Chapter 4

* A variable is a symbolic name for an area of memory
* Processing (and c/c++/java) is a strongly typed language
* All variables are associate with a data type
* Two categories of data types
  + Primitive types
  + Reference type
* There are 8 primitive types
  + Name
    - Boolean – true, false
    - Char – ‘a’ ‘b’
    - Integer
      * Byte - -128 to 127
      * Short – - 2^63 to 2^63
      * Int
      * Long
    - Real
      * Float
      * Double

You have to give a data type to a variable

Ex. Declare, then initialize a variable

Int x;

X = 6;

Ex. Declare and initialize all at once

Int x = 6;

Rules for identities (var names);

* Must contain only letters, underclasses, and digits
* Must not begin with a digit
* Must not be a reserved word (word already used)

Ex.

int count = 0;

boolean finished = false;

float temp = 98.6;

double length;

ex.

float x = 7.2; // float is for decimals while int is for whole numbers

float y = 3.9; z = 8.1;

ex.

int a = b, c = 0, d;

Assignment statement

Variable = expression;

Ex.

Int x = 1, y = 6, z;

z = x + y;

y = z \*z;

x = y – z;

x = x + 5;

z = z\*z;

Check the lecture posted online for a diagram and examples for movable zoog

Arithmetic operators

+ add

-Subtract

\* multiply

/ divide

% remainder ex 7/2 = 1 because the remainder is 1

If mixed int and float float will be done

frameCount

frameRate is the amt of sec that occurs per minute

displayWideth, displayHeight

key

keyCode

keyPressed (Boolean but rest are int data)

mousePressed (Boolean)

Ex. System variables.pde

New built in function:

random()

* random(a) returns a random number x in range 0 ≤ x < a
* random(a,b) returns a random number x in a range a ≤ x < b