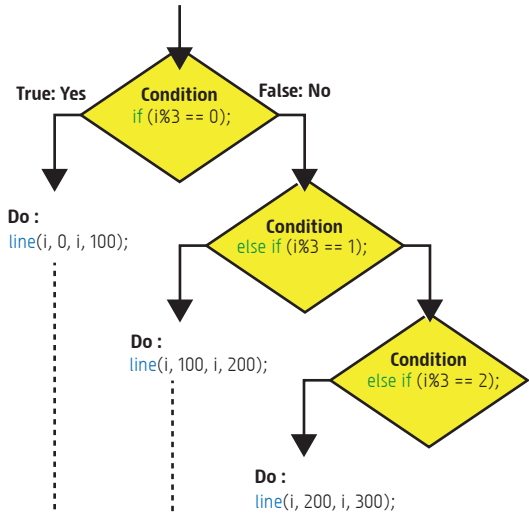# CONDITIONS AND BRANCHING

A condition structure allows the program (your sketch) to make a decision about which code to execute depending on conditions.
"if else" and "switch case" statements are the main elements to make a conditional structure.
* for (){} loop statement is explained in detail in week 2 (Looping and Repeating).

[Logical Structure of If structure in Processing Sketch]

[Logical structure of the swtich statement in Processing Sketch]

for(int i = 0; i < width; i += 4)
- Repeat if statement below 50 times.

True: Yes   **Condition** if (i%3 == 0);   False: No

Do : line(i, 0, i, 100);

Condition else if (i%3 == 1);

Do : line(i, 100, i, 200);

Condition else if (i%3 == 2);

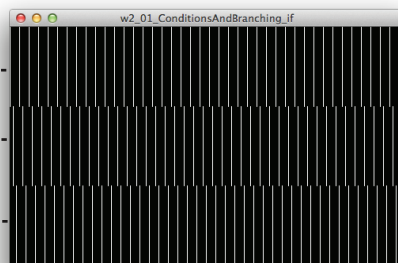**Do :** line(i, 200, i, 300);


```
void setup() {
  size(500, 300);
}

void draw() {
  background(0);

  stroke(255);

  for (int i=0; i<width; i+=4) {
    if (i%3 == 0) {
      line(i, 0, i, 100);
    }
    else if (i%3 == 1) {
      line(i, 100, i, 200);
    }
    else if (i%3 == 2) {
      line(i, 200, i, 300);
    }
  }
}
```
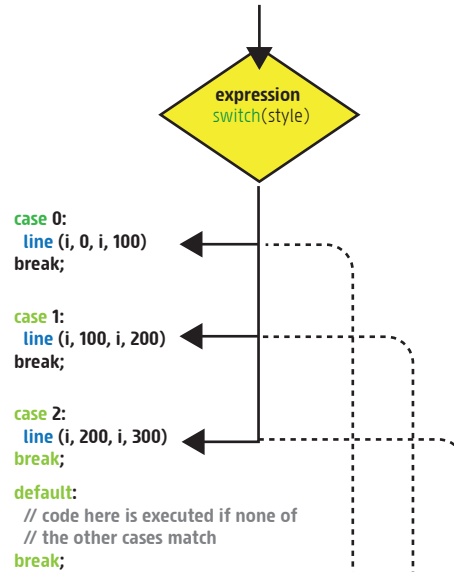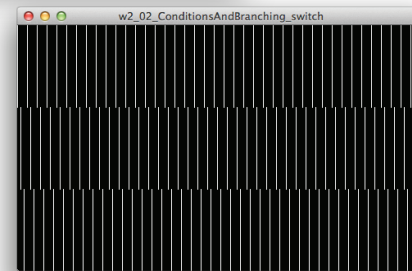
```
void setup() {
  size(500, 300);
}

void draw() {
  background(0);

  stroke(255);

  for (int i=0; i<width; i+=4) {
    int style = i%3;

    switch(style) {
    case 0:
      line(i, 0, i, 100);
      break;
    case 1:
      line(i, 100, i, 200);
      break;
    case 2:
      line(i, 200, i, 300);
      break;
    }
  }
}
```

for (int i = 0; i < width; i += 10)
- Repeat if statement below 50 times.

expression switch(style)

case 0: line (i, 0, i, 100) break;

case 1: line (i, 100, i, 200) break;

case 2: line (i, 200, i, 300) break;

default:
// code here is executed if none of
// the other cases match
break;

More info in the Processing Reference
if : http://processing.org/reference/if.html
else : http://processing.org/reference/else.html

More info in the Processing Reference
switch : http://processing.org/reference/switch.html