

CSE 142 Midterm Cheat Sheet

Syntax templates

<pre> if (test) { statement(s); } if (test) { statement(s); } else { statement(s); } if (test) { statement(s); } else if (test) { statement(s); } else { statement(s); } </pre>	<pre> for (initialization; test; update) { statement(s); } while (condition) { statement(s); } public static void name (<i>parameters</i>) { statement(s); } public static type name (<i>parameters</i>) { ... return expression; } </pre>
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Math Method	Description
Math.abs(<i>value</i>)	absolute value
Math.min(<i>v1</i> , <i>v2</i>)	smaller of two values
Math.max(<i>v1</i> , <i>v2</i>)	larger of two values
Math.round(<i>value</i>)	nearest whole number
Math.pow(<i>b</i> , <i>e</i>)	b to the e power

Random Method	Description
nextInt(<i>max</i>)	random integer from 0 to <i>max</i> -1

Construction Examples

Random r = new Random();

Scanner console = new Scanner(System.in);

String Method	Description
contains(str)	true if this string contains the other's characters inside it
endsWith(str), startsWith(str)	true if this string starts/ends with the other's characters
equals(str)	true if this string is the same as <i>str</i>
equalsIgnoreCase(str)	true if this string is the same as <i>str</i> , ignoring capitalization
indexOf(str)	index in this string where given string begins (-1 if not found)
length()	number of characters in this string
substring(i , j)	characters in this string from index <i>i</i> (inclusive) to <i>j</i> (exclusive)
substring(i)	characters in this string from index <i>i</i> (inclusive) to end
toLowerCase(), toUpperCase()	a new string with all lowercase or uppercase letters
charAt(i)	returns char at index <i>i</i>

Scanner Method	Description
nextInt()	read/return token as int
nextDouble()	read/return token as double
next()	read/return token as String

Operator	Description	Operator	Description
<	less than	!=	not equal
<=	less than or equal		
>	greater than	&&	logical and
>=	greater or equal		logical or
==	equal	!	logical not

CSE 142 Section Handout #5.5 Answers to Pre-Section Written Problem

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public static int mystery(int x) {
    int y = 1;
    int z = 0;

    // Point A
    while (x > y) {
        // Point B

        z = z + x - y;
        x = x / 2;

        // Point C

        y = y * 2;

        // Point D
    }
    // Point E

    return z;
}

```

	$x > y$	$z > 0$	$y \% 2 == 0$
Point A	SOMETIMES	NEVER	NEVER
Point B	ALWAYS	SOMETIMES	SOMETIMES
Point C	SOMETIMES	ALWAYS	SOMETIMES
Point D	SOMETIMES	ALWAYS	ALWAYS
Point E	NEVER	SOMETIMES	SOMETIMES