

# 1 main — MIR Walkthrough

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

## 1.1 Source Context

```
let z:bool = test(x, y);
assert!(z);
return ();
}
```

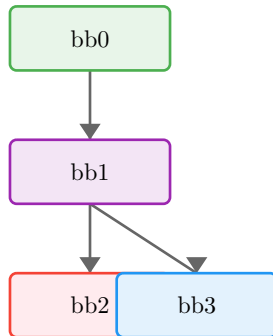
## 1.2 Function Overview

- **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     | usize |              |
| 3     | usize |              |
| 4     | !     |              |

## 1.4 Control-Flow Overview



## 1.5 Basic Blocks

### 1.5.1 bb0 — entry

*Entry point of the function.*

| MIR  | Annotation    |
|--|---------------|
| $\_2 = 42$   | Load constant |
| $\_3 = 0$  | Load constant |
| $\rightarrow \_1 = \text{test}(\text{move } \_2, \text{move } \_3) \rightarrow \text{bb1}$ | Call test     |

### 1.5.2 bb1 — branch point

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

### 1.5.3 bb2 — panic path

*Panic/diverging path.*

| MIR                         | Annotation |
|-----------------------------|------------|
| → \_4 = panic(\[16 bytes\]) | Call panic |

### 1.5.4 bb3 — return / success

*Normal return path.*

| MIR      | Annotation           |
|----------|----------------------|
| → return | Return from function |

## 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 test — MIR Walkthrough

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

### 2.1 Source Context

```
fn test(x: usize, y:usize) -> bool {  
    return x > y;  
}
```

### 2.2 Function Overview

- **Function:** test
- **Basic blocks:** 1
- **Return type:** bool

### 2.3 Locals

| Local | Type  | Notes        |
|-------|-------|--------------|
| 0     | bool  | Return place |
| 1     | usize |              |
| 2     | usize |              |

### 2.4 Control-Flow Overview

bb0

### 2.5 Basic Blocks

#### 2.5.1 bb0 — entry

*Entry point of the function.*

| MIR                | Annotation             |
|--------------------|------------------------|
| $\_0 = \_1 \> \_2$ | Greater than operation |
| → 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

