1 `main` — MIR Walkthrough

Purpose: TODO: Describe why this walkthrough exists

1.1 Source Context

```
fn main() {
    assert!(42 % 10 == 2);
}
```

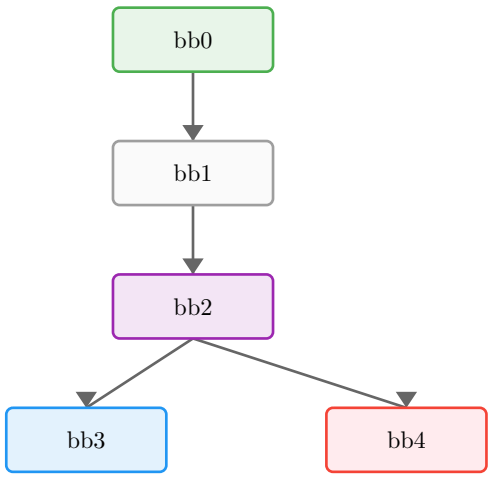
1.2 Function Overview

- **Function:** `main`
- **Basic blocks:** 5
- **Return type:** `()`
- **Notable properties:**
  - Contains panic path
  - Contains assertions
  - Has conditional branches

1.3 Locals

Local	Type	Notes
0	`()`	Return place
1	`i32`	
2	`bool`	
3	`bool`	
4	`bool`	
5	`bool`	
6	`!`	

1.4 Control-Flow Overview



1.5 Basic Blocks

1.5.1 bb0 — entry

Entry point of the function.

MIR	Annotation

`\_2 = 10 == 0`	Equal operation
`→ assert(move \_2 == false) → bb1`	Panic if move _2 is true

1.5.2 bb1

MIR	Annotation
`\_3 = 10 == -1`	Equal operation
`\_4 = 42 == -2147483648`	Equal operation
`\_5 = move \_3 & move \_4`	AND operation
`→ assert(move \_5 == false) → bb2`	Panic if move _5 is true

1.5.3 bb2 — branch point

MIR	Annotation
`\_1 = 42 % 10`	Remainder operation
`→ switch(move \_1) \[2→bb3; else→bb4\]`	Branch on move _1

1.5.4 bb3 — return / success

Normal return path.

MIR	Annotation
`→ return`	Return from function

1.5.5 bb4 — panic path

Panic/diverging path.

MIR	Annotation
`→ \_6 = 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