1 `main` — MIR Walkthrough

Purpose: TODO: Describe why this walkthrough exists

1.1 Source Context

```rust
fn main() {
    let ans = is_even(10);

    assert!(ans == true);
}
```

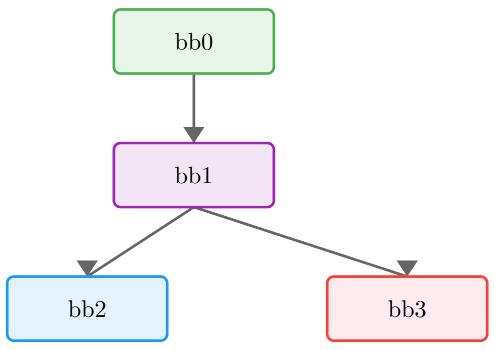
1.2 Function Overview

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

1.3 Locals

Local	Type	Notes
`0`	`()`	Return place
`1`	`bool`	
`2`	`!`	

1.4 Control-Flow Overview



1.5 Basic Blocks

1.5.1 bb0 — entry

Entry point of the function.

MIR	Annotation
`→ _1 = is_even(10) → bb1`	Call is_even

1.5.2 bb1 — branch point

MIR	Annotation
`→ switch(_1) [0→bb3; else→bb2]`	Branch on _1

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
`→ _2 = 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

2 `is_odd` — MIR Walkthrough

Purpose: TODO: Describe why this walkthrough exists

2.1 Source Context

```
fn is_odd(n:u32) -> bool {
    if n == 0 {
        false
    } else {
        is_even(n - 1)
    }
}
```

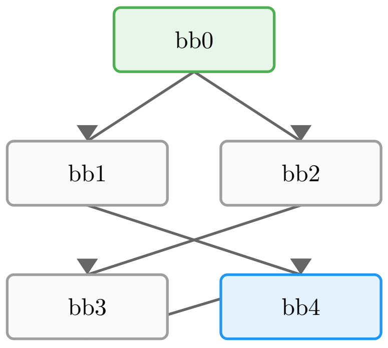
2.2 Function Overview

- **Function:** `is_odd`
- **Basic blocks:** 5
- **Return type:** `bool`
- **Notable properties:**
  - Contains panic path
  - Uses checked arithmetic
  - Contains assertions
  - Has conditional branches

2.3 Locals

Local	Type	Notes
`0`	`bool`	Return place
`1`	`u32`	
`2`	`u32`	
`3`	`(u32, bool)`	

2.4 Control-Flow Overview



2.5 Basic Blocks

2.5.1 bb0 — entry

Entry point of the function.

MIR	Annotation
`→ switch(_1) [0→bb1; else→bb2]`	Branch on _1

2.5.2 bb1

MIR	Annotation
`_0 = 0`	Load constant
`→ goto bb4`	Jump to bb4

2.5.3 bb2

MIR	Annotation
`_3 = checked(_1 - 1)`	Checked Subtract (may panic)
`→ assert(move _3.1 == false) → bb3`	Panic if move _3.1 is true

2.5.4 bb3

MIR	Annotation
`_2 = move _3.0`	Move value
`→ _0 = is_even(move _2) → bb4`	Call is_even

2.5.5 bb4 — return / success

Normal return path.

MIR	Annotation
`→ return`	Return from function

2.6 Key Observations

TODO: Add bullet points summarizing what this MIR teaches

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2.7 Takeaways

TODO: One or two sentences to generalize this example

3 `is_even` — MIR Walkthrough

Purpose: TODO: Describe why this walkthrough exists

3.1 Source Context

```
fn is_even(n:u32) -> bool {
    if n == 0 {
        true
    } else {
        is_odd(n - 1)
    }
}
```

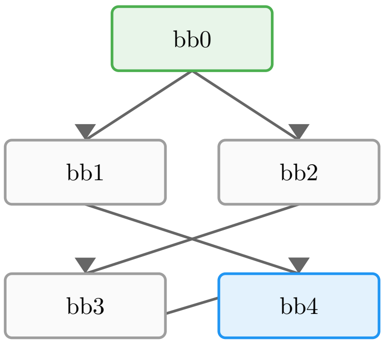
3.2 Function Overview

- **Function:** `is_even`
- **Basic blocks:** 5
- **Return type:** `bool`
- **Notable properties:**
  - Contains panic path
  - Uses checked arithmetic
  - Contains assertions
  - Has conditional branches

3.3 Locals

Local	Type	Notes
`0`	`bool`	Return place
`1`	`u32`	
`2`	`u32`	
`3`	`(u32, bool)`	

3.4 Control-Flow Overview



3.5 Basic Blocks

3.5.1 bb0 — entry

Entry point of the function.

MIR	Annotation
`→ switch(_1) [0→bb1; else→bb2]`	Branch on _1

3.5.2 bb1

MIR	Annotation
`_0 = 1`	Load constant
`→ goto bb4`	Jump to bb4

3.5.3 bb2

MIR	Annotation
`_3 = checked(_1 - 1)`	Checked Subtract (may panic)
`→ assert(move _3.1 == false) → bb3`	Panic if move _3.1 is true

3.5.4 bb3

MIR	Annotation
`_2 = move _3.0`	Move value
`→ _0 = is_odd(move _2) → bb4`	Call is_odd

3.5.5 bb4 — return / success

Normal return path.

MIR	Annotation
`→ return`	Return from function

3.6 Key Observations

TODO: Add bullet points summarizing what this MIR teaches

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3.7 Takeaways

TODO: One or two sentences to generalize this example