

# CSE 142 Midterm Cheat Sheet

## Syntax templates

<pre> if (<b>test</b>) { <b>statement(s)</b>; }  if (<b>test</b>) { <b>statement(s)</b>; } else { <b>statement(s)</b>; }  if (<b>test</b>) { <b>statement(s)</b>; } else if (<b>test</b>) { <b>statement(s)</b>; } else { <b>statement(s)</b>; }         </pre>	<pre> for (<b>initialization</b>; <b>test</b>; <b>update</b>) {     <b>statement(s)</b>; }  while (<b>condition</b>) {     <b>statement(s)</b>; }  public static void <b>name</b>(<b>parameters</b>) {     <b>statement(s)</b>; }  public static <b>type</b> <b>name</b>(<b>parameters</b>) {     ...     return <b>expression</b>; }         </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
nextDouble()	random real number $\geq 0$ and $< 1$

### Construction Examples

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Random r = new Random();
Scanner console = new Scanner(System.in);
    
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String Method	Description
contains( <i>str</i> )	true if this string contains the other's characters inside it
endsWith( <i>str</i> ), startsWith( <i>str</i> )	true if this string starts/ends with the other's characters
equals( <i>str</i> )	true if this string is the same as <i>str</i>
equalsIgnoreCase( <i>str</i> )	true if this string is the same as <i>str</i> , ignoring capitalization
indexOf( <i>str</i> )	index in this string where given string begins (-1 if not found)
length()	number of characters in this string
substring( <i>i</i> , <i>j</i> )	characters in this string from index <i>i</i> (inclusive) to <i>j</i> (exclusive)
substring( <i>i</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>i</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	Operator	Description
<	less than	==	equal	&&	logical and
<=	less than or equal	!=	not equal		logical or
>	greater than			!	logical not
>=	greater or equal				