

Processing Workshop

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Variables



Variables: Data types

```
int count = 0;
```

```
float score = 43.71;
```

```
char letter = 'a';
```

```
boolean niceWeather = true;
```

Variables: Assign values

```
int x = 0;
```

```
line(x, 10, x, 200);
```

```
x = 50;
```

```
line(x, 10, x, 200);
```

Variables: Assign values

```
int x = 0;           // ok
```

```
int y = 0.3;        // error: float value
```

```
z = 10;             // error: not declared
```

```
char c = true;     // error: wrong type
```

$$1 + 2 + 3 + 4 + 5 = ?$$

$$1 + 2$$

$$3 + 3$$

$$6 + 4$$

$$10 + 5 = 15$$

Variables: Usage

```
int sum = 0;
```

Variables: Usage

```
int sum = 0;
```

```
sum = 1 + 2;
```


Variables: Usage

```
int sum = 0;
```

```
sum = 1 + 2;
```

```
sum = sum + 3;
```

Variables: Usage

```
int sum = 0;
```

```
sum = 1 + 2;
```

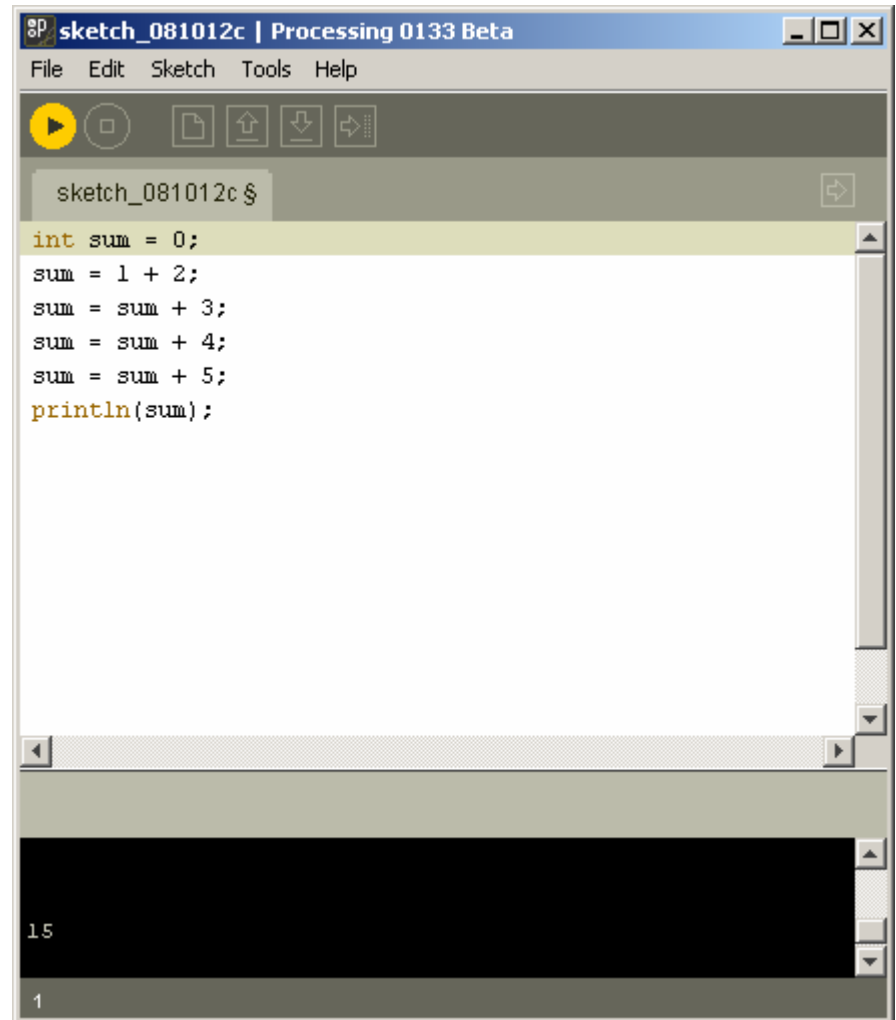
```
sum = sum + 3;
```

```
sum = sum + 4;
```

```
sum = sum + 5;
```

Variables: Usage

```
int sum = 0;  
  
sum = 1 + 2;  
  
sum = sum + 3;  
  
sum = sum + 4;  
  
sum = sum + 5;  
  
println(sum);
```



The screenshot shows the Processing IDE window titled "sketch_081012c | Processing 0133 Beta". The menu bar includes "File", "Edit", "Sketch", "Tools", and "Help". Below the menu bar is a toolbar with icons for running, stopping, saving, and other functions. The main text area contains the following code:

```
sketch_081012c $  
int sum = 0;  
sum = 1 + 2;  
sum = sum + 3;  
sum = sum + 4;  
sum = sum + 5;  
println(sum);
```

At the bottom of the IDE, the output console shows the result of the program execution: "15".

Expressions

```
int a = 3;
```

```
int b = 5;
```

```
int c = a + b;
```

```
a = b * 2;
```

```
c = c + a;
```

Expression in function calls

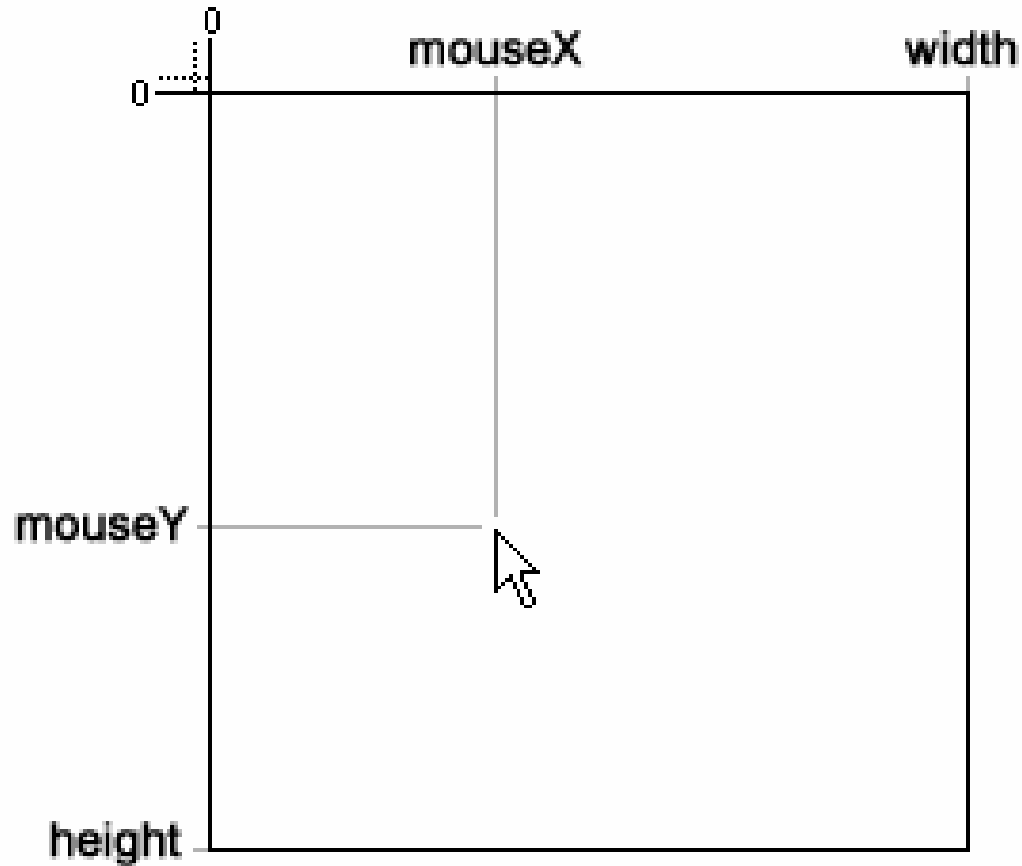
```
int x = 100;
```

```
int y = 20;
```

```
fill(x);
```

```
line(x, y, 300, y * 2);
```

Processing variables



Static sketch

```
size(200, 200);  
background(0);  
line(100, 50, 0, 0);  
ellipse(100, 100, 20, 20);
```

Dynamic sketch

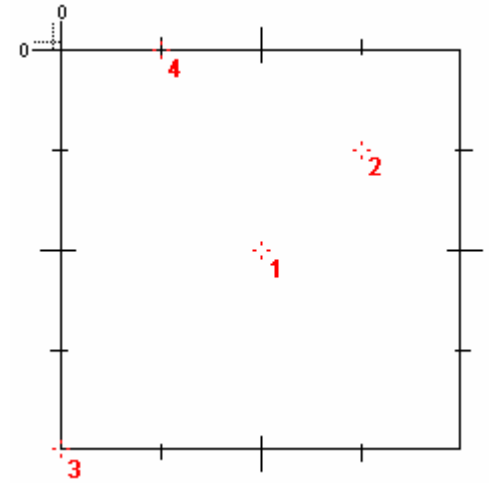
```
void setup() {  
    size(200, 200);  
    background(0);  
}  
  
void draw() {  
    line(100, 50, 0, 0);  
    ellipse(100, 100, 20, 20);  
}
```


Dynamic sketch

```
void setup() {  
    size(200, 200);  
    background(0);  
}  
  
void draw() {  
    line(100, 50, mouseX, mouseY);  
    ellipse(mouseX, mouseY, 20, 20);  
}
```

Exercises

E4: Draw one line from point 1 to 2, and one line from point 3 to 4. Resizing the drawing area should result in the same image.



E5: Create a dynamic interactive line composition.

