

Boolean Data Type and Expressions

Hui Chen

Department of Computer & Information Science

Brooklyn College

Objectives

- To declare **boolean** variables and write Boolean expressions using relational operators (§3.2).

Outline

- boolean data type
- boolean operators and expressions

boolean

- We often need to compare two values
 - Recall the exercise that computes GPA, what if we enter a letter grade?
 - `boolean isA = (grade == 'A')`
 - Does the student qualify for a scholarship?
 - `boolean isQualified = (gpa >= 3.0)`
 - The result of the comparison is one of the two values
 - `true`, `false`

Relational Operators

- Java provides 6 relationship operators to compare two values

Java Operator	Mathematics Symbol	Name	Example (radius is 5)	Result
<	<	less than	<code>radius < 0</code>	<code>false</code>
<=	≤	less than or equal to	<code>radius <= 0</code>	<code>false</code>
>	>	greater than	<code>radius > 0</code>	<code>true</code>
>=	≥	greater than or equal to	<code>radius >= 0</code>	<code>true</code>
==	=	equal to	<code>radius == 0</code>	<code>false</code>
!=	≠	not equal to	<code>radius != 0</code>	<code>true</code>

Let's try them out ...

Questions?