

# 1 main — MIR Walkthrough

**Purpose:** TODO: Describe why this walkthrough exists

## 1.1 Source Context

```
let b:u32 = 4294967294 + 1;
assert!(a == b)
}
```

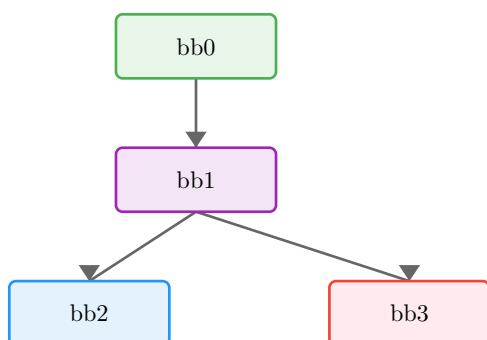
## 1.2 Function Overview

- **Function:** main
- **Basic blocks:** 4
- **Return type:** ()
- **Notable properties:**
  - Contains panic path
  - Uses checked arithmetic
  - Contains assertions
  - Has conditional branches

## 1.3 Locals

Local	Type	Notes
0	()	Return place
1	u32	
2	(u32, bool)	
3	bool	
4	u32	
5	!	

## 1.4 Control-Flow Overview



## 1.5 Basic Blocks

### 1.5.1 bb0 — entry

*Entry point of the function.*

MIR	Annotation
_2 = checked(-2 + 1)	Checked Add (may panic)
→ assert(move _2.1 == false) → bb1	Panic if move _2.1 is true

### 1.5.2 bb1 — branch point

MIR	Annotation
_1 = move _2.0	Move value
_4 = -1	Load constant
_3 = move _4 == _1	Equal operation
→ switch(move _3) [0→bb3; else→bb2]	Branch on move _3

### 1.5.3 bb2 — return / success

*Normal return path.*

MIR	Annotation
→ return	Return from function

### 1.5.4 bb3 — panic path

*Panic/diverging path.*

MIR	Annotation
→ _5 = panic([16 bytes])	Call panic

## 1.6 Key Observations

TODO: Add bullet points summarizing what this MIR teaches

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## 1.7 Takeaways

TODO: One or two sentences to generalize this example

