

# 1 main — MIR Walkthrough

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

## 1.1 Source Context

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

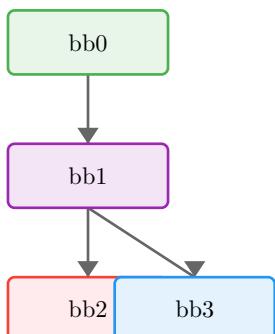
## 1.2 Function Overview

- **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 |
| → _1 = test(move _2, move _3) → 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

