

MIDTERM REVIEW

Expressions

An expression always evaluates out to **one** value. An expression *expresses* a value. Here are some examples of expressions:

- 10
- i
- 10 * i
- sqrt(2)
- (x < 1 || x > 100)
- (int)x / 3

Data Types

When you declare a variable, you always have to say what data type that variable is. Every expression also has a data type. Also see zyBook chapter 2.12. Here are some data types:

- int
- char
- double
- String
- Array: int[], double[], char[]

Statements

these are executable - by the computer

assignment statement, e.g. x = 0

method call, e.g. System.out.println(x);

simple expression, e.g. i++

control statements:

- if
- if else
- switch
- while
- for

Operators

Used to form expressions

- assignment
- arithmetic (also see zyBook chapter 2.11)
- increment, decrement
- logical
- relational
- type cast

Variables

When declaring a variable, the system allocates storage for it. At that time, you give it a data type and that determines the :

- number of bytes allocated

possible range of values

applicable operators

Arrays

declaring and allocating an array

index vs. value

iterating through every element of an array

types of values that you can store in an array