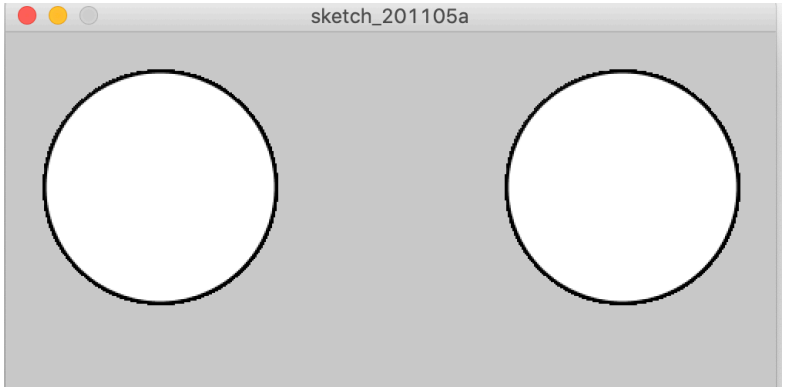
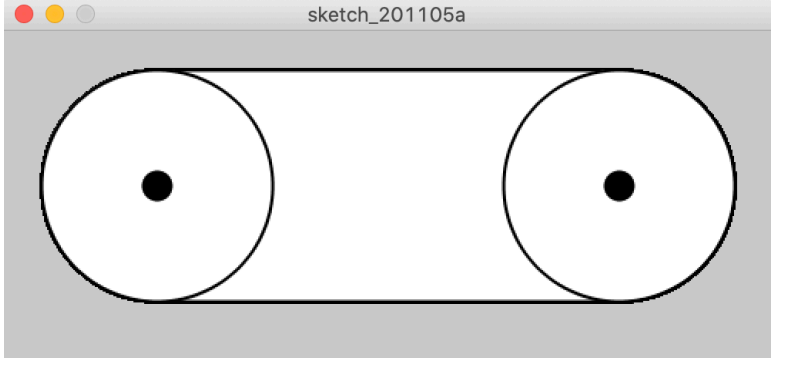
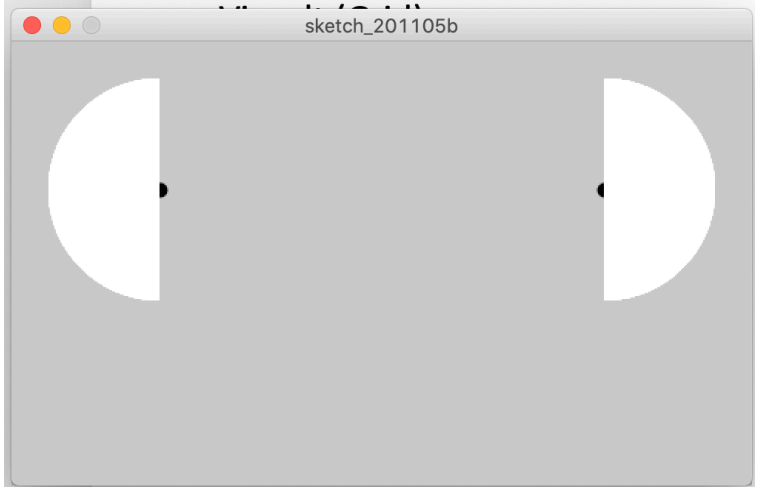
Processing med betingelser&loops

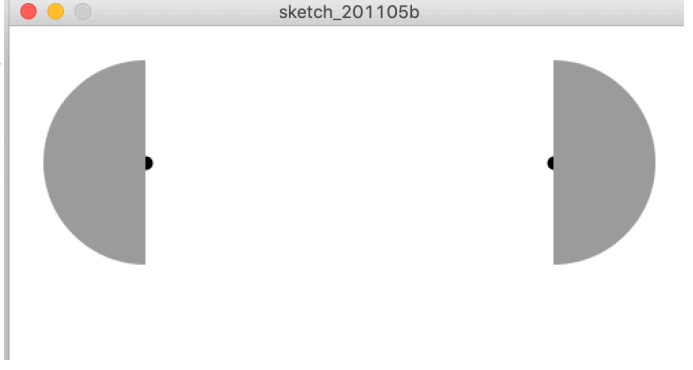
Pixels

- Visuelt (Grid)
- THE REFERENCE – (ø 2-8)
- Line(1,0,4,5)
  - Metode + argumenter
- Point, line, rectangle, ellipse
  - Location - koordinater
  - Size – width,height
  - Color – fill, stroke, strokeWeight
- Rect(2,3,w,h)
- Ellipse(1
- Arc



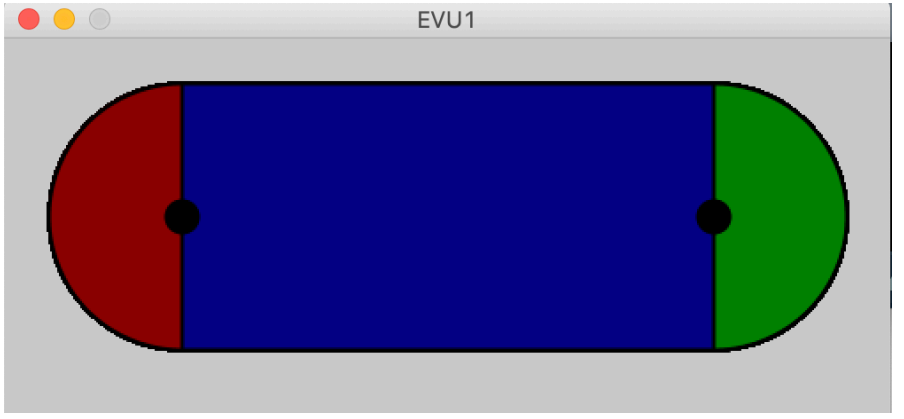


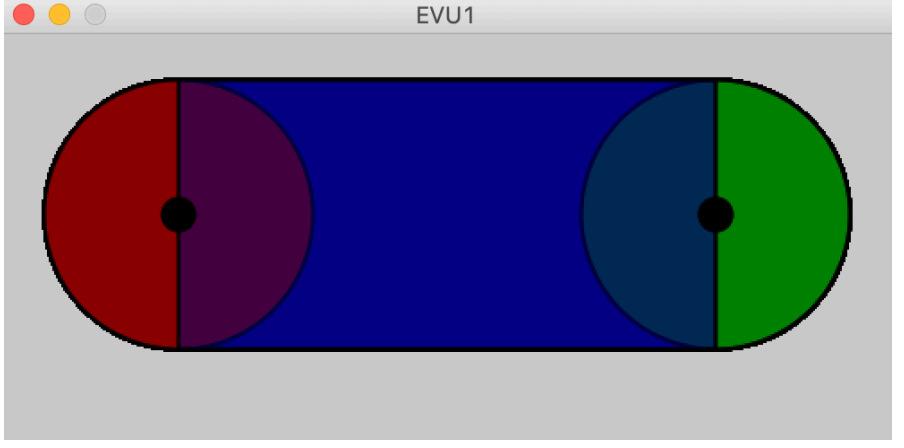


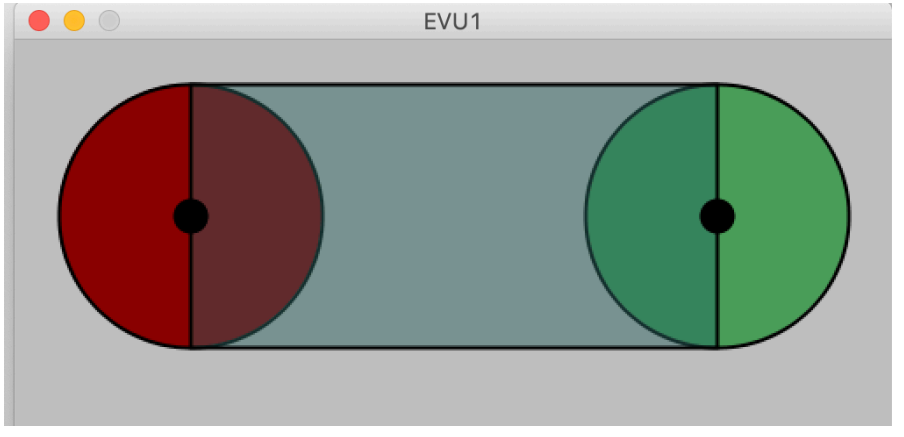


Color

- Grayscale (0-255)
- RGB (r,g,b)
- Transparancy (r,g,b,0-255)
- HSB (h,s,b)
- HSB(0-360,0-100,0-100)

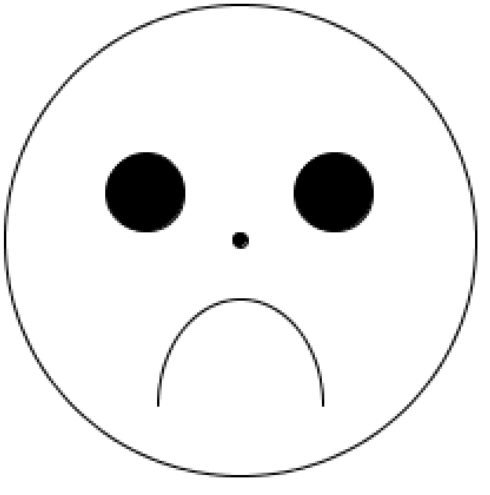






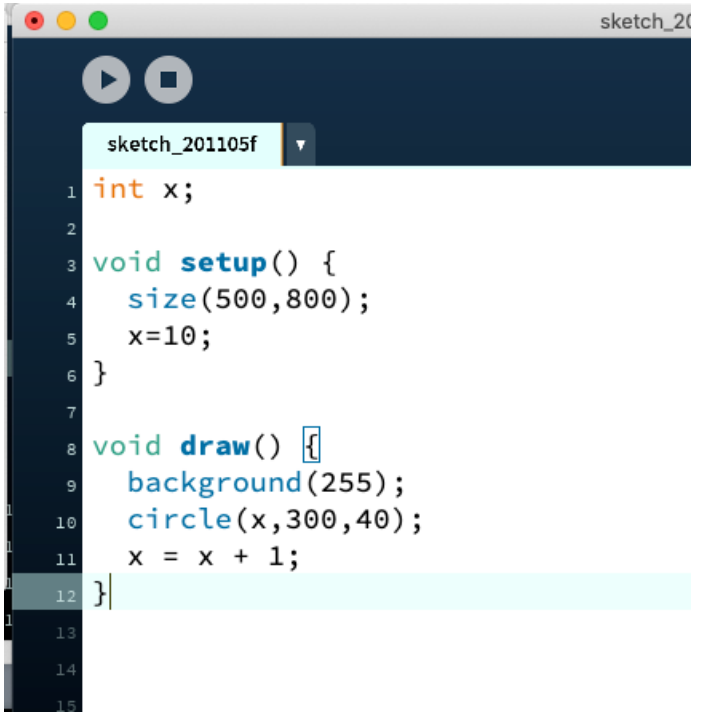
Processing - tooling

- preferences
- Sketch
- First sketch
  - **Function call**
  - Assignment
  - Control
- Functions
  - Build in
    - Size
    - Println
  - Comments //
  - Errors (ø 2-6)



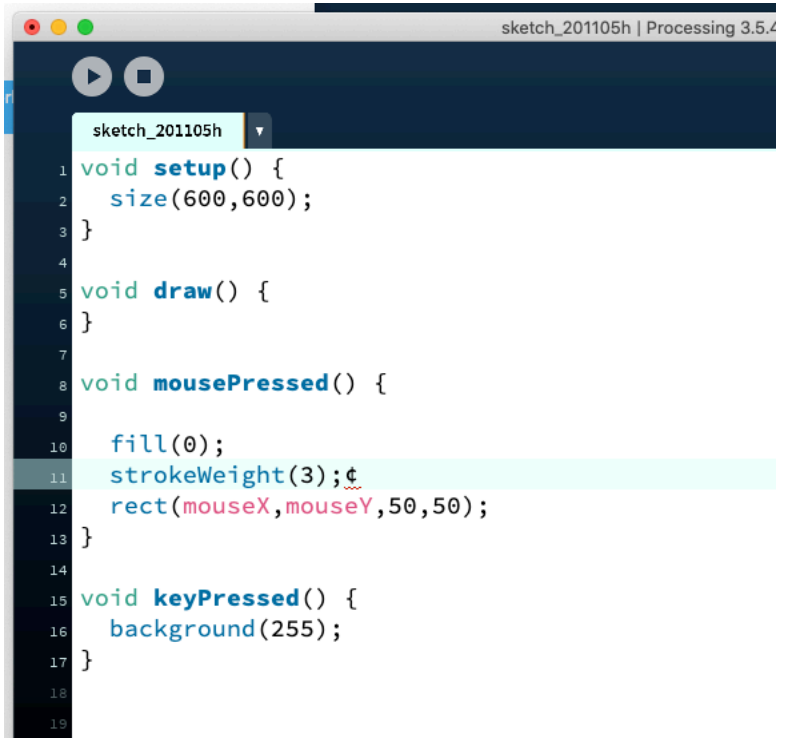
Interaction

- The Flow
  - Setup
  - Draw
    - Internal loop
    - (framecounter)
  - Block of code
  - Mouse
    - mouseX,mouseY
    - Ex 3-2 (background)
    - pmouseX,pmouseY
    - Ex 3-4



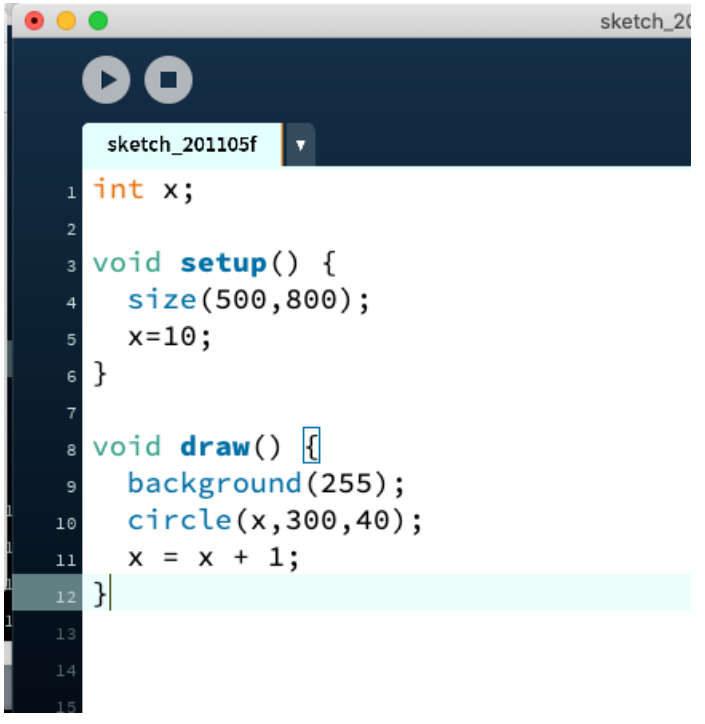
Mere mus ..

- Interaction
  - mousePressed()
  - mouseReleased()
  - keyPressed()

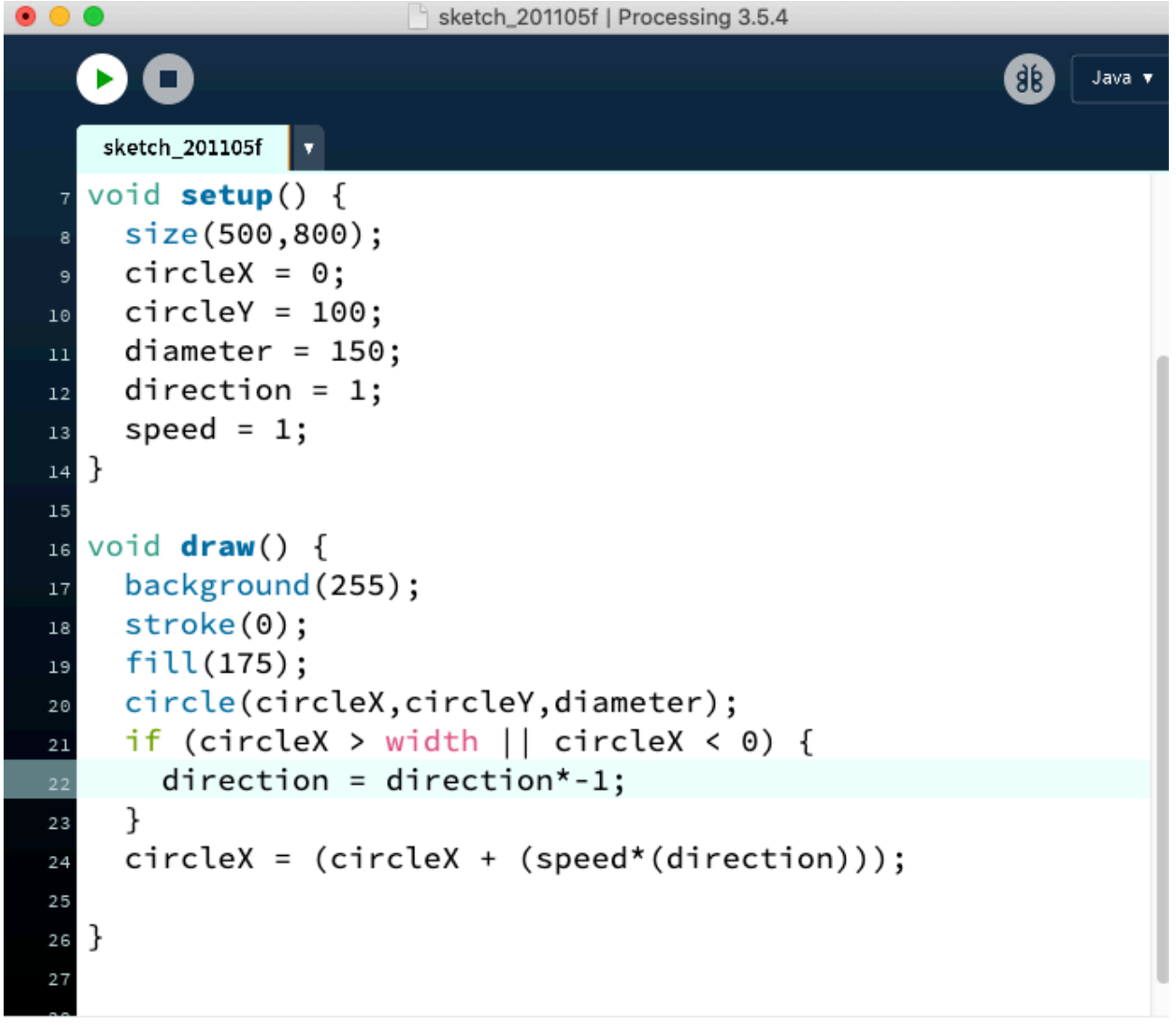


Variabler & operatorer

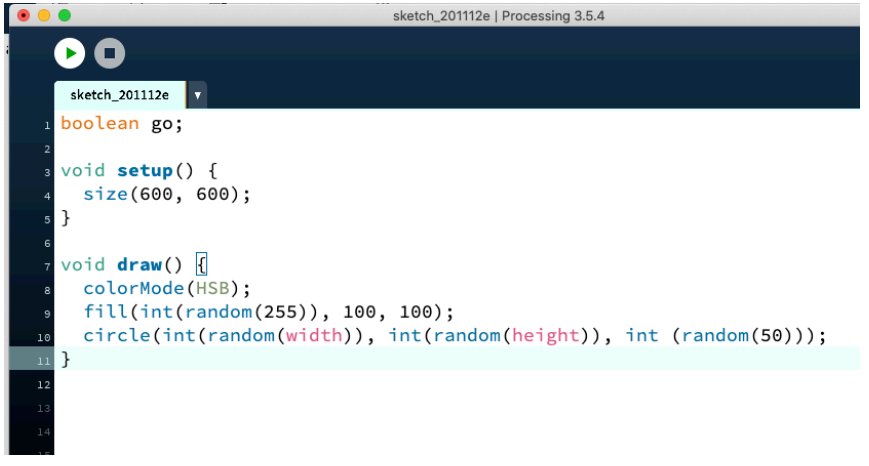
- Brugt i processing
  - boolean
  - Int
  - float
  - char
  - String



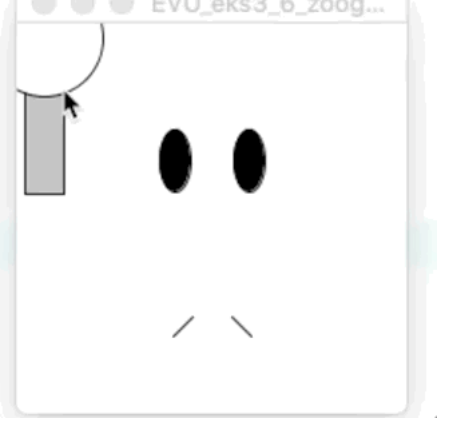
- System Variabler
  - width —Width (in pixels) of sketch window.
  - height —Height (in pixels) of sketch window.
  - frameCount —Number of frames processed.
  - frameRate —Rate that frames are processed (per second).
  - key —Most recent key pressed on the keyboard.
  - keyPressed —True or false? Is a key pressed?
  - mousePressed —True or false? Is the mouse pressed?


sketch_201105f | Processing 3.5.4
Java
sketch_201105f
7 void setup() {
8 size(500,800);
9 circleX = 0;
10 circleY = 100;
11 diameter = 150;
12 direction = 1;
13 speed = 1;
14 }
15
16 void draw() {
17 background(255);
18 stroke(0);
19 fill(175);
20 circle(circleX,circleY,diameter);
21 if (circleX > width || circleX < 0) {
22 direction = direction*-1;
23 }
24 circleX = (circleX + (speed*(direction)));
25
26 }
27

Random – ”a bit of fun”



- Action
  - random()
- Kombineres med objekter i arrays
- Øvelse: boolean go?



Kontrol: Conditionals & operators

- Brugt i processing
  - Boolean expressions (mouseX>10)
  - If, else-if og else
  - Logic (ø 5-5 s68)
  - If-else if (eks 5-3)
  - Loops
    - For og while
    - Draw()
- System Variabler

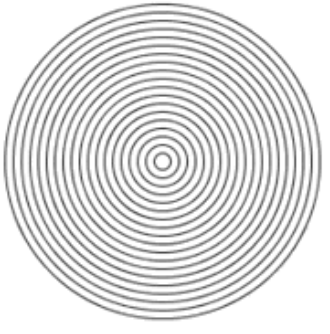
CONTROL

Relational Operators
== (equality)
> (greater than)
>= (greater than or equal to)
!= (inequality)
< (less than)
<= (less than or equal to)

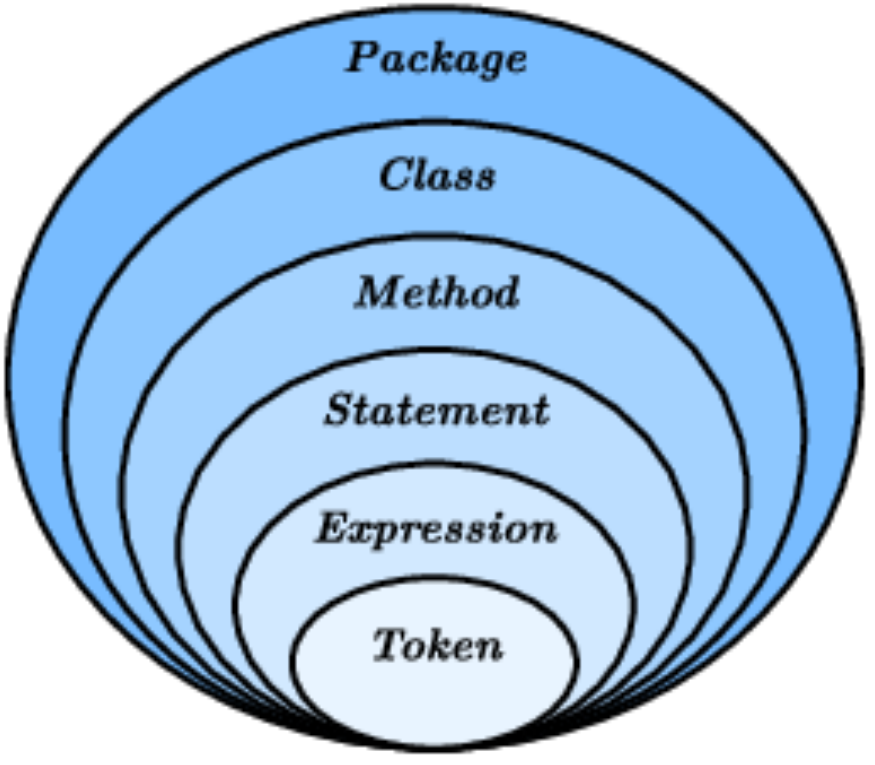
Logical Operators
&& (logical AND)
! (logical NOT)
|| (logical OR)

Conditionals
break
case
?: (conditional)
continue
default
else
if
switch()

Fælles øvelse – while and for



Elements of the language



java.util

Scanner

nextInt

hour = in.nextInt();

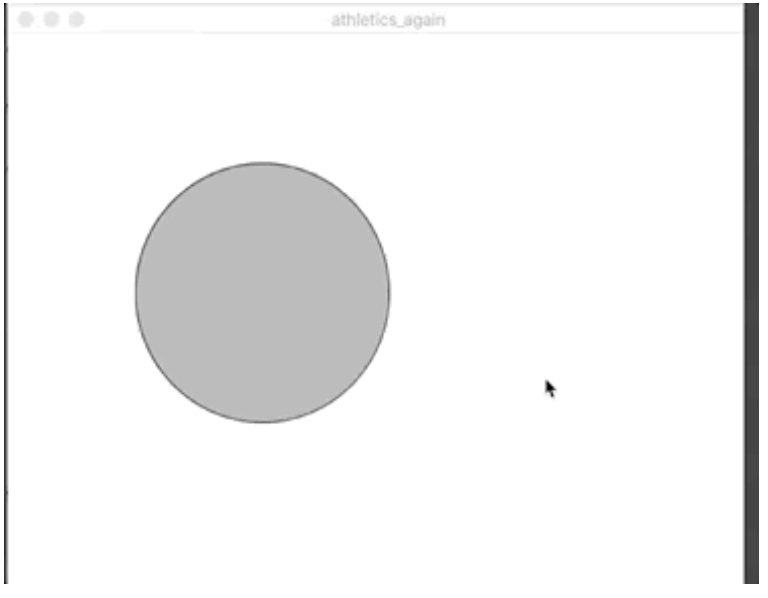
hour * 60

hour

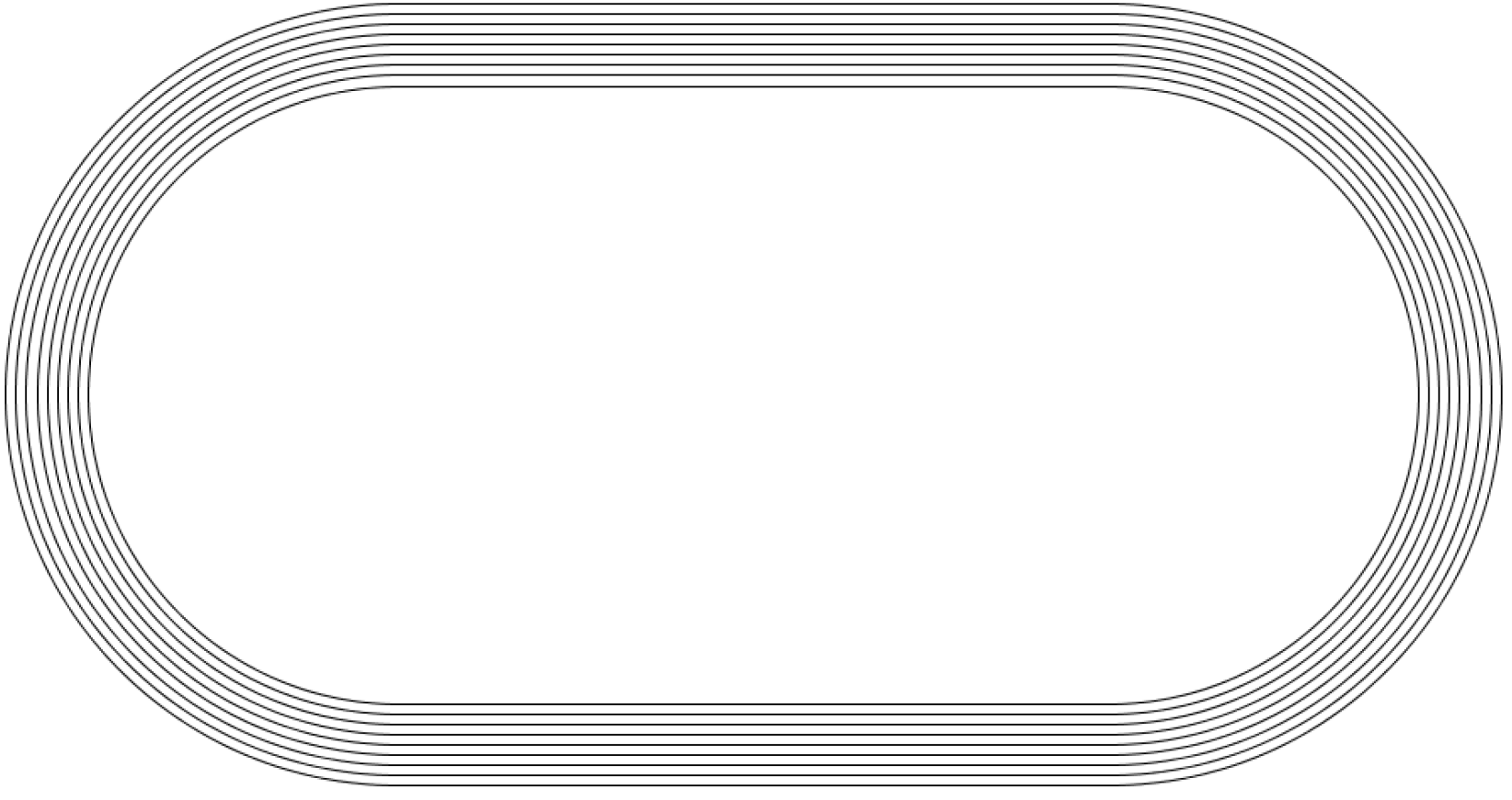
Operators og bogen s. 77

Level	Operators	Description	Associativity
15	() [] .	Function Call Array Subscript Member Selection	Left to Right
14	++ --	Postfix Increment / Decrement	Right to Left
13	++ -- + - ! ~ (type)	Prefix Increment / Decrement Unary plus / minus Logical negation / bitwise complement Casting	Right to Left
12	* / %	Multiplication Division Modulo	Left to Right
11	+ -	Addition / Subtraction	Left to Right
10	<< >> >>>	Bitwise Left Shift Bitwise Right Shift with sign extension Bitwise Right Shift with zero extension	Left to Right
9	< <= > >= instance of	Relational Less Than / Less than Equal To Relational Greater / Greater than Equal To Type Comparison for objects	Left to Right
8	== !=	Equality Inequality	Left to Right
7	&	Bitwise AND	Left to Right
6	^	Bitwise XOR	Left to Right
5	|	Bitwise OR	Left to Right
4	&&	Logical AND	Left to Right
3	||	Logical OR	Left to Right
2	?:	Conditional Operator	Right to Left
1	= += -= *= /= %= &= ^= |= <<= >>=	Assignment Operators	Right to Left

øvelse - 5.5 side 77



Øvelse – Atletikbanen – step 2



7. Øvelse – Lav jeres egen pixel-quiz

- Find billeder indenfor et tema
- Læg dem i data-mappen
- Brug frameRate eller Counter til at udregne point

```
59 void draw() {
60   println("C " + factor);
61   println("FrameRate: " + frameRate);
```