

# Random Testing + Delta Debugging

# Delta Debugging

- DeltaDebugger should return a relevant (1-minimal) configuration.
- => There might be more than 1 relevant configuration.

# Example

To minimize:

Relevant Configurations:

```
x = x + 1  
if(true){  
    x *= 2;  
}  
fail();
```

```
fail();
```

```
if(true){  
}  
fail();
```

# Tests

- `DeltaDebuggerTest.testDeltaDebuggerTwoExceptions()` has 2 relevant Configurations.
- Currently only one is accepted by test.
- This will be changed for grading.

# Test

- CombinedTest.testStackClazz() might fail under specific circumstances.
- Test will not be used for grading.

# Limit Unsuccessful Calls

- How often should the test generator try to call a method?
- Introduce a parameter for unsuccessful attempts.
- Initialize with default value, e.g. 5.
- We will not specifically test for this.

# Test Limit

- Is measured on the produced test file.
- Only the number of calls to the class to test are taken into account.
- Behavior in case of inheritance is not defined  $\Rightarrow$  will not be tested.
- Program must terminate - no endless loops.