

1 main — MIR Walkthrough

Purpose: TODO: Describe why this walkthrough exists

1.1 Source Context

```
fn main() {  
    let tup:(i32, i32) = (42, 99);  
  
    assert!(tup == (42, 99));  
}
```

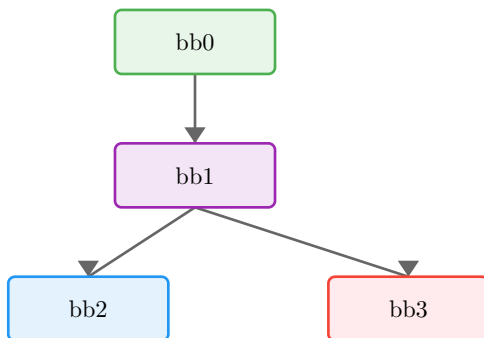
1.2 Function Overview

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

1.3 Locals

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

1.4 Control-Flow Overview



1.5 Basic Blocks

1.5.1 bb0 — entry

Entry point of the function.

MIR	Annotation
$_1 = \text{Tuple}(42, 99)$	Construct aggregate
$_3 = \&_1$	Shared borrow
$_4 = 0$	Load constant

→ _2 = eq(move _3, move _4) → bb1	Call eq
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1.5.2 bb1 — branch point

MIR	Annotation
→ switch(move _2) \[0→bb3; else→bb2\]	Branch on move _2

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

