Arithmetic Operators**
- **Relational Operators**
- Logical Operators
- **Bitwise Operators**
- **Assignment Operators**
- **Miscellaneous Operators**

Increment (++) and Decrement (--)

> used to increase or decrease the value by 1

- ➤ unary operator
- can only be applied to variables

Two kinds of increment and decrement operators:

Postincrement/decrement

Bitwise Operators

int $a = 10$, $b = 2$ for all examples below				
Operator	Meaning	Example	Result	
~	Bitwise unary NOT	~a	-11	
&	Bitwise AND	a&b	2	
1	Bitwise OR	alb	10	
^	Bitwise Ex-OR	a^b	8	
>>	Shiftright	a>>1	5	
>>>	Shift right zero fill	a>>>1	5	
<<	Shift left	a<<1	20	
&=	Bitwise AND assignment	a &= b	2	
=	Bitwise OR assignment	a = b	10	
^=	Bitwise Ex-OR assignment	a ^= b	8	
>>=	Shift right assignment	a >>= 1	5	
>>>=	Shift right zero fill assignment	a>>>=1	5	
<<=	Shift left assignment	a <<= 1	20	
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Relational Operators

Ine output of the relational operator is true or false (boolean value). These operators are mainly used when applying control statements in the program of the p int a = 10, b = 2 for all examples below

Operator	Meaning	Example	Result
==	Equalsto	a == b	false
!=	Not equal to	a != b	true
<	Less than	a < b	false
<=	Less than or equal to	a <= b	false
>	Greater than	a>b	true
>=	Greater than or equal to	a >= b	true
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Logical Operators

> More complex conditions can be created using logical operators.

Parts of a method definition

> modifier - defines the access type of the method and this is optional; some modifiers are public, private, protected, static, abstract, and final.

-static - means that the method belongs to the ClassName class and not an object of the ClassName class

> returnType - return type of the method(if method does not return a value, the returnType is void)

> nameOfMethod -name of the method(this is an identifier, follow rules in naming an identifier)

> parameter list - the type, order, and number of parameters of the method. Some method does not have a parameter.

> method body - block of statements that performs the task

Local Variable

> Variables declared inside the method.

➤ These variables are considered local to the method (local scope), they can only be used inside the method.

➤ These variables are hidden from other methods, which makes it impossible for other methods to access it.

Formal parameter

→ a value-returning method uses a return Solt meHt to return its value; that is, it passes a value back when the method completes its t S
Determinent

> is a statement that causes a method to execute.