

# Code

# Frames

# Trace

```
★ while j < 100:  
    j += 1  
    ★ if a is None:  
        break  
    ★ a = a.f()
```

```
a = a2  
j = j2
```

```
[j1, a1]  
j2 = int_add(j1, 1)  
guard_nonnull(a1)  
guard_class(a1, Even)  
i1 = getfield_gc(a1, descr='value')  
i2 = int_rshift(i1, 2)  
b1 = int_eq(i2, 1)  
guard_false(b1)  
i3 = int_and(i2, 1)  
i4 = int_is_zero(i3)  
guard_true(i4)  
a2 = new(Even)  
setfield_gc(a2, descr='value')  
b2 = int_lt(j2, 100)  
guard_true(b2)
```

```
n = self.value >> 2  
★ if n == 1:  
    return None  
return self.build(n)
```

```
n = i2  
self = a1
```

```
★ if n & 1 == 0:  
    return Even(n)  
else:  
    return Odd(n)
```

```
n = i2
```

```
self.value = n
```

```
self = a2
```