

Block 0

resumepoint 2 2 2 1 0 2 2

0 Parameter THIS\_SLOT

Value

1 Parameter 0

Value

2 Constant undefined

Undefined

3 Start

4 CheckOverRecursed

5 Constant magic uninitialized-lexical

MagicUninitializedLexical

6 Constant 0x0

Int32

14 Goto → block 1

Block 1 (loop header)

resumepoint 13 12 11 10 9 8 7

7 Phi ← Constant#2, Constant#2

Value

8 Phi ← Constant#2, Constant#2

Value

9 Phi ← Parameter#0, Parameter#0

Value

10 Phi ← Parameter#1, Parameter#1

Value

11 Phi ← Constant#6, UnreachableResult#34

Value

12 Phi ← Constant#2, UnreachableResult#21

Value

13 Phi ← Constant#2, UnreachableResult#30

Value

15 InterruptCheck

16 Bail

17 UnreachableResult

Bool

18 Test ← UnreachableResult#17 → block 2, block 3

Block 2 (backedge)

resumepoint 13 12 11 10 9 8 7

19 Constant magic uninitialized-lexical

MagicUninitializedLexical

20 Bail

21 UnreachableResult

Object

22 Constant 0x1

Int32

23 Constant string 119e3d12be60

String

24 Bail

25 Constant 0x2

Int32

26 Constant string 119e3d12d780

String

27 Bail

28 Constant 0x1

Int32

29 Bail

30 UnreachableResult

Value

31 Bail

32 UnreachableResult

Value

33 Bail

34 UnreachableResult

Value

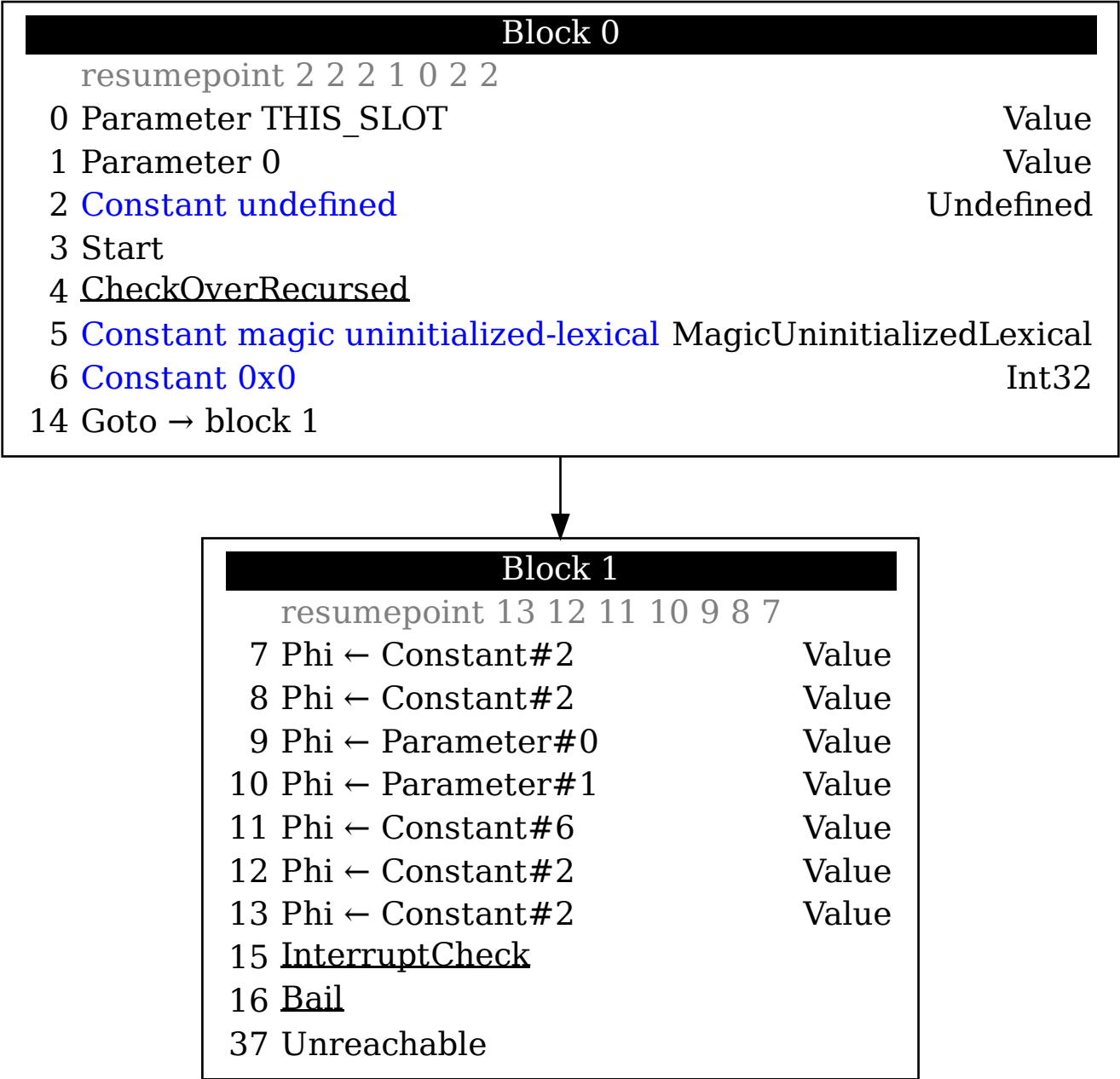
35 Goto → block 1

Block 3

resumepoint 13 12 11 10 9 8 7

36 Return ← Phi#8

**./Benchmarks/prop\_access.js:1 - Prune Unused Branches**  
movable, guard, in worklist, recovered on bailout



**./Benchmarks/prop\_access.js:1 - Fold Empty Blocks**  
movable, guard, in worklist, recovered on bailout

**Block 0**

resume point 2 2 2 1 0 2 2

|    |                                      |                           |
|----|--------------------------------------|---------------------------|
| 0  | Parameter THIS_SLOT                  | Value                     |
| 1  | Parameter 0                          | Value                     |
| 2  | Constant undefined                   | Undefined                 |
| 3  | Start                                |                           |
| 4  | <u>CheckOverRecurse</u>              |                           |
| 5  | Constant magic uninitialized-lexical | MagicUninitializedLexical |
| 6  | Constant 0x0                         | Int32                     |
| 14 | Goto → block 1                       |                           |

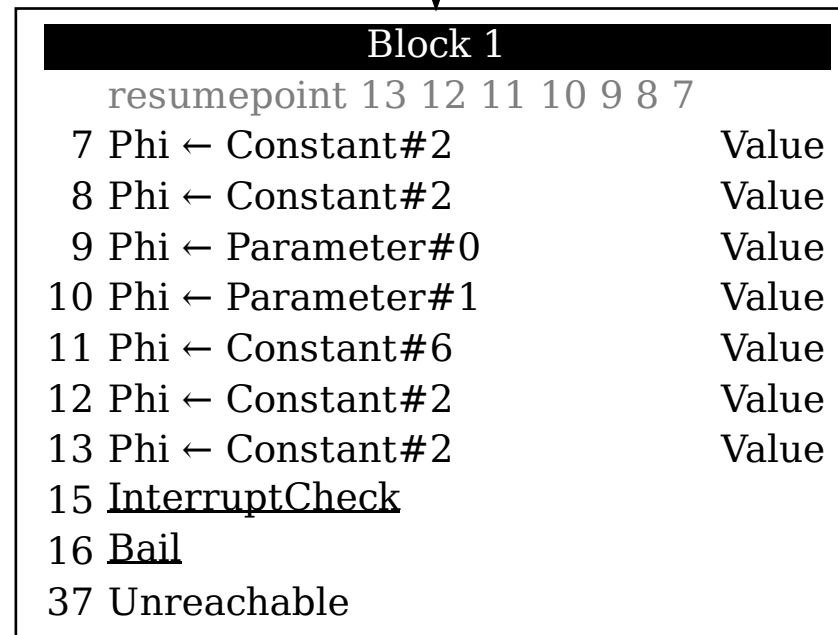
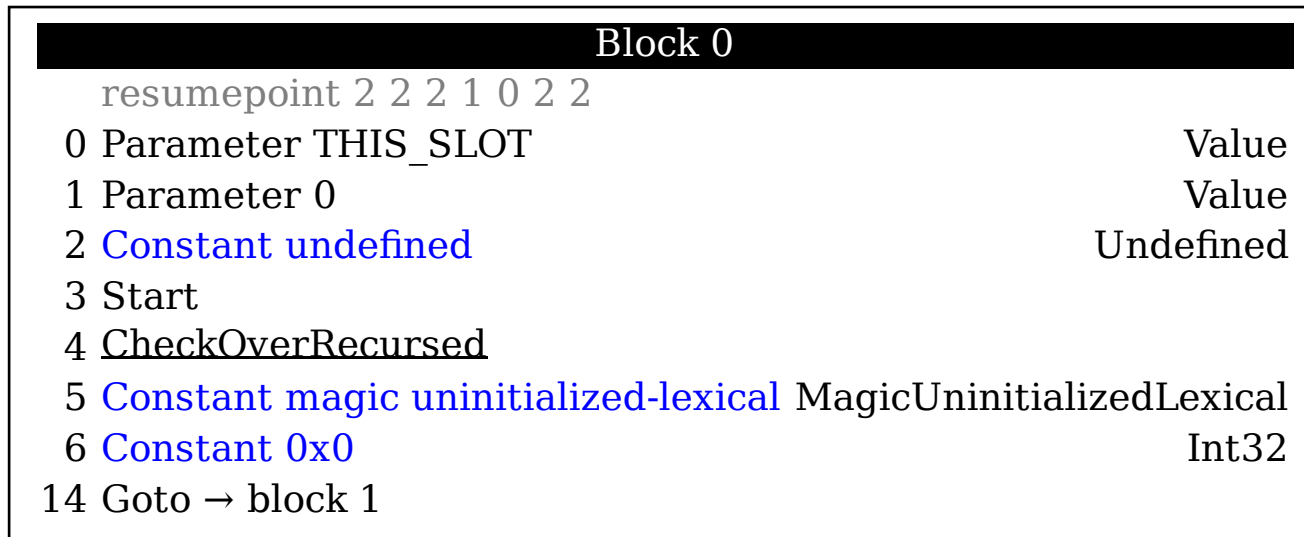


**Block 1**

resume point 13 12 11 10 9 8 7

|    |                       |       |
|----|-----------------------|-------|
| 7  | Phi ← Constant#2      | Value |
| 8  | Phi ← Constant#2      | Value |
| 9  | Phi ← Parameter#0     | Value |
| 10 | Phi ← Parameter#1     | Value |
| 11 | Phi ← Constant#6      | Value |
| 12 | Phi ← Constant#2      | Value |
| 13 | Phi ← Constant#2      | Value |
| 15 | <u>InterruptCheck</u> |       |
| 16 | <u>Bail</u>           |       |
| 37 | Unreachable           |       |

**./Benchmarkers/prop\_access.js:1 - Eliminate trivially dead resume point operands**  
movable, guard, in worklist, recovered on bailout



**./Benchmarkers/prop\_access.js:1 - Fold Tests**  
movable, guard, in worklist, recovered on bailout

**Block 0**

resume point 2 2 2 1 0 2 2

|    |                                      |                           |
|----|--------------------------------------|---------------------------|
| 0  | Parameter THIS_SLOT                  | Value                     |
| 1  | Parameter 0                          | Value                     |
| 2  | Constant undefined                   | Undefined                 |
| 3  | Start                                |                           |
| 4  | <u>CheckOverRecurse</u>              |                           |
| 5  | Constant magic uninitialized-lexical | MagicUninitializedLexical |
| 6  | Constant 0x0                         | Int32                     |
| 14 | Goto → block 1                       |                           |



**Block 1**

resume point 13 12 11 10 9 8 7

|    |                       |       |
|----|-----------------------|-------|
| 7  | Phi ← Constant#2      | Value |
| 8  | Phi ← Constant#2      | Value |
| 9  | Phi ← Parameter#0     | Value |
| 10 | Phi ← Parameter#1     | Value |
| 11 | Phi ← Constant#6      | Value |
| 12 | Phi ← Constant#2      | Value |
| 13 | Phi ← Constant#2      | Value |
| 15 | <u>InterruptCheck</u> |       |
| 16 | <u>Bail</u>           |       |
| 37 | Unreachable           |       |

**./Benchmarkers/prop\_access.js:1 - Split Critical Edges**  
movable, guard, in worklist, recovered on bailout

**Block 0**

resume point 2 2 2 1 0 2 2

|    |                                      |                           |
|----|--------------------------------------|---------------------------|
| 0  | Parameter THIS_SLOT                  | Value                     |
| 1  | Parameter 0                          | Value                     |
| 2  | Constant undefined                   | Undefined                 |
| 3  | Start                                |                           |
| 4  | <u>CheckOverRecurse</u>              |                           |
| 5  | Constant magic uninitialized-lexical | MagicUninitializedLexical |
| 6  | Constant 0x0                         | Int32                     |
| 14 | Goto → block 1                       |                           |



**Block 1**

resume point 13 12 11 10 9 8 7

|    |                       |       |
|----|-----------------------|-------|
| 7  | Phi ← Constant#2      | Value |
| 8  | Phi ← Constant#2      | Value |
| 9  | Phi ← Parameter#0     | Value |
| 10 | Phi ← Parameter#1     | Value |
| 11 | Phi ← Constant#6      | Value |
| 12 | Phi ← Constant#2      | Value |
| 13 | Phi ← Constant#2      | Value |
| 15 | <u>InterruptCheck</u> |       |
| 16 | <u>Bail</u>           |       |
| 37 | Unreachable           |       |

**./Benchmarkers/prop\_access.js:1 - Renumber Blocks**  
movable, guard, in worklist, recovered on bailout

**Block 0**

resume point 2 2 2 1 0 2 2

|    |                                      |                           |
|----|--------------------------------------|---------------------------|
| 0  | Parameter THIS_SLOT                  | Value                     |
| 1  | Parameter 0                          | Value                     |
| 2  | Constant undefined                   | Undefined                 |
| 3  | Start                                |                           |
| 4  | <u>CheckOverRecurse</u>              |                           |
| 5  | Constant magic uninitialized-lexical | MagicUninitializedLexical |
| 6  | Constant 0x0                         | Int32                     |
| 14 | Goto → block 1                       |                           |



**Block 1**

resume point 13 12 11 10 9 8 7

|    |                       |       |
|----|-----------------------|-------|
| 7  | Phi ← Constant#2      | Value |
| 8  | Phi ← Constant#2      | Value |
| 9  | Phi ← Parameter#0     | Value |
| 10 | Phi ← Parameter#1     | Value |
| 11 | Phi ← Constant#6      | Value |
| 12 | Phi ← Constant#2      | Value |
| 13 | Phi ← Constant#2      | Value |
| 15 | <u>InterruptCheck</u> |       |
| 16 | <u>Bail</u>           |       |
| 37 | Unreachable           |       |

**./Benchmarks/prop\_access.js:1 - Eliminate this**  
**movable**, **guard**, **in worklist**, recovered on bailout

**Block 0**

resumepoint 2 2 2 1 0 2 2

0 Parameter THIS\_SLOT Value

1 Parameter 0 Value

2 **Constant undefined** Undefined

3 Start

4 CheckOverRecursed

5 **Constant magic uninitialized-lexical** MagicUninitializedLexical

6 **Constant 0x0** Int32

14 Goto → block 1

**Block 1**

resumepoint 2 2 6 1 0 2 2

15 InterruptCheck

16 Bail

37 Unreachable



## ./Benchmarks/prop\_access.js:1 - Iterator Indices

**movable**, **guard**, **in worklist**, recovered on bailout

### Block 0

resumepoint 2 2 2 1 0 2 2

|    |   |                           |
|----|---|---------------------------|
| 0  | Parameter THIS_SLOT                         | Value                     |
| 1  | Parameter 0                                 | Value                     |
| 2  | <b>Constant undefined</b>                   | Undefined                 |
| 3  | Start                                       |                           |
| 4  | <u>CheckOverRecursed</u>                    |                           |
| 5  | <b>Constant magic uninitialized-lexical</b> | MagicUninitializedLexical |
| 6  | <b>Constant 0x0</b>                         | Int32                     |
| 14 | Goto → block 1                              |                           |



### Block 1

resumepoint 2 2 6 1 0 2 2

15 InterruptCheck  
16 Bail  
37 Unreachable

## ./Benchmarks/prop\_access.js:1 - Scalar Replacement

*movable*, *guard*, *in worklist*, *recovered on bailout*

### Block 0

resumepoint 2 2 2 1 0 2 2

|    |                                      |                           |
|----|--------------------------------------|---------------------------|
| 0  | Parameter THIS_SLOT                  | Value                     |
| 1  | Parameter 0                          | Value                     |
| 2  | Constant undefined                   | Undefined                 |
| 3  | Start                                |                           |
| 4  | <del>CheckOverRecursed</del>         |                           |
| 5  | Constant magic uninitialized-lexical | MagicUninitializedLexical |
| 6  | Constant 0x0                         | Int32                     |
| 14 | Goto → block 1                       |                           |



### Block 1

resumepoint 2 2 6 1 0 2 2

15 ~~InterruptCheck~~  
16 ~~Bail~~  
37 Unreachable

**./Benchmarkers/prop\_access.js:1 - Apply types**  
movable, guard, in worklist, recovered on bailout

**Block 0**

resumepoint 2 2 2 1 0 2 2

0 Parameter THIS\_SLOT Value

1 Parameter 0 Value

2 Constant undefined Undefined

3 Start

4 ~~CheckOverRecursed~~

5 Constant magic uninitialized-lexical MagicUninitializedLexical

6 Constant 0x0 Int32

14 Goto → block 1



**Block 1**

resumepoint 2 2 6 1 0 2 2

15 ~~InterruptCheck~~

16 Bail

37 Unreachable

**./Benchmarkers/prop\_access.js:1 - Alias analysis**  
**movable**, **guard**, **in worklist**, recovered on bailout

**Block 0**

resumepoint 2 2 2 1 0 2 2

|   |   |                           |
|---|---|---------------------------|
| 0 | Parameter THIS_SLOT                         | Value                     |
| 1 | Parameter 0                                 | Value                     |
| 2 | <b>Constant undefined</b>                   | Undefined                 |
| 3 | Start                                       |                           |
| 4 | <u>CheckOverRecursed</u>                    |                           |
| 5 | <b>Constant magic uninitialized-lexical</b> | MagicUninitializedLexical |
| 6 | <b>Constant 0x0</b>                         | Int32                     |
| 7 | Goto → block 1                              |                           |

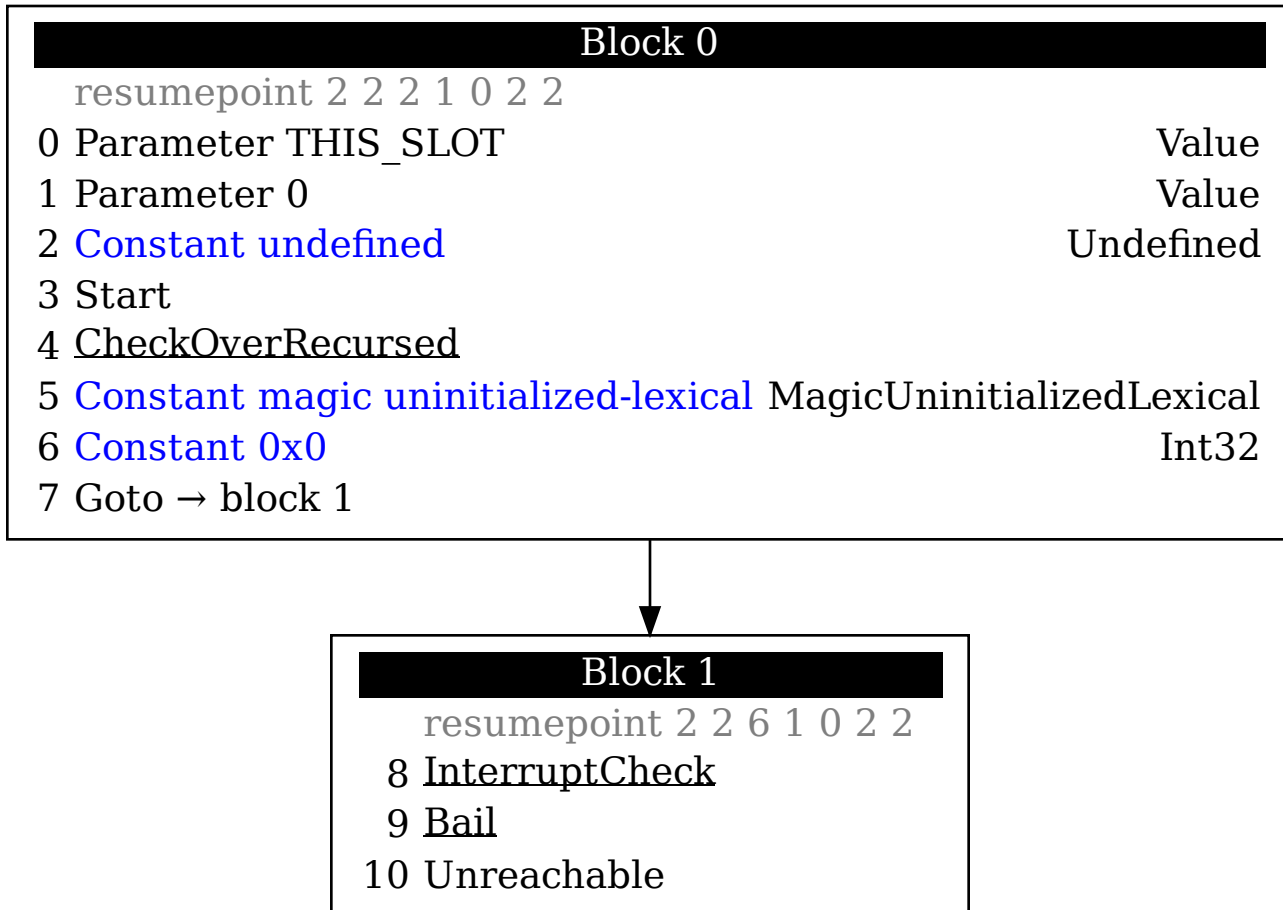
**Block 1**

resumepoint 2 2 6 1 0 2 2

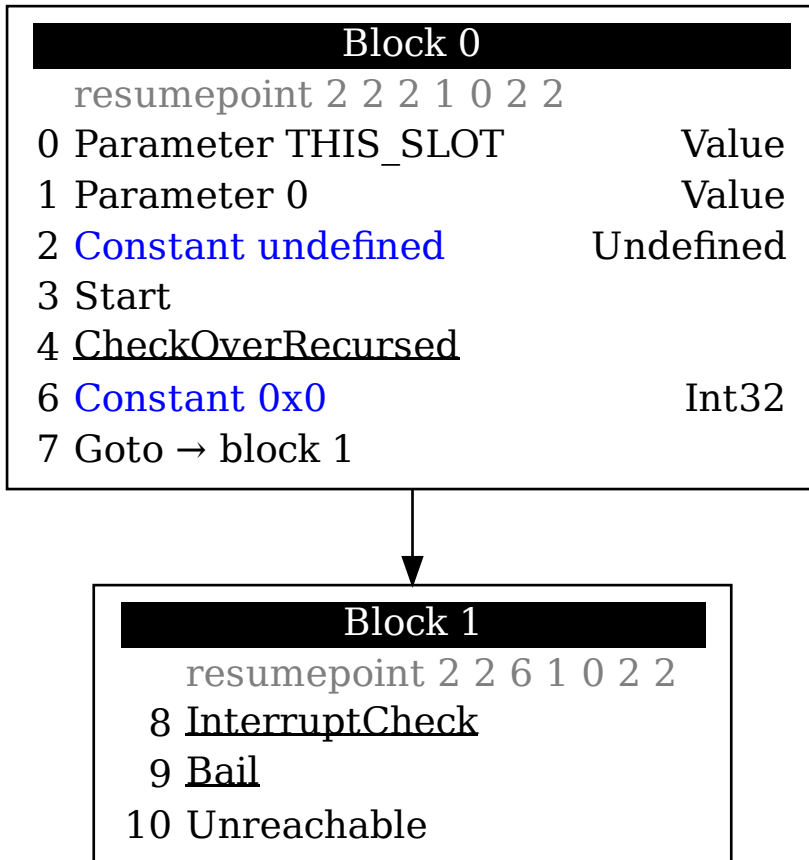
8 InterruptCheck  
9 Bail  
10 Unreachable

## ./Benchmarkers/prop\_access.js:1 - Eliminate dead resume point operands

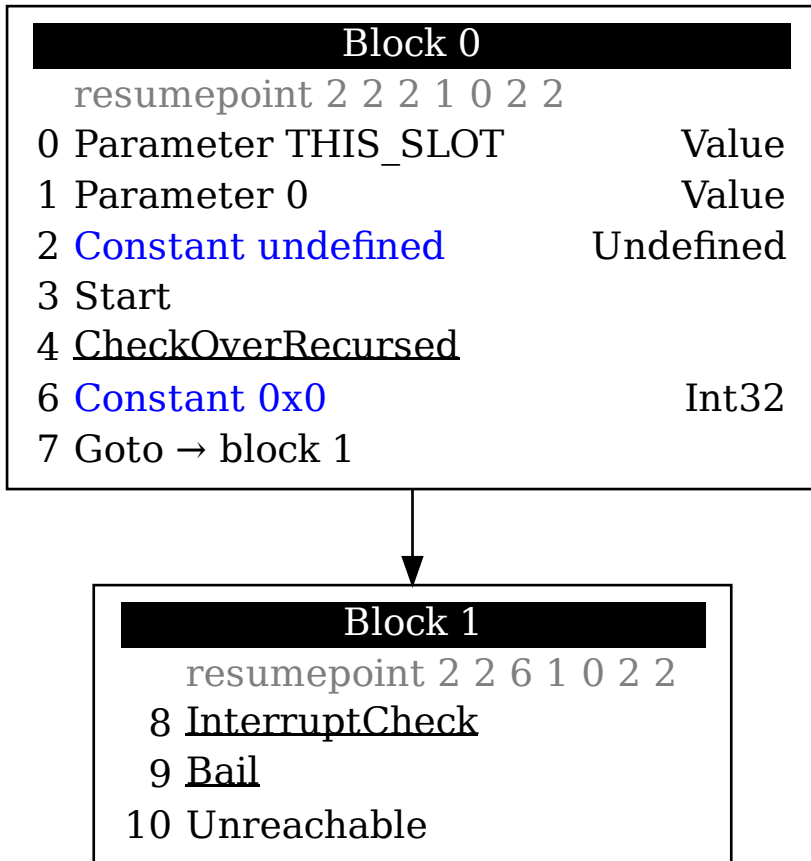
**movable**, **guard**, **in worklist**, recovered on bailout



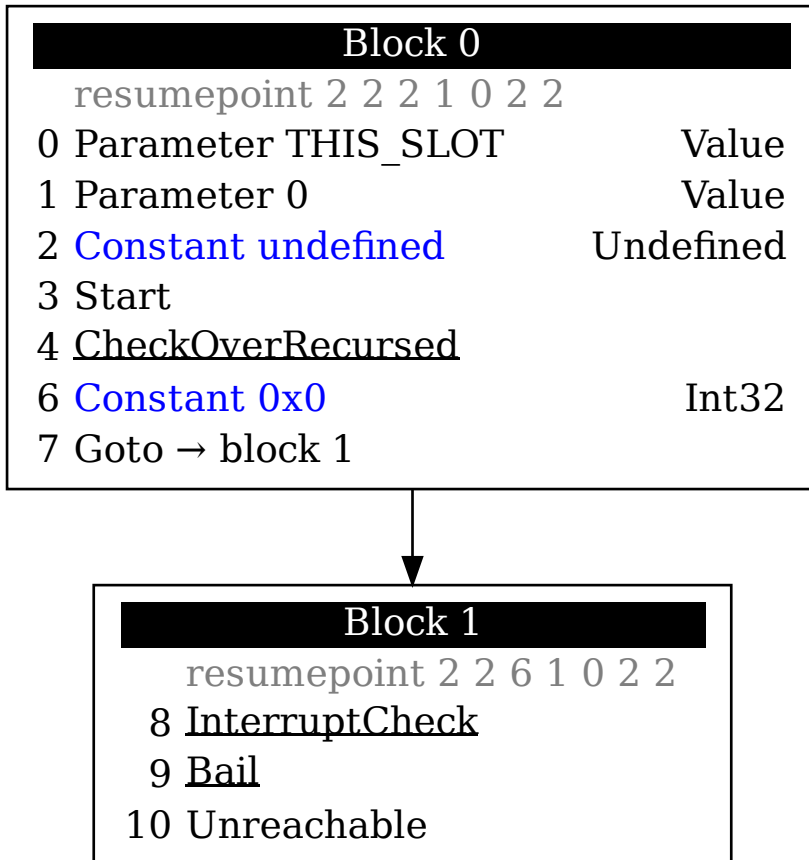
**./Benchmarks/prop\_access.js:1 - GVN**  
movable, guard, in worklist, recovered on bailout



**./Benchmarkers/prop\_access.js:1 - LICM**  
**movable**, **guard**, **in worklist**, recovered on bailout



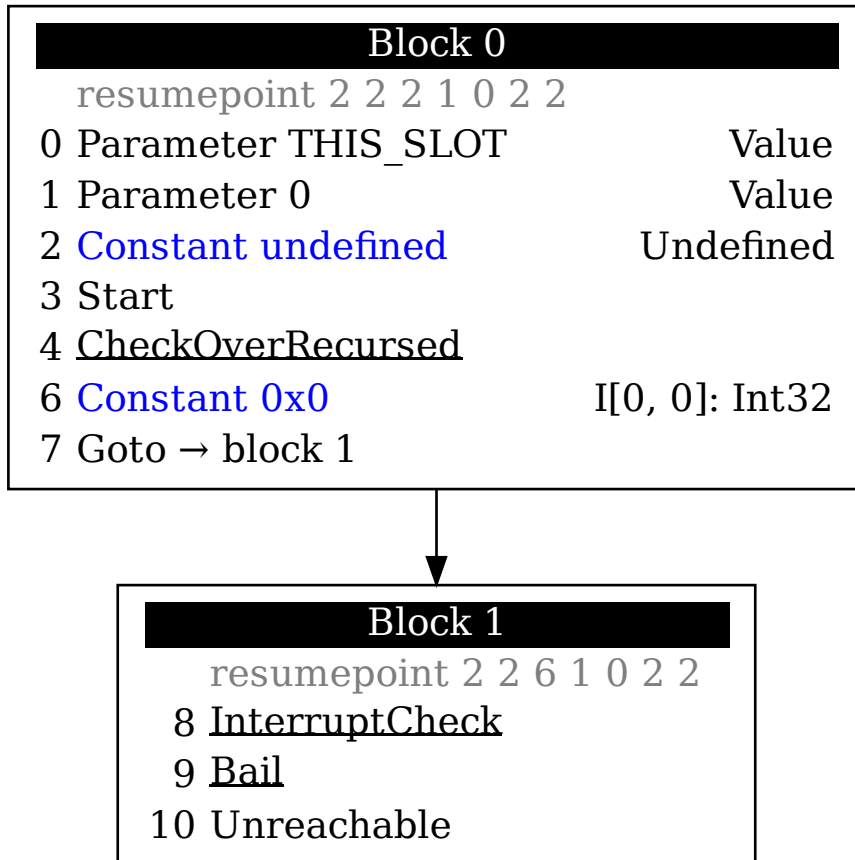
**./Benchmarks/prop\_access.js:1 - Beta**  
movable, guard, in worklist, recovered on bailout



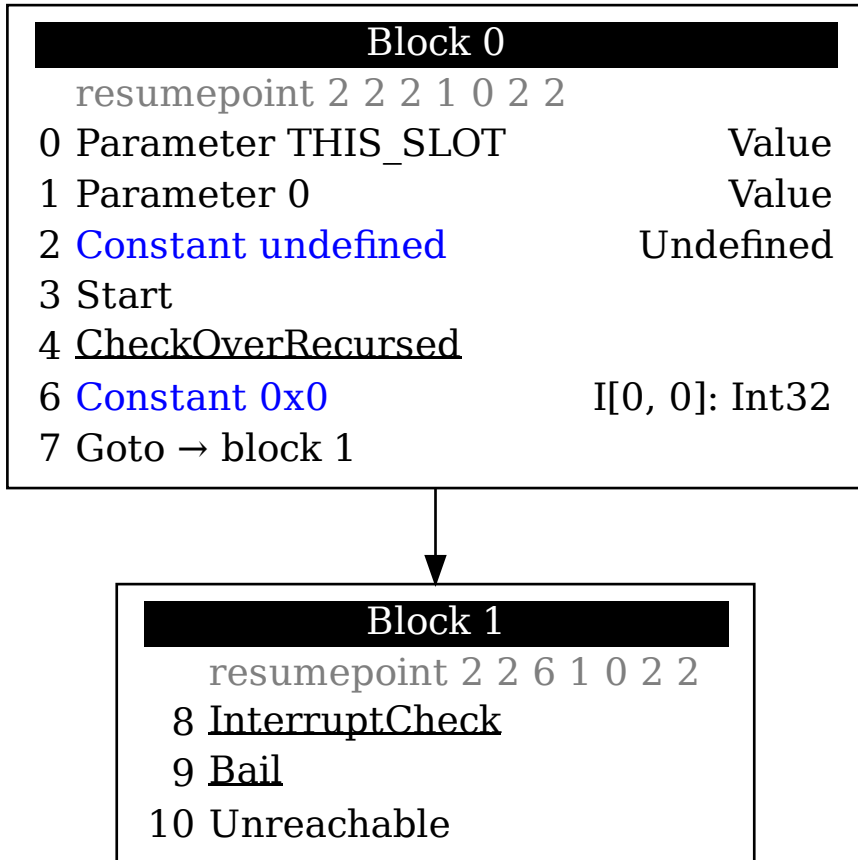


## ./Benchmarks/prop\_access.js:1 - Range Analysis

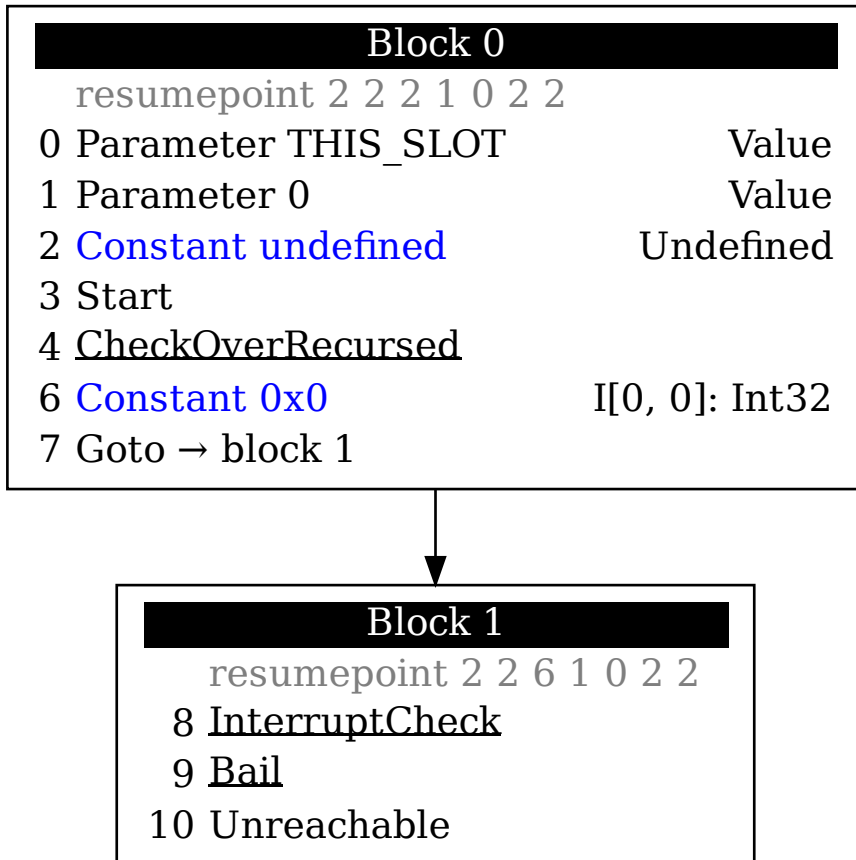
**movable**, **guard**, **in worklist**, recovered on bailout



**./Benchmarkers/prop\_access.js:1 - De-Beta**  
**movable**, **guard**, **in worklist**, recovered on bailout

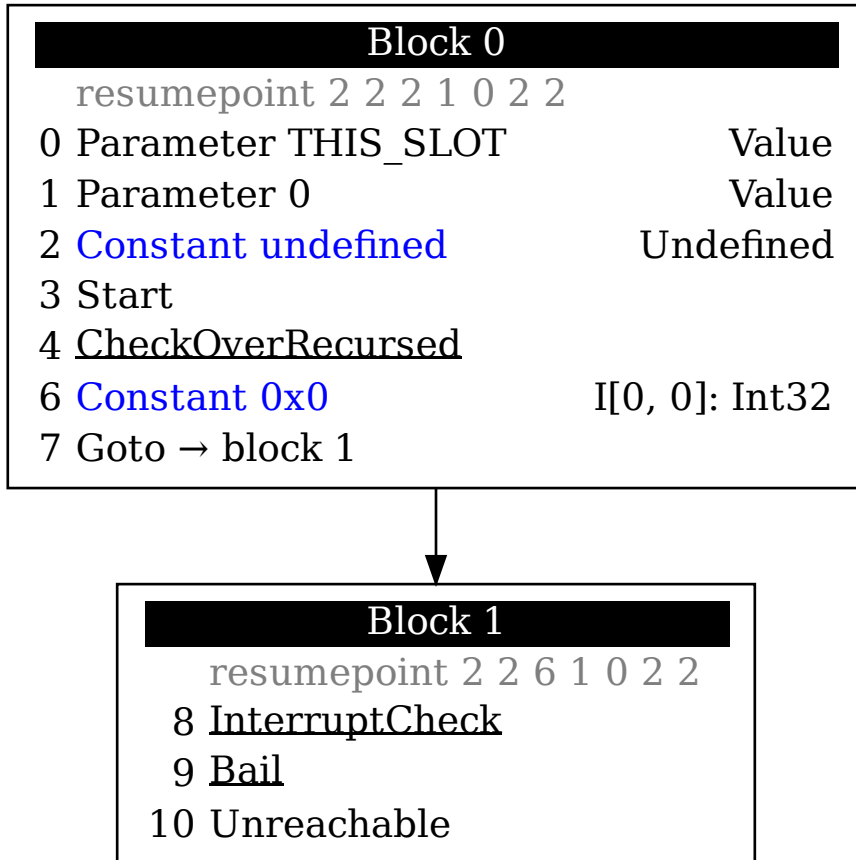


**./Benchmarkers/prop\_access.js:1 - RA check UCE**  
**movable**, guard, **in worklist**, recovered on bailout

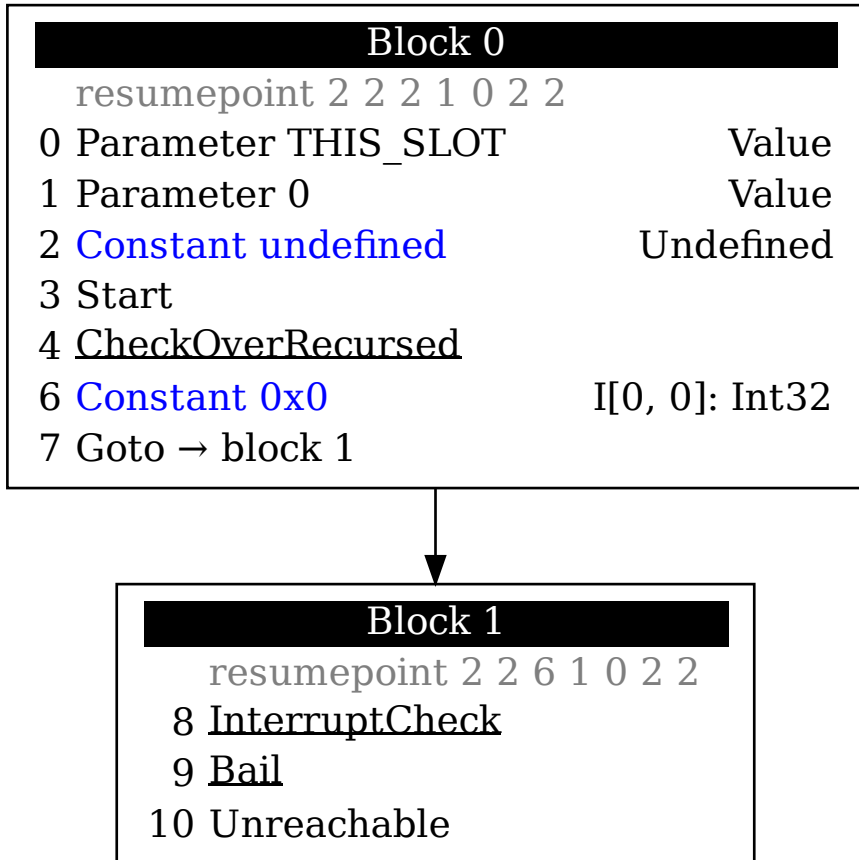


## ./Benchmarkers/prop\_access.js:1 - Truncate Doubles

**movable**, guard, **in worklist**, recovered on bailout

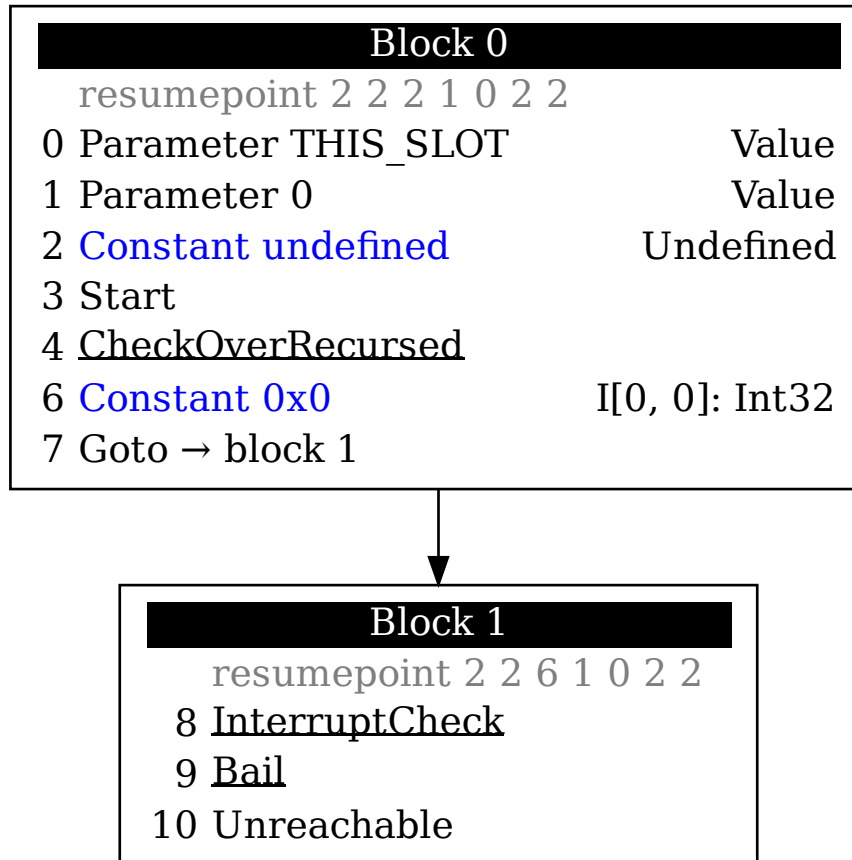


**./Benchmarks/prop\_access.js:1 - Sink**  
movable, guard, in worklist, recovered on bailout



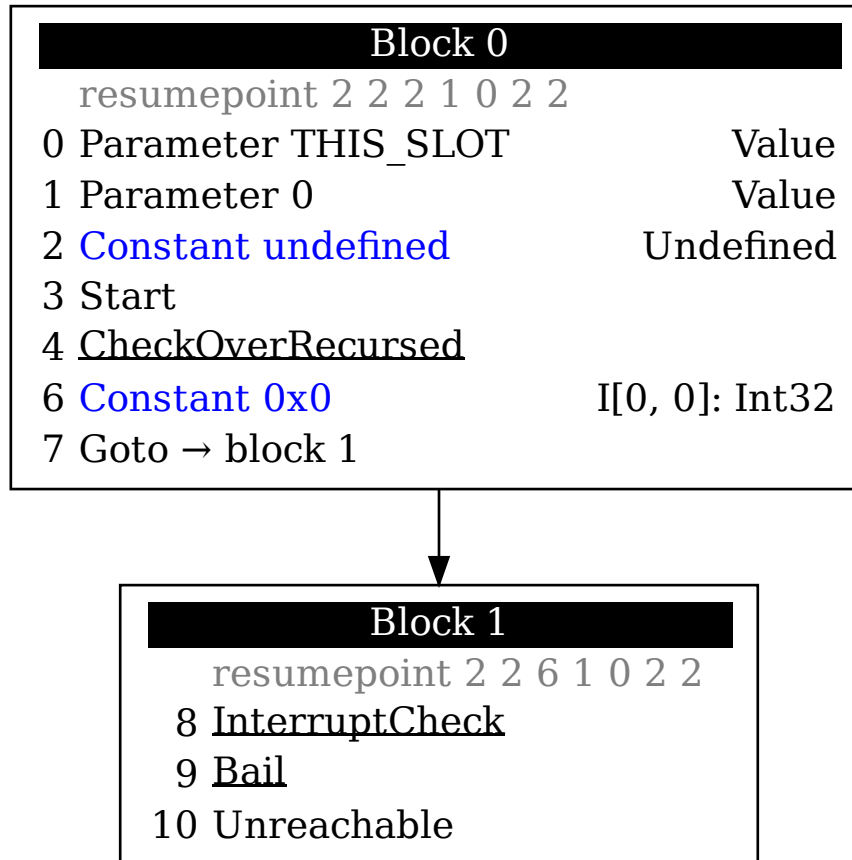
# ./Benchmarkers/prop\_access.js:1 - Remove Unnecessary Bitops

**movable**, **guard**, **in worklist**, recovered on bailout



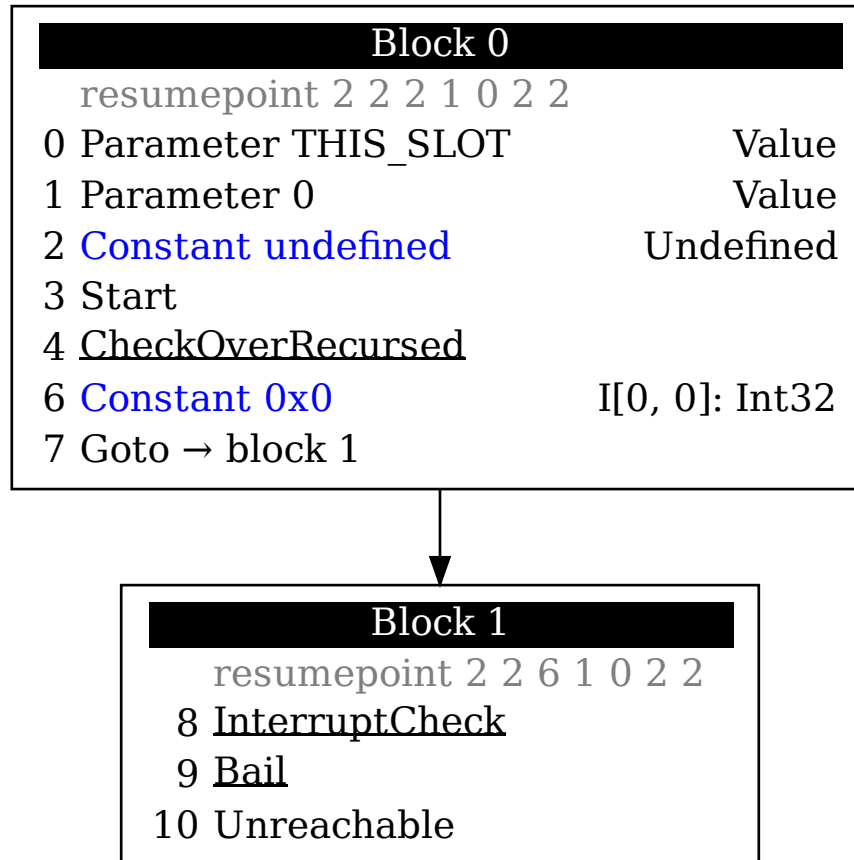
## ./Benchmarkers/prop\_access.js:1 - Fold Linear Arithmetic Constants

**movable**, guard, **in worklist**, recovered on bailout



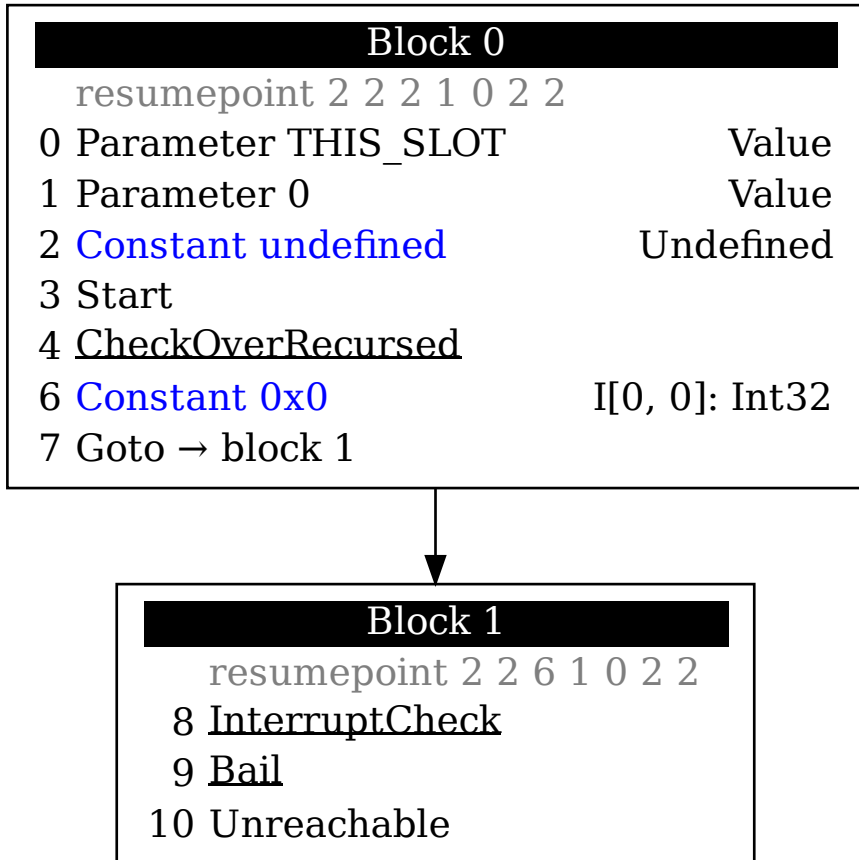
## ./Benchmarkers/prop\_access.js:1 - Effective Address Analysis

**movable**, **guard**, **in worklist**, recovered on bailout



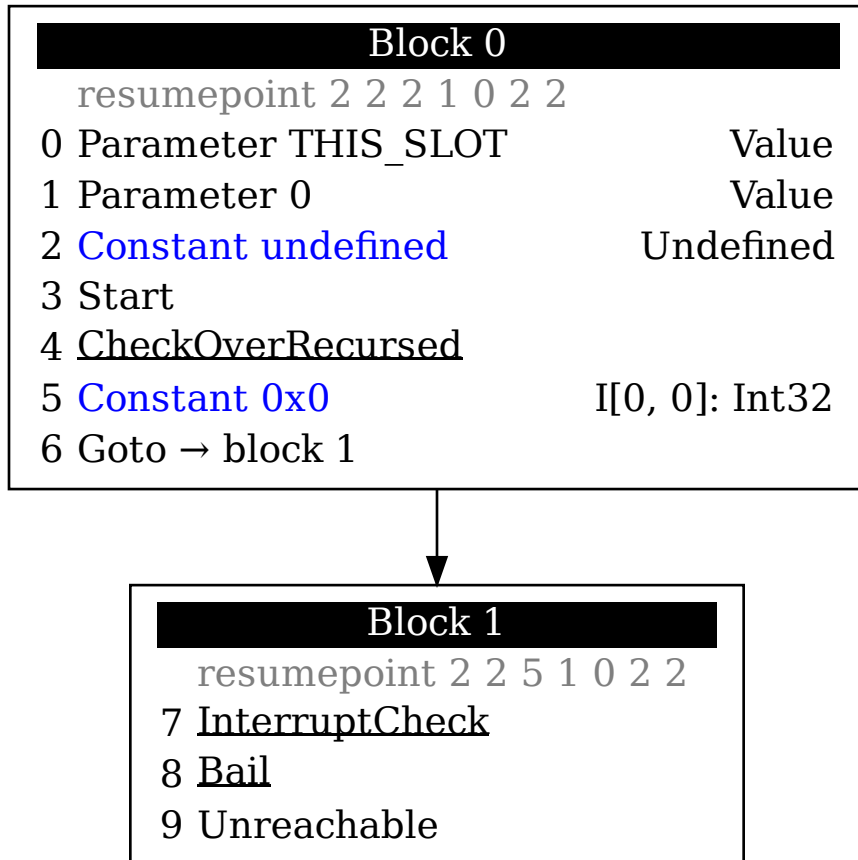


**./Benchmarks/prop\_access.js:1 - DCE**  
movable, guard, in worklist, recovered on bailout

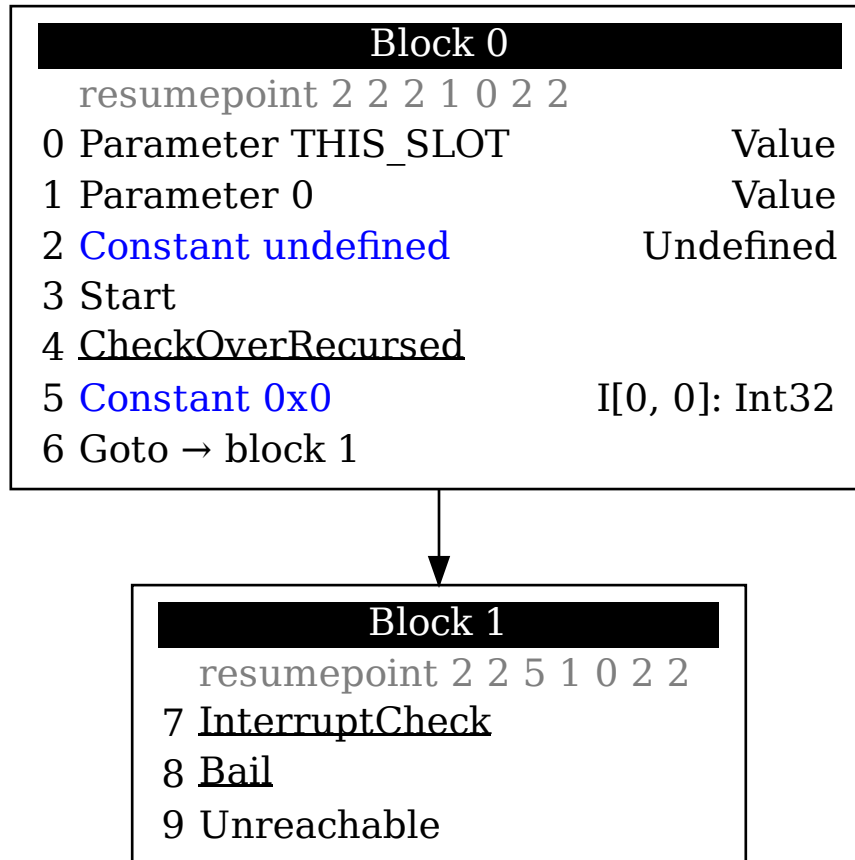


## ./Benchmarkers/prop\_access.js:1 - Reordering

**movable**, guard, **in worklist**, recovered on bailout

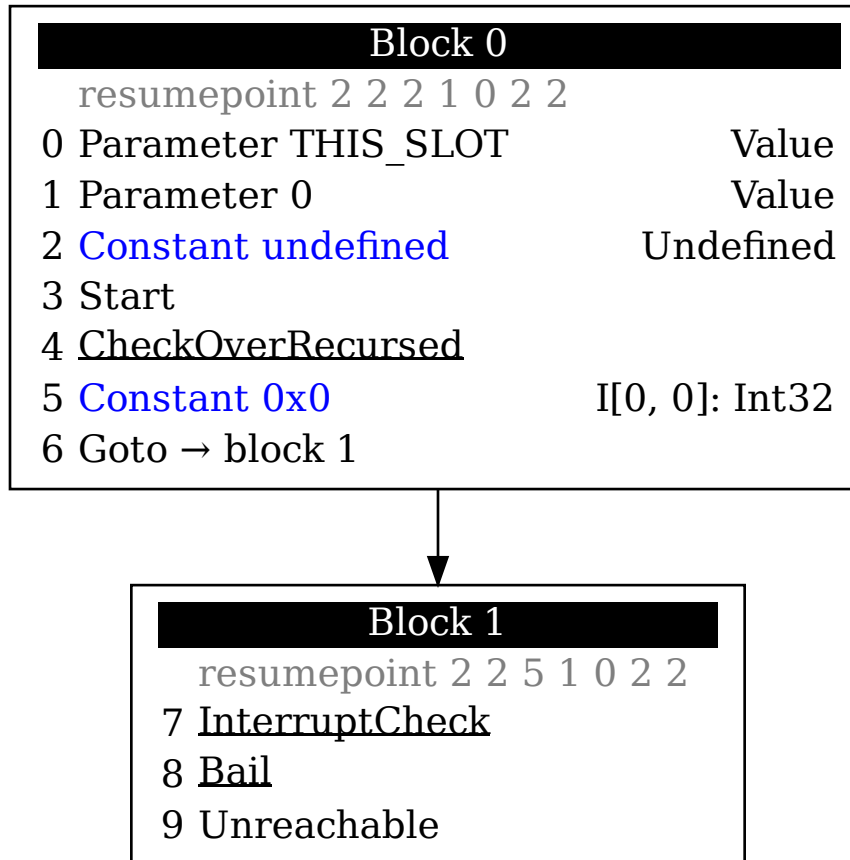


**./Benchmarkers/prop\_access.js:1 - Make loops contiguous**  
movable, guard, in worklist, recovered on bailout



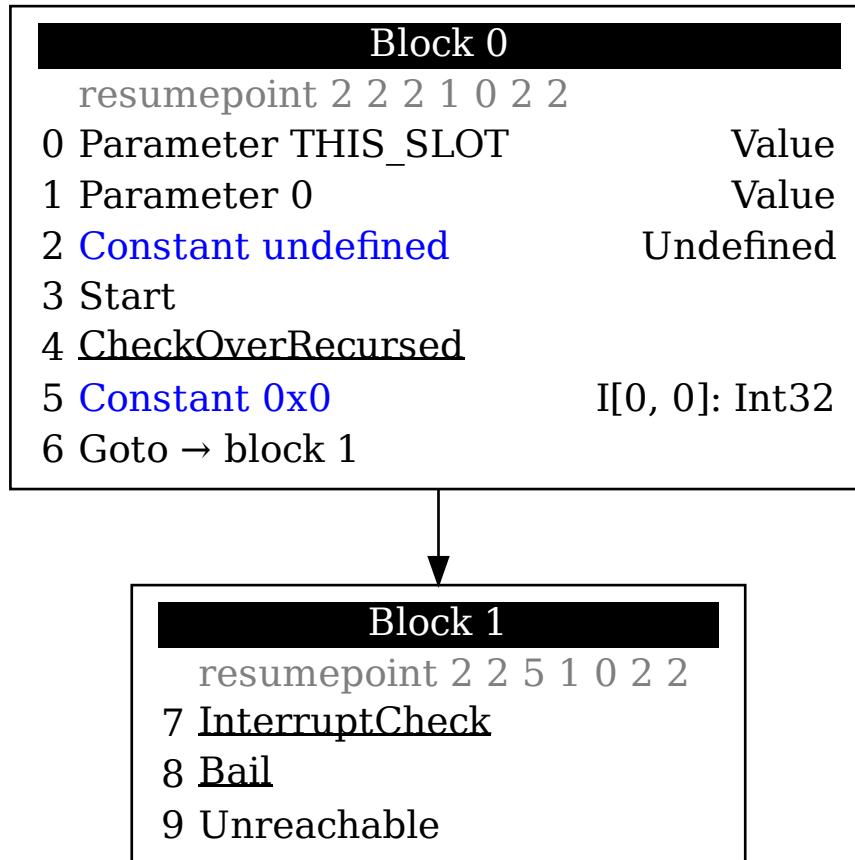
## ./Benchmarkers/prop\_access.js:1 - Edge Case Analysis (Late)

**movable**, **guard**, **in worklist**, recovered on bailout



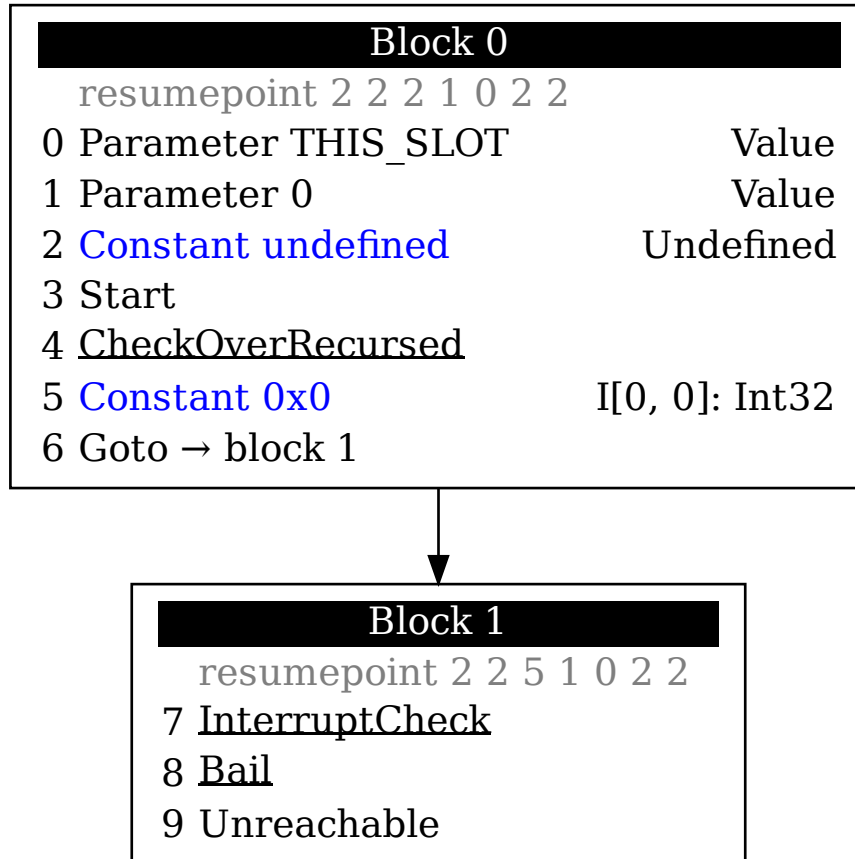
# ./Benchmarkers/prop\_access.js:1 - Bounds Check Elimination

**movable**, guard, **in worklist**, recovered on bailout



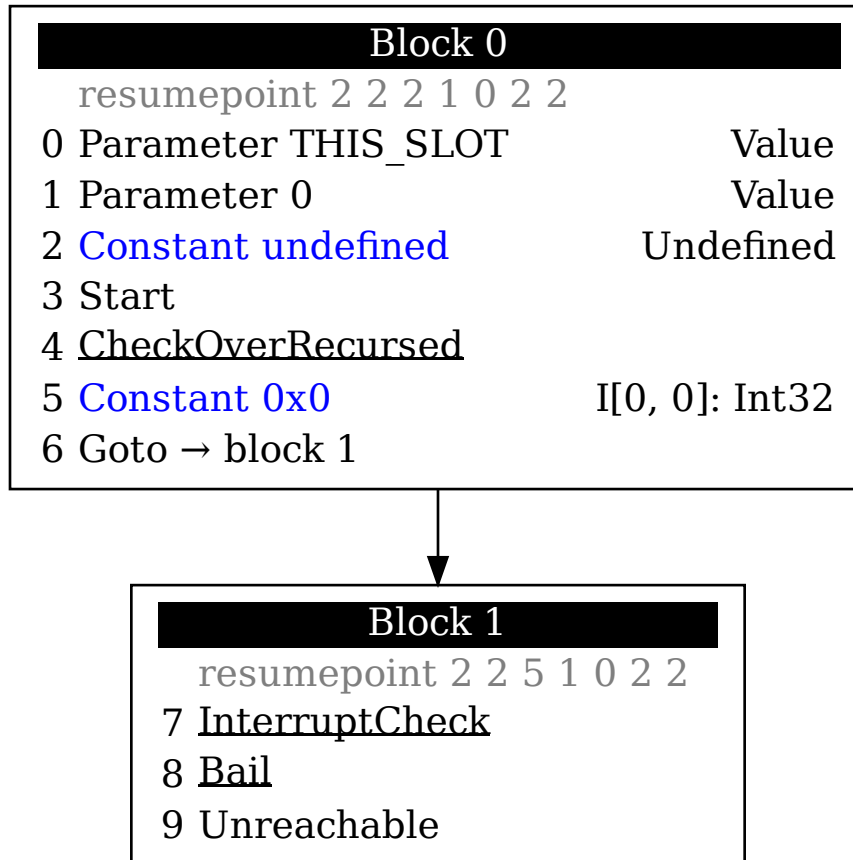
## ./Benchmarkers/prop\_access.js:1 - Shape Guard Elimination

movable, guard, in worklist, recovered on bailout

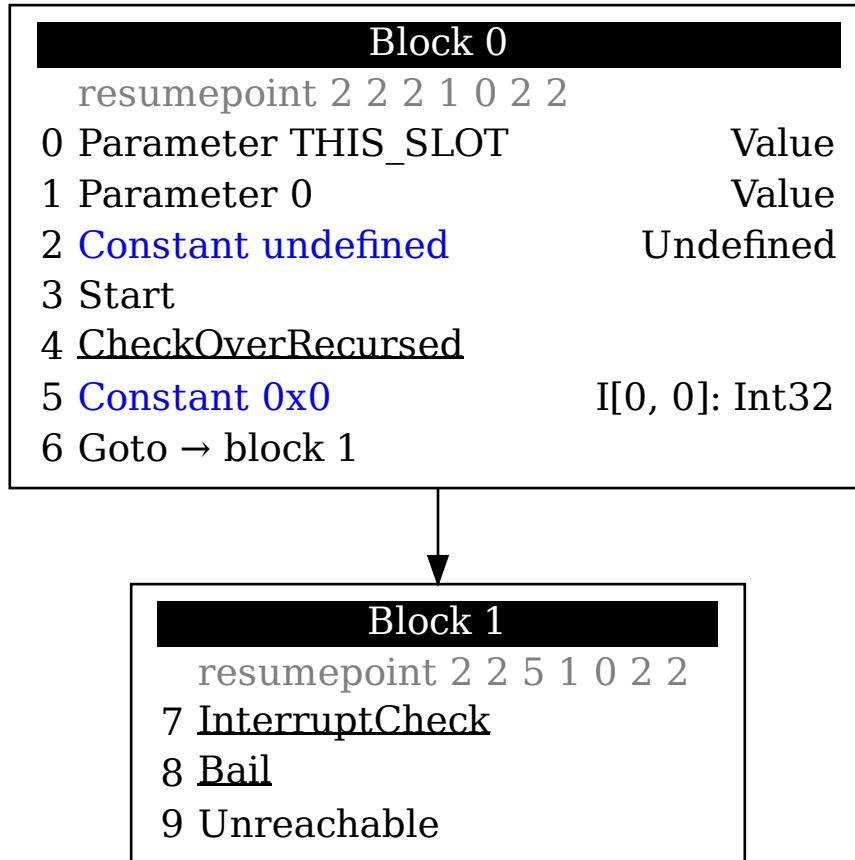


## ./Benchmarkers/prop\_access.js:1 - GC Barrier Elimination

**movable**, **guard**, **in worklist**, recovered on bailout



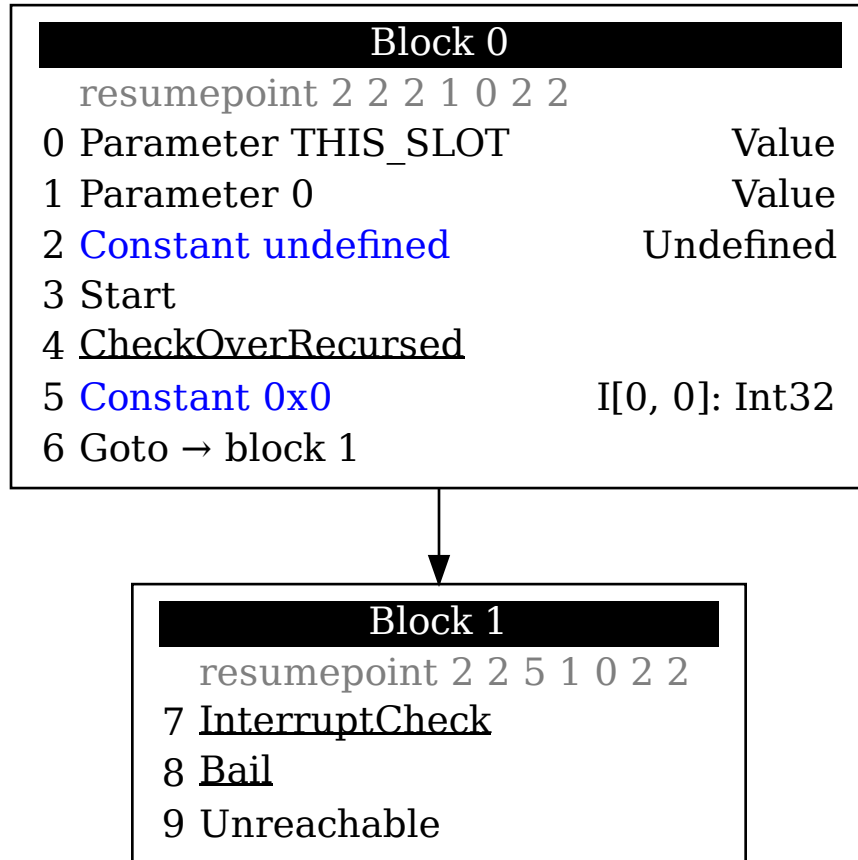
**./Benchmarkers/prop\_access.js:1 - FoldLoadsWithUnbox**  
movable, guard, in worklist, recovered on bailout





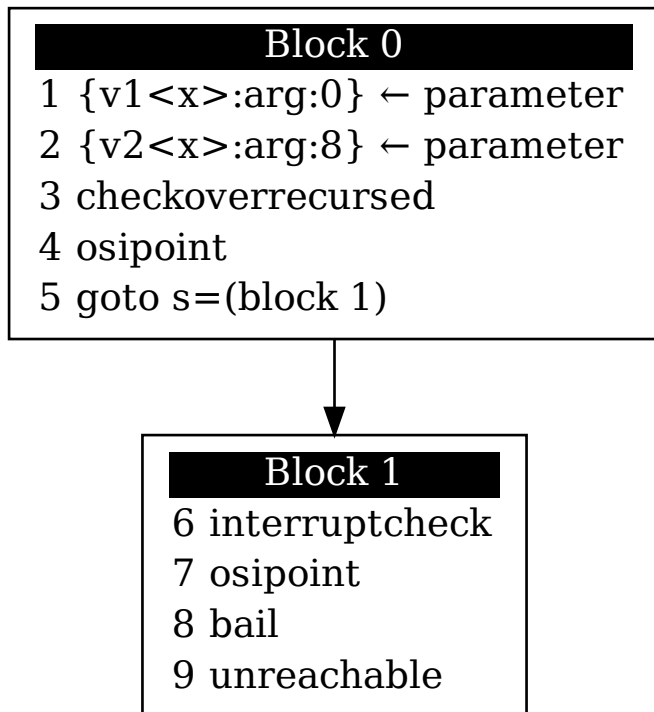
## ./Benchmarkers/prop\_access.js:1 - Add KeepAlive Instructions

**movable**, **guard**, **in worklist**, recovered on bailout



## ./Benchmarkers/prop\_access.js:1 - Generate LIR

movable, guard, in worklist, recovered on bailout



## ./Benchmarkers/prop\_access.js:1 - Allocate Registers [Backtracking]

movable, guard, in worklist, recovered on bailout

