

1 main — MIR Walkthrough

Purpose: TODO: Describe why this walkthrough exists

1.1 Source Context

```
    assert!(sum() == 42);  
}
```

1.2 Function Overview

- **Function:** main
- **Basic blocks:** 4
- **Return type:** () (0 bytes, align 1)
- **Notable properties:**
 - Contains panic path
 - Introduces borrows
 - Has conditional branches

1.3 Locals

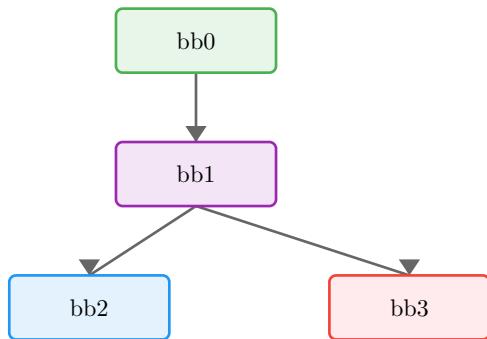
Local	Type	Notes
0	() (0 bytes, align 1)	Return place
1	{closure@tests/integration/programs/closure-no-args.rs:2:15: 2:24}	
2	Uint(U32)	
3	&{closure@tests/integration/programs/closure-no-args.rs:2:15: 2:24} (8 bytes, align 8)	
4	()	

1.4 Borrows

#	Borrow	Kind	Created At	Borrowed
0	_3	&	bb0[0]	_1

Borrows are tracked conservatively: active from creation until reassignment or scope end.

1.5 Control-Flow Overview



1.6 Basic Blocks

1.6.1 bb0 — entry

Entry point of the function.

MIR	Annotation
<code>_3 = &_1</code>	Shared borrow
<code>→ _2 = call(move _3, ()) → bb1</code>	Call call

1.6.2 bb1 — branch point

MIR	Annotation
<code>→ switch(move _2) [42→bb2; else→bb3]</code>	Branch on move _2

1.6.3 bb2 — return / success

Normal return path.

MIR	Annotation
<code>→ return</code>	Return from function

1.6.4 bb3 — panic path

Panic/diverging path.

MIR	Annotation
<code>→ _4 = panic([16 bytes])</code>	Call panic

1.7 Key Observations

TODO: Add bullet points summarizing what this MIR teaches

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1.8 Takeaways

TODO: One or two sentences to generalize this example

2 {closure#0} — MIR Walkthrough

Purpose: TODO: Describe why this walkthrough exists

2.1 Source Context

```
fn main() {
    let sum = || -> u32 { 42 };
```

2.2 Function Overview

- **Function:** {closure#0}
- **Basic blocks:** 1
- **Return type:** Uint(U32)

2.3 Locals

Local	Type	Notes
0	Uint(U32)	Return place
1	&{closure@tests/integration/programs/closure-no-args.rs:2:15: 2:24} (8 bytes, align 8)	

2.4 Control-Flow Overview

```
bb0
```

2.5 Basic Blocks

2.5.1 bb0 — entry

Entry point of the function.

MIR	Annotation
_0 = 42	Load constant
→ 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

