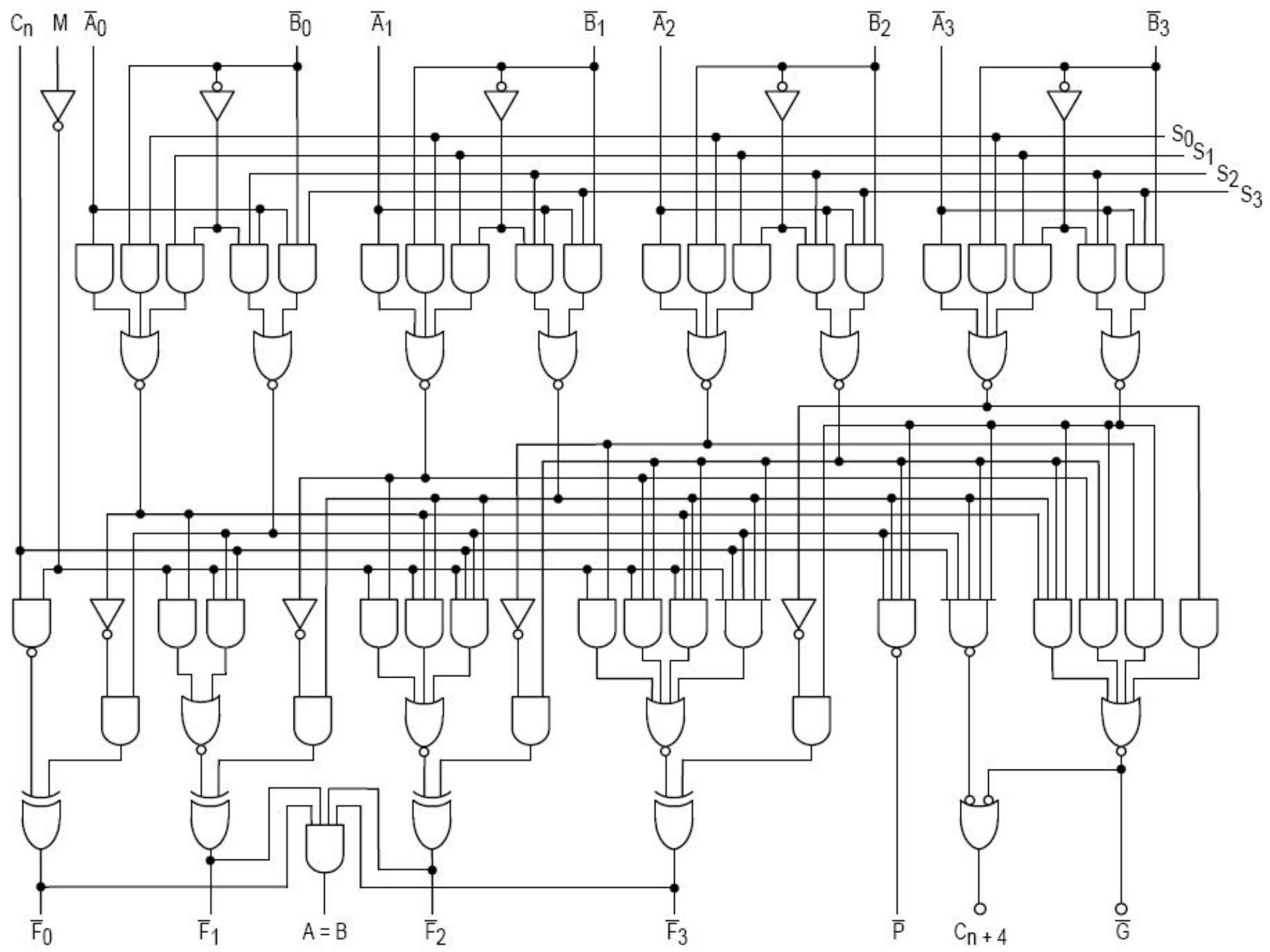
How Automated Tools can Communicate Effective Strategies for Fixing Bugs

Justin Smith

LAFAYETTE COLLEGE

@JustinSmith0903
smithjus@lafayette.edu
https://jssmith1.github.io/


C_n
M
$\overline{A}_0$
$\overline{B}_0$
$\overline{A}_1$
$\overline{B}_1$
$\overline{A}_2$
$\overline{B}_2$
$\overline{A}_3$
$\overline{B}_3$
S_0
S_1
S_2
S_3
$\overline{F}_0$
$\overline{F}_1$
A = B
$\overline{F}_2$
$\overline{F}_3$
$\overline{P}$
C_{n+4}
$\overline{G}$

StartupBot

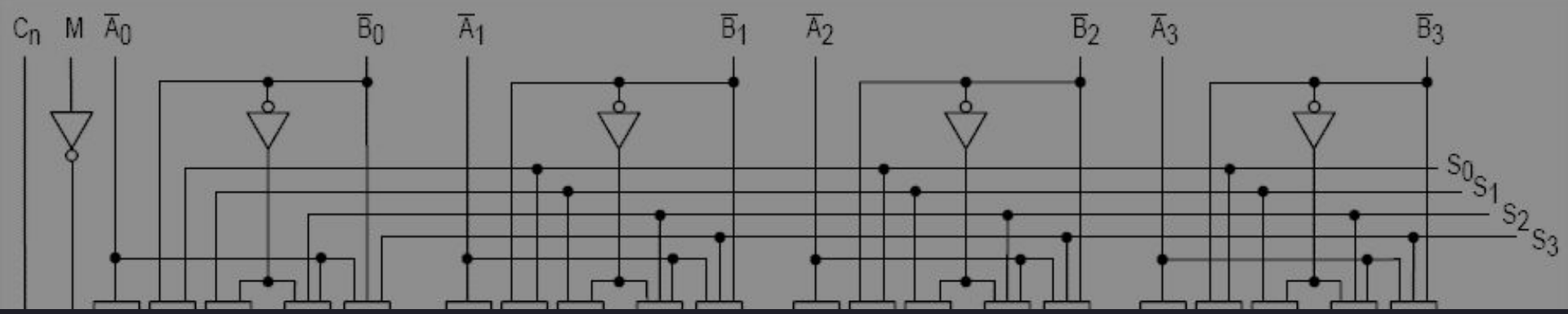
The future has landed

And there are no hoverboards or flying cars.

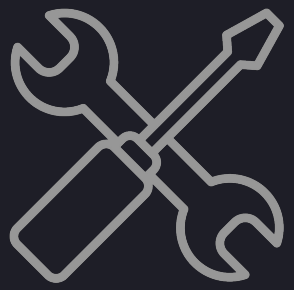
Just startups. Lots of computer generated startups.

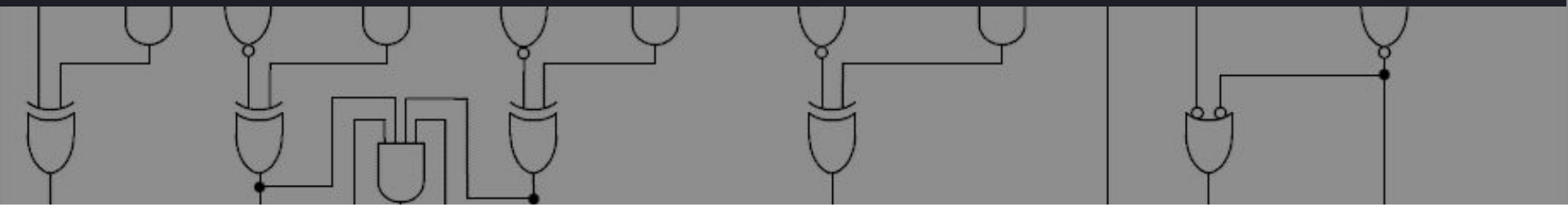
"We believe the process of creating a startup can be largely automated."

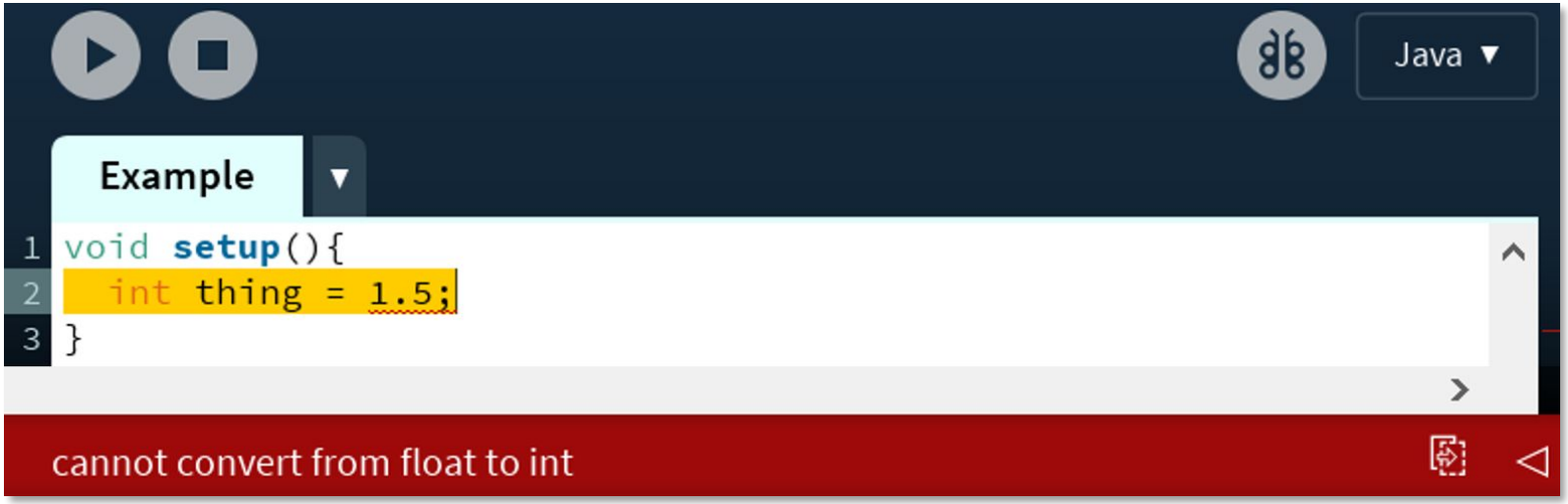
http://startupbot.github.io/

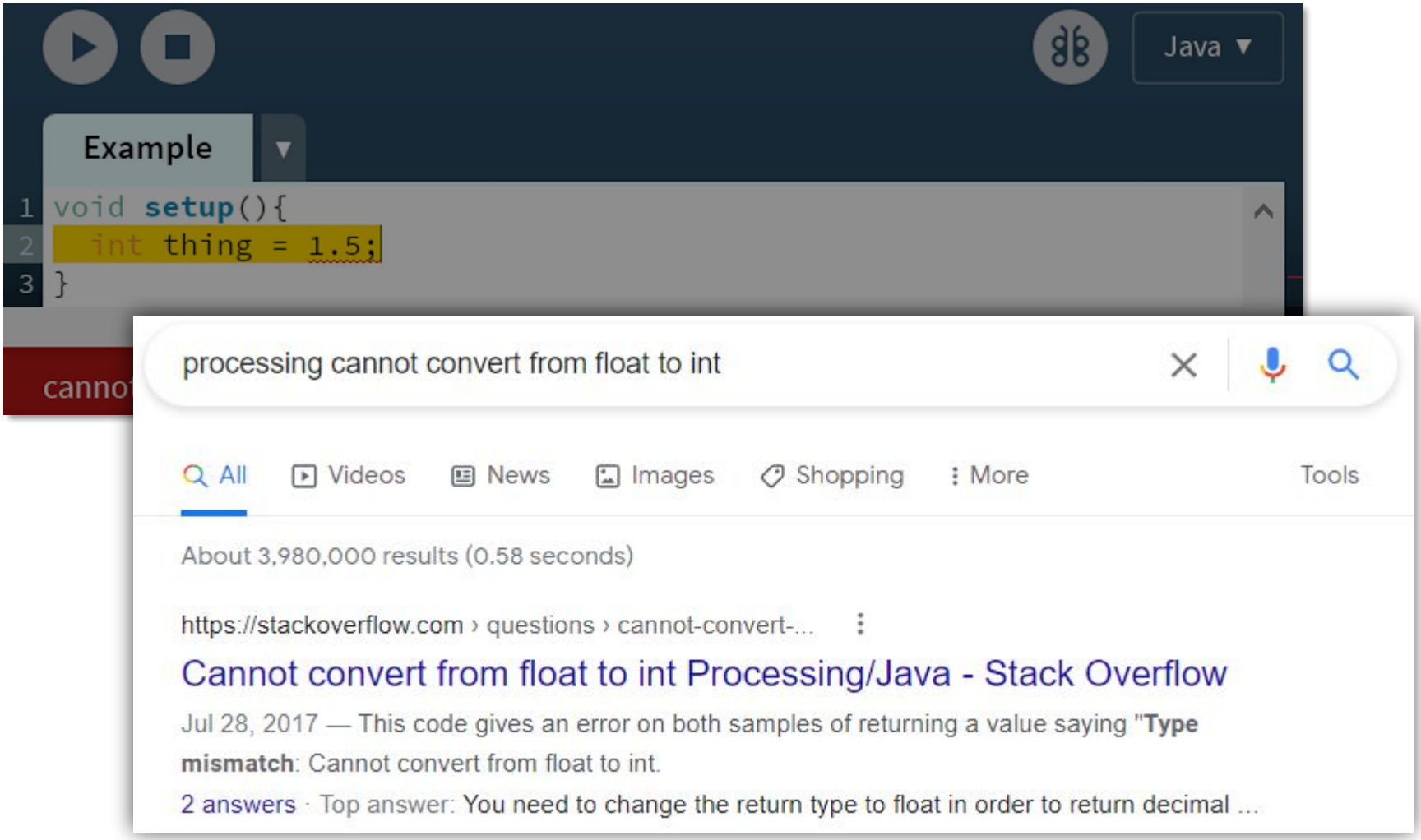


Many of our defect detection tools are stuck in the dark ages.






Java
Example
1 void setup(){
2 int thing = 1.5;
3 }
cannot convert from float to int


Java
Example
1 void setup(){
2 int thing = 1.5;
3 }
processing cannot convert from float to int
All
Videos
News
Images
Shopping
More
Tools
About 3,980,000 results (0.58 seconds)
https://stackoverflow.com › questions › cannot-convert-...
Cannot convert from float to int Processing/Java - Stack Overflow
Jul 28, 2017 — This code gives an error on both samples of returning a value saying "Type mismatch: Cannot convert from float to int.
2 answers · Top answer: You need to change the return type to float in order to return decimal ...

Cannot convert from float to int Processing/Java

Asked 2 years, 9 months ago Active 2 years, 9 months ago Viewed 1k times

0

I have some code here:

```
int mutate(float x){
   if (random(1) < .1){
   float offset = randomGaussian()/2;
   float newx = x + offset;
   return newx;
 } else {
    return x;
 }
}
```

This code gives an error on both samples of returning a value saying "Type mismatch: Cannot convert from float to int." What is wrong with my code?

Thanks in advance.

processing

Cannot convert from float to int Processing/Java

Asked 2 years, 9 months ago Active 2 years, 9 months ago Viewed 1k times

0

I have

```
int r
   i
   f
   f
   r
 } e
   }
}
```

3

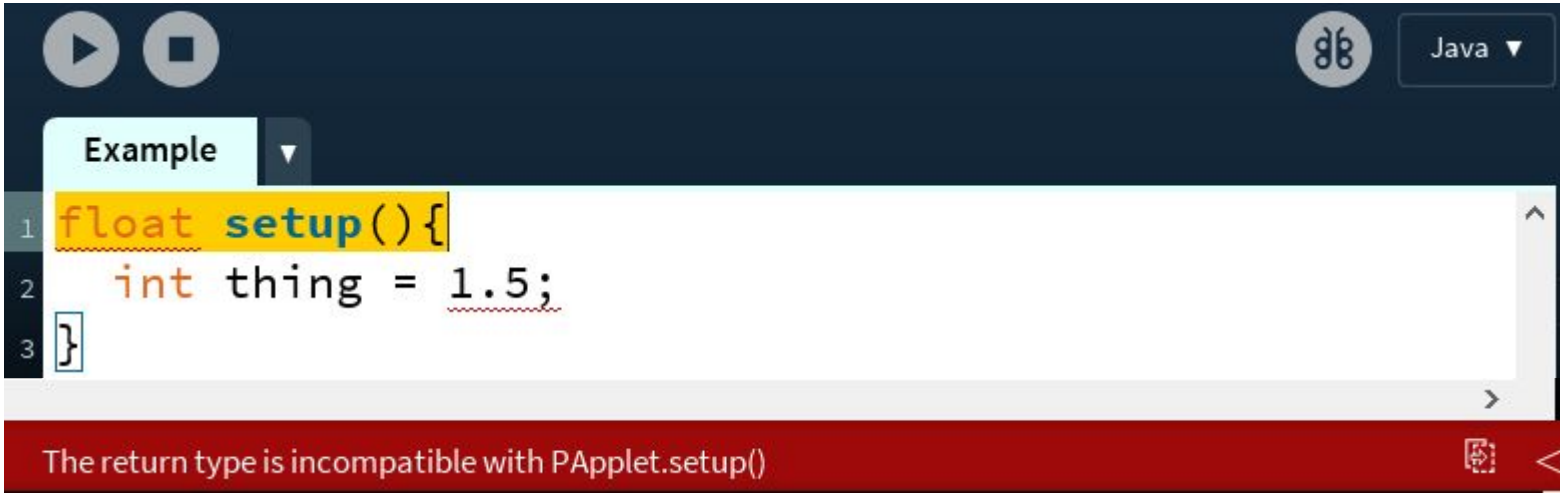
You need to change the return type to float in order to return decimal values (if that's what you are interested in):

```
float mutate(float x){
    if (random(1) < .1){
        float offset = randomGaussian()/2;
        float newx = x + offset;
        return newx;
    } else {
        return x;
    }
}
```

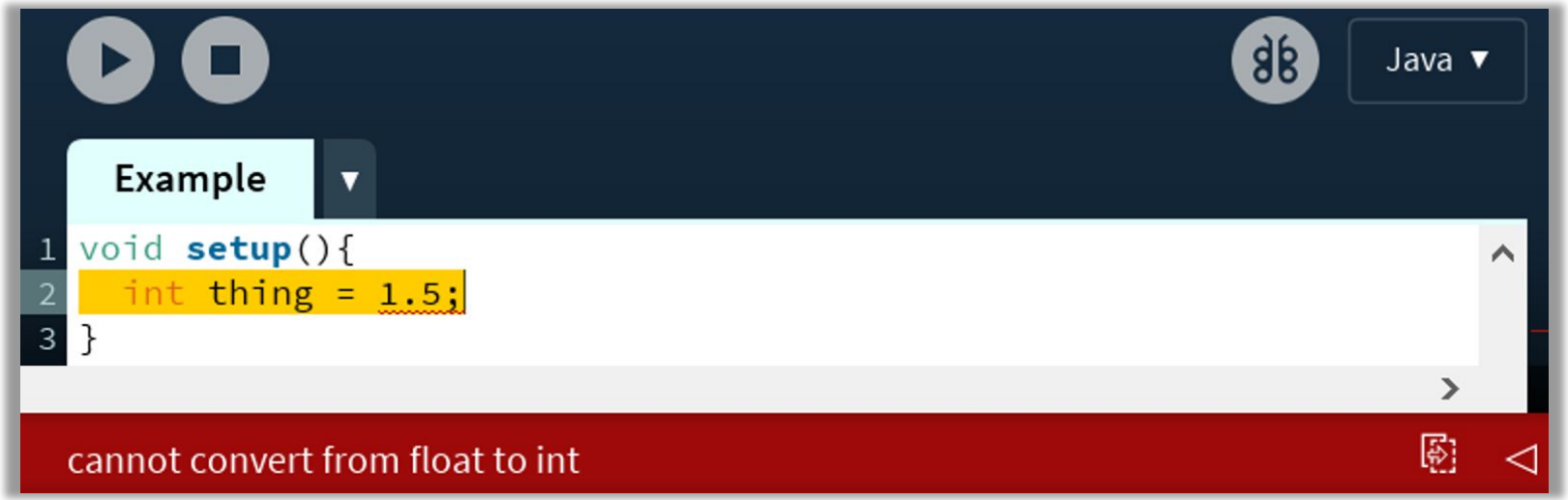
This code gives an error on both samples of returning a value saying "Type mismatch: Cannot convert from float to int." What is wrong with my code?

Thanks in advance.

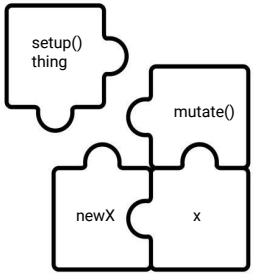
processing


Java
Example
1 float setup(){
2 int thing = 1.5;
3 }
The return type is incompatible with PApplet.setup()

What went wrong?



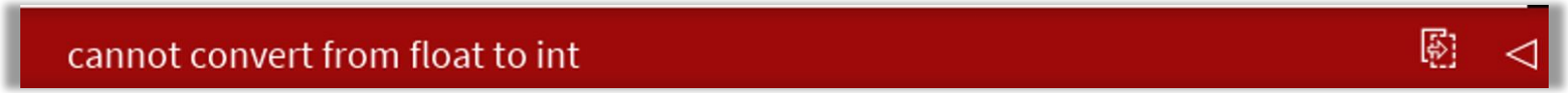
No Explanation

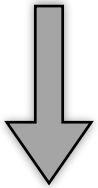


Mismatched Example

Different Root Cause

MatchingRef





Translation: You are trying to use the variable thing of type int as a float-type variable.

You may have assigned a float value to variable thing of type int.

You may have returned a float value in a method that expects to return a int value.

You may have used int-type variable thing in an operation involving float type.

☐ **Change the type of thing from int to float.**

Incorrect Example

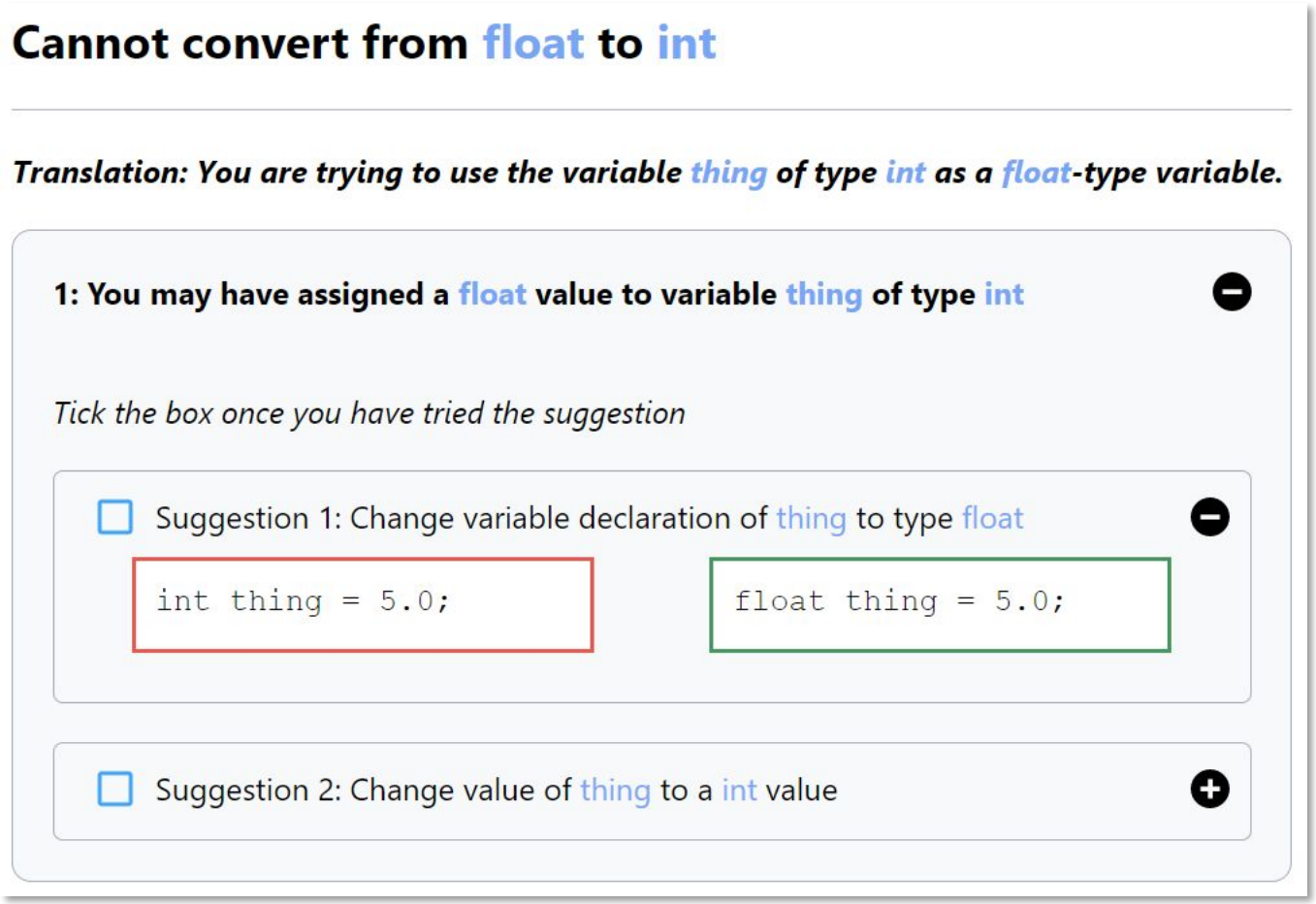
```
int thing = 3;
thing = thing * 3.14;
```

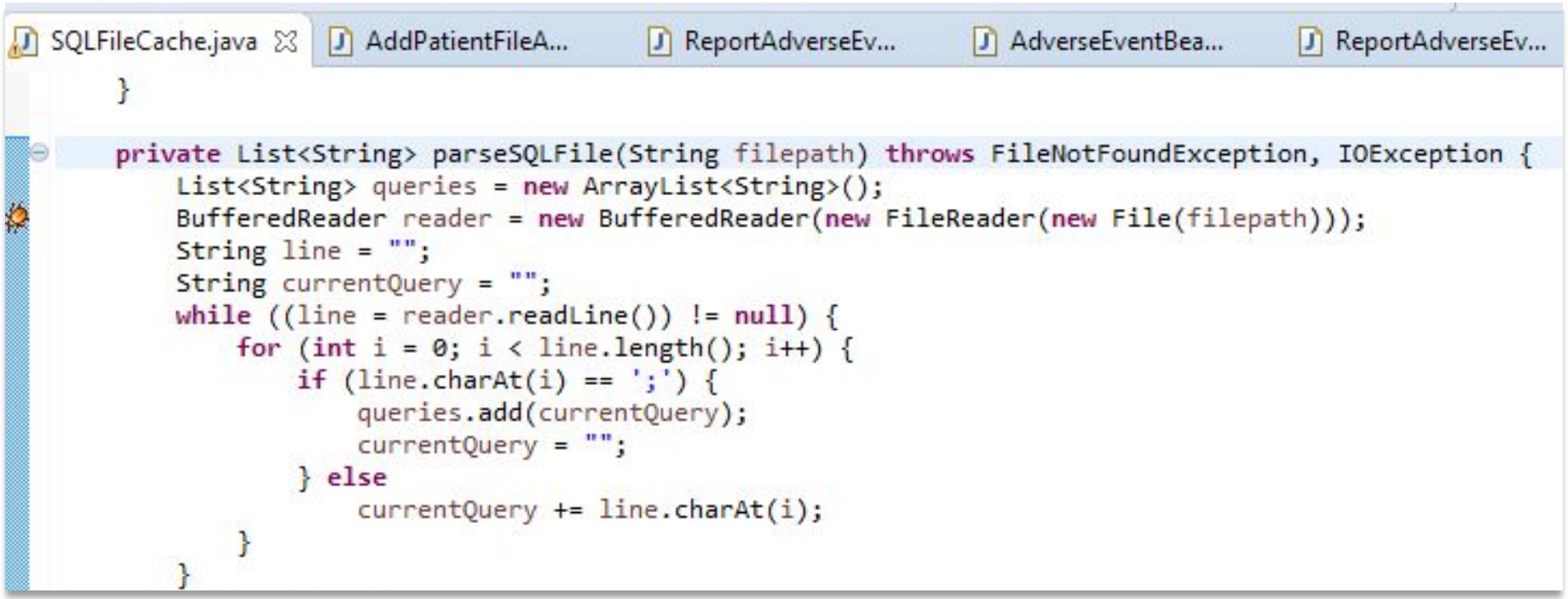
Correct Example

```
float thing = 3;
thing = thing * 3.14;
```

Happy with these suggestions?

MatchingRef

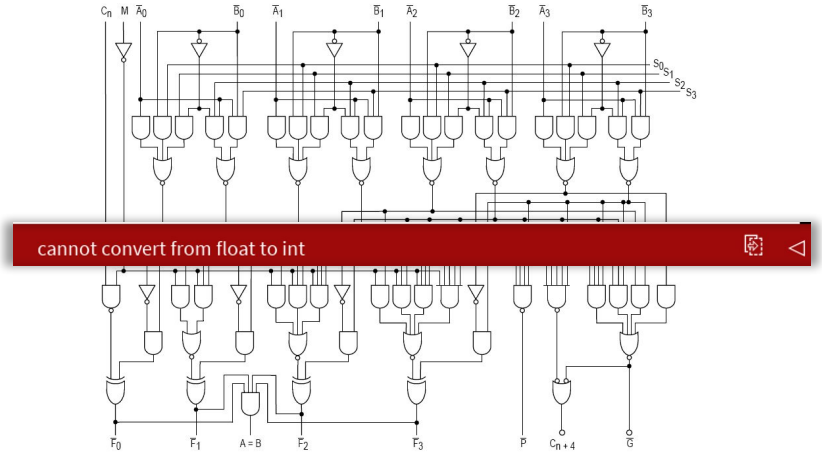




Bug Info | Resolution Strategy | Console

- ▼ ☐ Potential Path Traversal (Line 27 foo.java)
  - Detected By: Find Security Bugs (FSB)
  - FSB Confidence/Severity: High/High
  - FSB Pattern: Path Traversal - Read File
  - ▶ ☐ Read the vulnerability info.
  - ▼ ☐ Check for a false positive.
    - If the user cannot control the filepath, then this instance is a false positive.
    - ▼ ☐ Determine where the filepath is defined.
      - Invoke Open Declaration on the filepath variable.
    - ▶ ☐ Determine where this method can be called.
  - ▶ ☐ Consider the possible fixes.

Takeaways



Cannot convert from float to int

Translation: You are trying to use the variable thing of type int as a float-type variable.

1: You may have assigned a float value to variable thing of type int

Tick the box once you have tried the suggestion

Suggestion 1: Change variable declaration of thing to type float

```
int thing = 5.0;
```

```
float thing = 5.0;
```

Suggestion 2: Change value of thing to a int value

[Processing Plugin](https://github.com/jssmith1/helpful-java-mode)
https://github.com/jssmith1/helpful-java-mode

[MatchingRef](https://github.com/jssmith1/RefPage) Strategies
https://github.com/jssmith1/RefPage

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