Configuring Rustfmt

Rustfmt is designed to be very configurable. You can create a TOML file called rustfmt.toml or .rustfmt.toml, place it in the project or any other parent directory and it will apply the options in that file. If none of these directories contain such a file, both your home directory and a directory called rustfmt in your global config directory (e.g. .config/rustfmt/) are checked as well.

A possible content of rustfmt.toml or .rustfmt.toml might look like this:

```
indent_style = "Block"
reorder_imports = false
```

Each configuration option is either stable or unstable. Stable options can be used directly, while unstable options are opt-in. To enable unstable options, set unstable_features = true in rustfmt.toml or pass --unstable-features to rustfmt.

Configuration Options

Below you find a detailed visual guide on all the supported configuration options of rustfmt:

array_width

Maximum width of an array literal before falling back to vertical formatting.

- Default value: 60
- Possible values: any positive integer that is less than or equal to the value specified for max_width
- Stable: Yes

By default this option is set as a percentage of max_width provided by use_small_heuristics, but a value set directly for array_width will take precedence.

See also max_width and use_small_heuristics

attr_fn_like_width

Maximum width of the args of a function-like attributes before falling back to vertical formatting.

- Default value: 70
- Possible values: any positive integer that is less than or equal to the value specified for max_width
- Stable: Yes

By default this option is set as a percentage of max_width provided by use_small_heuristics, but a value set directly for attr_fn_like_width will take precedence.

See also max_width and use_small_heuristics

binop_separator

Where to put a binary operator when a binary expression goes multiline.

```
• Default value: "Front"
 • Possible values: "Front", "Back"
 • Stable: No (tracking issue: #3368)
"Front" (default):
fn main() {
 let sum = 123456789012345678901234567890
   + 123456789012345678901234567890
   + 123456789012345678901234567890;
 }
"Back":
fn main() {
 let sum = 123456789012345678901234567890 +
   123456789012345678901234567890 +
   123456789012345678901234567890;
 }
```

blank_lines_lower_bound

Minimum number of blank lines which must be put between items. If two items have fewer blank lines between them, additional blank lines are inserted.

• Default value: 0

- Possible values: unsigned integer
- Stable: No (tracking issue: #3382)

Example

Original Code (rustfmt will not change it with the default value of 0):

```
#![rustfmt::skip]
fn foo() {
    println!("a");
}
fn bar() {
    println!("b");
    println!("c");
}

fn foo() {
    println!("a");
}
fn bar() {
    println!("b");
    println!("c");
}
```

blank_lines_upper_bound

Maximum number of blank lines which can be put between items. If more than this number of consecutive empty lines are found, they are trimmed down to match this integer.

- Default value: 1
- Possible values: any non-negative integer
- Stable: No (tracking issue: #3381)

Example

```
Original Code:
```

```
#![rustfmt::skip]
fn foo() {
```

```
println!("a");
}
fn bar() {
    println!("b");
    println!("c");
}
1 (default):
fn foo() {
    println!("a");
}
fn bar() {
    println!("b");
    println!("c");
}
2:
fn foo() {
    println!("a");
fn bar() {
    println!("b");
    println!("c");
}
See also: blank_lines_lower_bound
```

brace_style

Brace style for items

- Default value: "SameLineWhere"
- $\bullet \ \ Possible \ values: \ "Always \verb|NextLine|", "PreferSameLine|", "SameLine \verb|Where|" \\$
- Stable: No (tracking issue: #3376)

Functions

```
"SameLineWhere" (default):
fn lorem() {
    // body
}
fn lorem(ipsum: usize) {
   // body
}
fn lorem<T>(ipsum: T)
where
   T: Add + Sub + Mul + Div,
{
    // body
}
"AlwaysNextLine":
fn lorem()
    // body
}
fn lorem(ipsum: usize)
{
    // body
fn lorem<T>(ipsum: T)
where
   T: Add + Sub + Mul + Div,
    // body
}
"PreferSameLine":
fn lorem() {
    // body
}
fn lorem(ipsum: usize) {
   // body
}
```

```
fn lorem<T>(ipsum: T)
where
   T: Add + Sub + Mul + Div, {
    // body
}
Structs and enums
"SameLineWhere" (default):
struct Lorem {
    ipsum: bool,
struct Dolor<T>
where
   T: Eq,
   sit: T,
}
"AlwaysNextLine":
struct Lorem
    ipsum: bool,
struct Dolor<T>
where
   T: Eq,
    sit: T,
"PreferSameLine":
struct Lorem {
    ipsum: bool,
struct Dolor<T>
where
   T: Eq, {
   sit: T,
}
```

chain_width

Maximum width of a chain to fit on one line.

- Default value: 60
- Possible values: any positive integer that is less than or equal to the value specified for max_width
- Stable: Yes

By default this option is set as a percentage of max_width provided by use_small_heuristics, but a value set directly for chain_width will take precedence.

See also max_width and use_small_heuristics

color

Whether to use colored output or not.

- Default value: "Auto"
- Possible values: "Auto", "Always", "Never"
- Stable: No (tracking issue: #3385)

combine_control_expr

Combine control expressions with function calls.

- Default value: true
- Possible values: true, false
- Stable: No (tracking issue: #3369)

true (default):

```
fn example() {
    // If
    foo!(if x {
        foo();
    } else {
        bar();
    });

// IfLet
foo!(if let Some(..) = x {
        foo();
    } else {
        bar();
    });

// While
```

```
foo!(while x {
        foo();
        bar();
   });
    // WhileLet
    foo!(while let Some(..) = x {
        foo();
        bar();
   });
    // ForLoop
    foo!(for x in y {
       foo();
        bar();
   });
    // Loop
    foo!(loop {
        foo();
        bar();
   });
}
false:
fn example() {
   // If
   foo!(
        if x {
            foo();
        } else {
            bar();
   );
    // IfLet
    foo!(
        if let Some(..) = x {
            foo();
        } else {
            bar();
        }
    );
    // While
```

```
foo!(
    while x \in
        foo();
        bar();
);
// WhileLet
foo!(
    while let Some(..) = x {
        foo();
        bar();
    }
);
// ForLoop
foo!(
    for x in y {
        foo();
        bar();
    }
);
// Loop
foo!(
    loop {
        foo();
        bar();
    }
);
```

comment_width

}

Maximum length of comments. No effect unlesswrap_comments = true.

- Default value: 80
- Possible values: any positive integer
- Stable: No (tracking issue: #3349)

Note: A value of O results in wrap_comments being applied regardless of a line's width.

80 (default; comments shorter than comment_width):

```
// Lorem ipsum dolor sit amet, consectetur adipiscing elit.
```

```
60 (comments longer than comment_width):
// Lorem ipsum dolor sit amet,
// consectetur adipiscing elit.
See also wrap_comments.
condense_wildcard_suffixes
Replace strings of \_ wild
cards by a single .. in tuple patterns
  • Default value: false
  • Possible values: true, false
  • Stable: No (tracking issue: #3384)
false (default):
fn main() {
    let (lorem, ipsum, _{-}, _{-}) = (1, 2, 3, 4);
    let (lorem, ipsum, ..) = (1, 2, 3, 4);
}
true:
fn main() {
    let (lorem, ipsum, ..) = (1, 2, 3, 4);
control_brace_style
Brace style for control flow constructs
  • Default value: "AlwaysSameLine"
  • Possible values: "AlwaysNextLine", "AlwaysSameLine", "ClosingNextLine"
  • Stable: No (tracking issue: #3377)
"AlwaysSameLine" (default):
fn main() {
    if lorem {
        println!("ipsum!");
    } else {
        println!("dolor!");
```

}

```
"AlwaysNextLine":
fn main() {
    if lorem
        println!("ipsum!");
    }
    else
        println!("dolor!");
    }
}
"ClosingNextLine":
fn main() {
    if lorem {
        println!("ipsum!");
    }
    else {
        println!("dolor!");
    }
}
```

disable_all_formatting

Don't reformat anything.

Note that this option may be soft-deprecated in the future once the ignore option is stabilized. Nightly toolchain users are encouraged to use ignore instead when possible.

• Default value: false

• Possible values: true, false

• Stable: Yes

edition

Specifies which edition is used by the parser.

• Default value: "2015"

• Possible values: "2015", "2018", "2021"

• Stable: Yes

Rustfmt is able to pick up the edition used by reading the Cargo.toml file if executed through the Cargo's formatting tool cargo fmt. Otherwise, the edition needs to be specified in your config file:

```
edition = "2018"
```

empty_item_single_line

Put empty-body functions and impls on a single line

```
• Default value: true
• Possible values: true, false
• Stable: No (tracking issue: #3356)

true (default):
fn lorem() {}

impl Lorem {}

false:
fn lorem() {
}

impl Lorem {
}
```

enum_discrim_align_threshold

See also brace_style, control_brace_style.

The maximum length of enum variant having discriminant, that gets vertically aligned with others. Variants without discriminants would be ignored for the purpose of alignment.

Note that this is not how much whitespace is inserted, but instead the longest variant name that doesn't get ignored when aligning.

- Default value : 0
- Possible values: any positive integer

0 (default):

```
enum Bar {
    A = 0,
    Bb = 1,
    RandomLongVariantGoesHere = 10,
    Ccc = 71,
}
enum Bar {
    VeryLongVariantNameHereA = 0,
    VeryLongVariantNameHereBb = 1,
```

```
VeryLongVariantNameHereCcc = 2,
}

20:
enum Foo {
    A = 0,
    Bb = 1,
    RandomLongVariantGoesHere = 10,
    Ccc = 2,
}
enum Bar {
    VeryLongVariantNameHereA = 0,
    VeryLongVariantNameHereBb = 1,
    VeryLongVariantNameHereCcc = 2,
}
```

error_on_line_overflow

Error if Rustfmt is unable to get all lines within max_width, except for comments and string literals. If this happens, then it is a bug in Rustfmt. You might be able to work around the bug by refactoring your code to avoid long/complex expressions, usually by extracting a local variable or using a shorter name.

Default value: false
Possible values: true, false
Stable: No (tracking issue: #3391)

See also max_width.

error_on_unformatted

Error if unable to get comments or string literals within max_width, or they are left with trailing whitespaces.

Default value: false
Possible values: true, false
Stable: No (tracking issue: #3392)

fn_args_layout

Control the layout of arguments in a function

Default value: "Tall"
Possible values: "Compressed", "Tall", "Vertical"
Stable: Yes

```
"Tall" (default):
trait Lorem {
    fn lorem(ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet);
    fn lorem(ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet) {
        // body
    fn lorem(
        ipsum: Ipsum,
        dolor: Dolor,
        sit: Sit,
        amet: Amet,
        consectetur: Consectetur,
        adipiscing: Adipiscing,
        elit: Elit,
    );
    fn lorem(
        ipsum: Ipsum,
        dolor: Dolor,
        sit: Sit,
        amet: Amet,
        consectetur: Consectetur,
        adipiscing: Adipiscing,
        elit: Elit,
    ) {
        // body
    }
}
"Compressed":
trait Lorem {
    fn lorem(ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet);
    fn lorem(ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet) {
        // body
    }
    fn lorem(
        ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet, consectetur: Consectetur,
        adipiscing: Adipiscing, elit: Elit,
    );
```

```
fn lorem(
        ipsum: Ipsum, dolor: Dolor, sit: Sit, amet: Amet, consectetur: Consectetur,
        adipiscing: Adipiscing, elit: Elit,
    ) {
        // body
    }
}
"Vertical":
trait Lorem {
    fn lorem(
        ipsum: Ipsum,
        dolor: Dolor,
        sit: Sit,
        amet: Amet,
    );
    fn lorem(
        ipsum: Ipsum,
        dolor: Dolor,
        sit: Sit,
        amet: Amet,
    ) {
        // body
    }
    fn lorem(
        ipsum: Ipsum,
        dolor: Dolor,
        sit: Sit,
        amet: Amet,
        {\tt consectetur} \colon \; {\tt Consectetur} \, ,
        adipiscing: Adipiscing,
        elit: Elit,
    );
    fn lorem(
        ipsum: Ipsum,
        dolor: Dolor,
        sit: Sit,
        amet: Amet,
        consectetur: Consectetur,
        adipiscing: Adipiscing,
        elit: Elit,
    ) {
```

```
// body }
```

fn_call_width

Maximum width of the args of a function call before falling back to vertical formatting.

- Default value: 60
- Possible values: any positive integer that is less than or equal to the value specified for max_width
- Stable: Yes

By default this option is set as a percentage of max_width provided by use_small_heuristics, but a value set directly for fn_call_width will take precedence.

See also max_width and use_small_heuristics

fn_single_line

Put single-expression functions on a single line

- Default value: false
- Possible values: true, false
- Stable: No (tracking issue: #3358)

false (default):

```
fn lorem() -> usize {
     42
}

fn lorem() -> usize {
    let ipsum = 42;
    ipsum
}

true:
fn lorem() -> usize { 42 }

fn lorem() -> usize {
    let ipsum = 42;
    ipsum
}
```

See also control_brace_style.

force_explicit_abi

Always print the abi for extern items

• Default value: true

• Possible values: true, false

• Stable: Yes

Note: Non-"C" ABIs are always printed. If false then "C" is removed.

```
true (default):
extern "C" {
    pub static lorem: c_int;
}

false:
extern {
    pub static lorem: c_int;
}
```

force_multiline_blocks

Force multiline closure and match arm bodies to be wrapped in a block

- Default value: false
- Possible values: false, true
- Stable: No (tracking issue: #3374)

```
false (default):
```

```
fn main() {
    result.and_then(|maybe_value| match maybe_value {
        None => foo(),
        Some(value) => bar(),
    });

match lorem {
        None => |ipsum| {
            println!("Hello World");
        },
        Some(dolor) => foo(),
    }
}
```

true:

```
fn main() {
    result.and_then(|maybe_value| {
        match maybe_value {
            None => foo(),
            Some(value) => bar(),
        }
    });

match lorem {
        None => {
            |ipsum| {
                println!("Hello World");
            }
        }
        Some(dolor) => foo(),
    }
}
```

format_code_in_doc_comments

Format code snippet included in doc comments.

- Default value: false
- Possible values: true, false
- Stable: No (tracking issue: #3348)

false (default):

```
/// Adds one to the number given.
///
/// # Examples
///
/// ```rust
/// let five=5;
///
/// assert_eq!(
///
     6,
///
       add_one(5)
///);
/// # fn add_one(x: i32) -> i32 {
/// #
         x + 1
/// # }
/// ...
fn add_one(x: i32) -> i32 {
   x + 1
}
```

true

```
/// Adds one to the number given.
///
/// # Examples
///
/// ``rust
/// let five = 5;
///
/// assert_eq!(6, add_one(5));
/// # fn add_one(x: i32) -> i32 {
/// # x + 1
/// # }
///
fn add_one(x: i32) -> i32 {
    x + 1
}
```

format_generated_files

Format generated files. A file is considered generated if any of the first five lines contain a <code>@generated</code> comment marker. By default, generated files are reformatted, i. e. <code>@generated</code> marker is ignored. This option is currently ignored for stdin (<code>@generated</code> in stdin is ignored.)

- Default value: true
- Possible values: true, false
- Stable: No (tracking issue: #5080)

format_macro_matchers

Format the metavariable matching patterns in macros.

- Default value: false
- Possible values: true, false
- Stable: No (tracking issue: #3354)

false (default):

```
macro_rules! foo {
    ($a: ident : $b: ty) => {
          $a(42): $b;
    };
    ($a: ident $b: ident $c: ident) => {
          $a = $b + $c;
    };
}
```

true:

See also format_macro_bodies.

format_macro_bodies

Format the bodies of macros.

- Default value: true
- Possible values: true, false
- Stable: No (tracking issue: #3355)

true (default):

```
macro_rules! foo {
    ($a: ident : $b: ty) => {
          $a(42): $b;
    };
    ($a: ident $b: ident $c: ident) => {
          $a = $b + $c;
    };
}
```

false:

```
macro_rules! foo {
    ($a: ident : $b: ty) => { $a(42): $b; };
    ($a: ident $b: ident $c: ident) => { $a=$b+$c; };
}
```

See also $format_macro_matchers$.

format_strings

Format string literals where necessary

- Default value: false
- Possible values: true, false
- Stable: No (tracking issue: #3353)

false (default):

```
fn lorem() -> usize {
    42 // spaces before 42
}

true:
fn lorem() -> usize {
    42 // tabs before 42
}
See also: tab_spaces.
```

hex_literal_case

Control the case of the letters in hexadecimal literal values

Default value: Preserve
Possible values: Upper, Lower
Stable: No (tracking issue: #5081)

hide_parse_errors

Do not show parse errors if the parser failed to parse files.

• Default value: false

```
• Possible values: true, false
```

• Stable: No (tracking issue: #3390)

ignore

Skip formatting files and directories that match the specified pattern. The pattern format is the same as .gitignore. Be sure to use Unix/forwardslash / style paths. This path style will work on all platforms. Windows style paths with backslashes \ are not supported.

• Default value: format every file

• Possible values: See an example below

• Stable: No (tracking issue: #3395)

Example

If you want to ignore specific files, put the following to your config file:

```
ignore = [
    "src/types.rs",
    "src/foo/bar.rs",
]
```

If you want to ignore every file under examples/, put the following to your config file:

```
ignore = [
    "examples",
```

If you want to ignore every file under the directory where you put your rustfmt.toml:

```
ignore = ["/"]
```

imports_indent

Indent style of imports

- Default Value: "Block"
- Possible values: "Block", "Visual"
- Stable: No (tracking issue: #3360)

```
"Block" (default):
```

```
"Visual":
See also: imports_layout.
imports_layout
Item layout inside a imports block
 • Default value: "Mixed"
 • Possible values: "Horizontal", "Horizontal Vertical", "Mixed", "Vertical"
 • Stable: No (tracking issue: #3361)
"Mixed" (default):
};
"Horizontal": Note: This option forces all imports onto one line and may
exceed max width.
use foo::{xxx, yyy, zzz};
use foo::{aaa, bbb, ccc, ddd, eee, fff};
"HorizontalVertical":
use foo::{
  aaaaaaaaaaaaaaaa,
  ccccccccccccccc,
  ddddddddddddddd,
  eeeeeeeeeeeee,
  fffffffffffffff,
};
"Vertical":
use foo::{
  XXX,
```

ууу,

```
zzz,
};
use foo::{
    aaa,
    bbb,
    ccc,
    ddd,
    eee,
    fff,
};
indent_style
Indent on expressions or items.
  • Default value: "Block"
   • Possible values: "Block", "Visual"
  • Stable: No (tracking issue: #3346)
Array
"Block" (default):
fn main() {
    let lorem = vec![
        "ipsum",
        "dolor",
        "sit",
        "amet",
        "consectetur",
        "adipiscing",
        "elit",
    ];
}
"Visual":
fn main() {
    let lorem = vec!["ipsum",
                      "dolor",
                      "sit",
                      "amet",
                      "consectetur",
                      "adipiscing",
                      "elit"];
}
```

```
Control flow
"Block" (default):
fn main() {
    if lorem_ipsum
        && dolor_sit
        && amet_consectetur
        && lorem_sit
        && dolor_consectetur
        && amet_ipsum
        \&\& lorem_consectetur
    {
        // ...
    }
}
"Visual":
fn main() {
    if lorem_ipsum
       && dolor_sit
       \&\& amet_consectetur
       && lorem_sit
       && dolor_consectetur
       && amet_ipsum
       && lorem_consectetur
    {
        // ...
}
See also: control_brace_style.
Function arguments
"Block" (default):
fn lorem() {}
fn lorem(ipsum: usize) {}
fn lorem(
    ipsum: usize,
    dolor: usize,
    sit: usize,
    amet: usize,
    consectetur: usize,
```

```
adipiscing: usize,
    elit: usize,
) {
    // body
"Visual":
fn lorem() {}
fn lorem(ipsum: usize) {}
fn lorem(ipsum: usize,
         dolor: usize,
         sit: usize,
         amet: usize,
         consectetur: usize,
         adipiscing: usize,
         elit: usize) {
    // body
}
Function calls
"Block" (default):
fn main() {
    lorem(
        "lorem",
        "ipsum",
        "dolor",
        "sit",
        "amet",
        "consectetur",
        "adipiscing",
        "elit",
    );
}
"Visual":
fn main() {
    lorem("lorem",
          "ipsum",
          "dolor",
          "sit",
          "amet",
```

```
"consectetur",
          "adipiscing",
          "elit");
}
Generics
"Block" (default):
fn lorem<</pre>
    Ipsum: Eq = usize,
    Dolor: Eq = usize,
    Sit: Eq = usize,
    Amet: Eq = usize,
    Adipiscing: Eq = usize,
    Consectetur: Eq = usize,
    Elit: Eq = usize,
>(
    ipsum: Ipsum,
    dolor: Dolor,
    sit: Sit,
    amet: Amet,
    adipiscing: Adipiscing,
    consectetur: Consectetur,
    elit: Elit,
) -> T {
    // body
"Visual":
fn lorem<Ipsum: Eq = usize,</pre>
         Dolor: Eq = usize,
         Sit: Eq = usize,
         Amet: Eq = usize,
         Adipiscing: Eq = usize,
         Consectetur: Eq = usize,
         Elit: Eq = usize>(
    ipsum: Ipsum,
    dolor: Dolor,
    sit: Sit,
    amet: Amet,
    adipiscing: Adipiscing,
    consectetur: Consectetur,
    elit: Elit)
    -> T {
```

```
// body
}
Struct
"Block" (default):
fn main() {
    let lorem = Lorem {
        ipsum: dolor,
        sit: amet,
    };
}
"Visual":
fn main() {
    let lorem = Lorem { ipsum: dolor,
                         sit: amet };
}
See also: struct_lit_single_line, indent_style.
Where predicates
"Block" (default):
fn lorem<Ipsum, Dolor, Sit, Amet>() -> T
where
    Ipsum: Eq,
    Dolor: Eq,
    Sit: Eq,
    Amet: Eq,
{
    // body
}
"Visual":
fn lorem<Ipsum, Dolor, Sit, Amet>() -> T
    where Ipsum: Eq,
          Dolor: Eq,
          Sit: Eq,
          Amet: Eq
{
    // body
}
```

inline_attribute_width

Write an item and its attribute on the same line if their combined width is below a threshold

• Default value: 0

Possible values: any positive integer
Stable: No (tracking issue: #3343)

Example

```
0 (default):
#[cfg(feature = "alloc")]
use core::slice;
50:
#[cfg(feature = "alloc")] use core::slice;
```

license_template_path

Check whether beginnings of files match a license template.

• Default value: ""

• Possible values: path to a license template file

• Stable: No (tracking issue: #3352)

A license template is a plain text file which is matched literally against the beginning of each source file, except for {}-delimited blocks, which are matched as regular expressions. The following license template therefore matches strings like // Copyright 2017 The Rust Project Developers., // Copyright 2018 The Rust Project Developers., etc.:

```
// Copyright {\d+} The Rust Project Developers.
```

 $\{, \}$ and $\{$ match literal braces / backslashes.

match_arm_blocks

Controls whether arm bodies are wrapped in cases where the first line of the body cannot fit on the same line as the => operator.

The Style Guide requires that bodies are block wrapped by default if a line break is required after the =>, but this option can be used to disable that behavior to prevent wrapping arm bodies in that event, so long as the body does not contain multiple statements nor line comments.

• Default value: true

• Possible values: true, false

• Stable: No (tracking issue: #3373)

```
true (default):
fn main() {
   match lorem {
      ipsum => {
         dolor => println!("{}", sit),
      sit => foo(
         "fooooooooooooooooo",
         "baaaaaaaaaaaaaaaaaaaarr",
         "baaaaaaaaaaaaaaaaazzzzzzzzzzz",
         "qqqqqqquuuuuuuuuuuuuuuuuuuuuxxx",
      ),
   }
}
false:
fn main() {
   match lorem {
      lorem =>
         ipsum => println!("{}", sit),
      sit => foo(
         "fooooooooooooooooo",
         "baaaaaaaaaaaaaaaaaaaarr",
         "baaaaaaaaaaaaaaaaazzzzzzzzzzz",
         "qqqqqqquuuuuuuuuuuuuuuuuuuuuuxxx",
      ),
   }
}
See \ also: \ {\tt match\_block\_trailing\_comma}.
match_arm_leading_pipes
Controls whether to include a leading pipe on match arms
  • Default value: Never
  • Possible values: Always, Never, Preserve
  • Stable: Yes
Never (default):
```

// Leading pipes are removed from this:

// fn foo() {

match foo {

```
/ "foo" / "bar" => {}
           / "baz"
          / "something relatively long"
//
          / "something really really really reall!!!!!!!!!! long" => println!("x"),
          / "qux" => println!("y"),
//
          _ => {}
//
      }
// }
// Becomes
fn foo() {
   match foo {
        "foo" | "bar" => {}
        "baz"
        | "something relatively long"
        | "something really really really reallllllllllllllllly long" => println!("x"),
        "qux" => println!("y"),
        _ => {}
   }
}
Always:
// Leading pipes are emitted on all arms of this:
// fn foo() {
//
      match foo {
//
           "foo" / "bar" => {}
//
           "baz"
//
          / "something relatively long"
//
           / "something really really really reall!!!!!!!!!!! long" => println!("x"),
//
          "qux" => println!("y"),
          _ => {}
//
//
      }
// }
// Becomes:
fn foo() {
    match foo {
       | "foo" | "bar" => {}
        | "baz"
        | "something relatively long"
        | "something really really really reallllllllllllly long" => println!("x"),
        | "qux" => println!("y"),
        | _ => {}
   }
}
```

```
Preserve:
```

match_block_trailing_comma

Put a trailing comma after a block based match arm (non-block arms are not affected)

```
• Default value: false
```

• Possible values: true, false

• Stable: Yes

```
false (default):
fn main() {
    match lorem {
        Lorem::Ipsum => {
            println!("ipsum");
        }
        Lorem::Dolor => println!("dolor"),
    }
}

true:
fn main() {
    match lorem {
        Lorem::Ipsum => {
            println!("ipsum");
        },
        Lorem::Dolor => println!("dolor"),
```

```
}
See also: trailing_comma, match_arm_blocks.
max_width
Maximum width of each line
  • Default value: 100
  • Possible values: any positive integer
  • Stable: Yes
See also error_on_line_overflow.
merge_derives
Merge multiple derives into a single one.
  • Default value: true
  • Possible values: true, false
  • Stable: Yes
true (default):
#[derive(Eq, PartialEq, Debug, Copy, Clone)]
pub enum Foo {}
false:
#[derive(Eq, PartialEq, Debug, Copy, Clone)]
pub enum Bar {}
#[derive(Eq, PartialEq)]
#[derive(Debug)]
#[derive(Copy, Clone)]
pub enum Foo {}
```

imports_granularity

How imports should be grouped into use statements. Imports will be merged or split to the configured level of granularity.

- Default value: Preserve
- Possible values: Preserve, Crate, Module, Item, One
- Stable: No (tracking issue: #4991)

Preserve (default): Do not change the granularity of any imports and preserve the original structure written by the developer.

```
use foo::b;
use foo::b::{f, g};
use foo::{a, c, d::e};
use qux::{h, i};
```

Crate: Merge imports from the same crate into a single **use** statement. Conversely, imports from different crates are split into separate statements.

```
use foo::{
    a, b,
    b::{f, g},
    c,
    d::e,
};
use qux::{h, i};
```

Module: Merge imports from the same module into a single **use** statement. Conversely, imports from different modules are split into separate statements.

```
use foo::b::{f, g};
use foo::d::e;
use foo::{a, b, c};
use qux::{h, i};
```

Item: Flatten imports so that each has its own use statement.

```
use foo::a;
use foo::b;
use foo::b::g;
use foo::c;
use foo::d::e;
use qux::h;
use qux::i;
```

One: Merge all imports into a single use statement as long as they have the same visibility.

```
pub use foo::{x, y};
use {
    bar::{
        a,
        b::{self, f, g},
        c.
```

```
d::e,
},
qux::{h, i},
```

merge_imports

This option is deprecated. Use imports_granularity = "Crate" instead.

- Default value: false
- Possible values: true, false

false (default):

```
use foo::{a, c, d};
use foo::{b, g};
use foo::{e, f};

true:
use foo::{a, b, c, d, e, f, g};
```

newline_style

Unix or Windows line endings

- Default value: "Auto"
- Possible values: "Auto", "Native", "Unix", "Windows"
- Stable: Yes

Auto (default): The newline style is detected automatically on a per-file basis. Files with mixed line endings will be converted to the first detected line ending style.

Native Line endings will be converted to \r on Windows and \n on all other platforms.

Unix Line endings will be converted to \n.

Windows Line endings will be converted to \r\n.

${\tt normalize_comments}$

Convert /* */ comments to // comments where possible

- Default value: false
- Possible values: true, false
- Stable: No (tracking issue: #3350)

```
false (default):
// Lorem ipsum:
fn dolor() -> usize {}
/* sit amet: */
fn adipiscing() -> usize {}
true:
// Lorem ipsum:
fn dolor() -> usize {}
// sit amet:
fn adipiscing() -> usize {}
normalize_doc_attributes
Convert #![doc] and #[doc] attributes to //! and /// doc comments.
  • Default value: false
  • Possible values: true, false
  • Stable: No (tracking issue: #3351)
false (default):
#![doc = "Example documentation"]
#[doc = "Example item documentation"]
pub enum Bar {}
/// Example item documentation
pub enum Foo {}
true:
//! Example documentation
/// Example item documentation
pub enum Foo {}
```

overflow_delimited_expr

When structs, slices, arrays, and block/array-like macros are used as the last argument in an expression list, allow them to overflow (like blocks/closures) instead of being indented on a new line.

• Default value: false

```
• Possible values: true, false
  • Stable: No (tracking issue: #3370)
false (default):
fn example() {
    foo(ctx, |param| {
        action();
        foo(param)
    });
    foo(
        ctx,
        Bar {
             x: value,
             y: value2,
        },
    );
    foo(
        ctx,
        28
             MAROON_TOMATOES,
             PURPLE_POTATOES,
             ORGANE_ORANGES,
             GREEN_PEARS,
             RED_APPLES,
        ],
    );
    foo(
        ctx,
        vec![
             {\tt MAROON\_TOMATOES},
             PURPLE_POTATOES,
             ORGANE_ORANGES,
             GREEN_PEARS,
             RED_APPLES,
        ],
    );
}
true:
fn example() {
    foo(ctx, |param| {
```

```
action();
        foo(param)
    });
    foo(ctx, Bar {
        x: value,
        y: value2,
    });
    foo(ctx, &[
        MAROON_TOMATOES,
        PURPLE_POTATOES,
        ORGANE_ORANGES,
        GREEN_PEARS,
        RED_APPLES,
    ]);
    foo(ctx, vec![
        MAROON_TOMATOES,
        PURPLE_POTATOES,
        ORGANE_ORANGES,
        GREEN_PEARS,
        RED_APPLES,
    ]);
}
remove_nested_parens
Remove nested parens.
   • Default value: true,
   • Possible values: true, false
   • Stable: Yes
true (default):
fn main() {
    (foo());
}
false:
fn main() {
    (foo());
    ((((foo())));
}
```

reorder_impl_items

• Default value: false

• Possible values: true, false

Reorder implitems. type and const are put first, then macros and methods.

```
• Stable: No (tracking issue: #3363)
false (default)
struct Dummy;
impl Iterator for Dummy {
    fn next(&mut self) -> Option<Self::Item> {
    }
    type Item = i32;
}
impl Iterator for Dummy {
    type Item = i32;
    fn next(&mut self) -> Option<Self::Item> {
        None
    }
}
true
struct Dummy;
impl Iterator for Dummy {
    type Item = i32;
    fn next(&mut self) -> Option<Self::Item> {
        None
}
```

reorder_imports

Reorder import and extern crate statements alphabetically in groups (a group is separated by a newline).

• Default value: true

• Possible values: true, false

• Stable: Yes

```
true (default):
    use dolor;
    use ipsum;
    use lorem;
    use sit;

false:
    use lorem;
    use ipsum;
    use dolor;
    use sit;
```

group_imports

Controls the strategy for how imports are grouped together.

- Default value: Preserve
- Possible values: Preserve, StdExternalCrate, One
- Stable: No (tracking issue: #5083)

Preserve (default): Preserve the source file's import groups.

```
use super::update::convert_publish_payload;
use chrono::Utc;

use alloc::alloc::Layout;
use juniper::{FieldError, FieldResult};
use uuid::Uuid;

use std::sync::Arc;

use broker::database::PooledConnection;

use super::schema::{Context, Payload};
use crate::models::Event;
use core::f32;
```

StdExternalCrate: Discard existing import groups, and create three groups for: 1. std, core and alloc, 2. external crates, 3. self, super and crate imports.

```
use alloc::alloc::Layout;
use core::f32;
use std::sync::Arc;
use broker::database::PooledConnection;
```

```
use chrono::Utc;
use juniper::{FieldError, FieldResult};
use uuid::Uuid;
use super::schema::{Context, Payload};
use super::update::convert_publish_payload;
use crate::models::Event;
One: Discard existing import groups, and create a single group for everything
use super::schema::{Context, Payload};
use super::update::convert_publish_payload;
use crate::models::Event;
use alloc::alloc::Layout;
use broker::database::PooledConnection;
use chrono::Utc;
use core::f32;
use juniper::{FieldError, FieldResult};
use std::sync::Arc;
use uuid::Uuid;
reorder_modules
Reorder mod declarations alphabetically in group.
   • Default value: true
   • Possible values: true, false
   • Stable: Yes
true (default)
mod a;
mod b;
mod dolor;
mod ipsum;
mod lorem;
mod sit;
false
mod b:
mod a;
mod lorem;
mod ipsum;
```

```
mod dolor;
mod sit;
```

Note mod with #[macro_export] will not be reordered since that could change the semantics of the original source code.

report_fixme

Report FIXME items in comments.

- Default value: "Never"
- Possible values: "Always", "Unnumbered", "Never"
- Stable: No (tracking issue: #3394)

Warns about any comments containing FIXME in them when set to "Always". If it contains a #X (with X being a number) in parentheses following the FIXME, "Unnumbered" will ignore it.

See also report_todo.

report_todo

Report TODO items in comments.

- Default value: "Never"
- Possible values: "Always", "Unnumbered", "Never"
- Stable: No (tracking issue: #3393)

Warns about any comments containing TODO in them when set to "Always". If it contains a #X (with X being a number) in parentheses following the TODO, "Unnumbered" will ignore it.

See also report fixme.

required_version

Require a specific version of rustfmt. If you want to make sure that the specific version of rustfmt is used in your CI, use this option.

- Default value: CARGO_PKG_VERSION
- Possible values: any published version (e.g. "0.3.8")
- Stable: No (tracking issue: #3386)

short_array_element_width_threshold

The width threshold for an array element to be considered "short".

The layout of an array is dependent on the length of each of its elements. If the length of every element in an array is below this threshold (all elements are "short") then the array can be formatted in the mixed/compressed style, but if any one element has a length that exceeds this threshold then the array elements will have to be formatted vertically.

- Default value: 10
- Possible values: any positive integer that is less than or equal to the value specified for max_width
- Stable: Yes

```
10 (default):
fn main() {
   pub const FORMAT_TEST: [u64; 5] = [
       0x0000000000000000,
       Oxaaaaaaaaaaaaaaa,
       Oxcccccccccccc,
       Oxddddddddddddd,
   ];
}
20:
fn main() {
   pub const FORMAT_TEST: [u64; 5] = [
       0x00000000000000, 0xaaaaaaaaaaaaa, 0xbbbbbbbbbbbbbb, 0xcccccccccccc,
       Oxdddddddddddddd,
   ];
}
```

See also max_width.

skip_children

Don't reformat out of line modules

- Default value: false
- Possible values: true, false
- Stable: No (tracking issue: #3389)

single_line_if_else_max_width

Maximum line length for single line if-else expressions. A value of 0 (zero) results in if-else expressions always being broken into multiple lines. Note this occurs when use_small_heuristics is set to Off.

- Default value: 50
- Possible values: any positive integer that is less than or equal to the value specified for max width
- Stable: Yes

By default this option is set as a percentage of max_width provided by use_small_heuristics, but a value set directly for single_line_if_else_max_width will take precedence.

See also max_width and use_small_heuristics

space_after_colon

Leave a space after the colon.

- Default value: true
- Possible values: true, false
- Stable: No (tracking issue: #3366)

true (default):

```
fn lorem<T: Eq>(t: T) {
    let lorem: Dolor = Lorem {
        ipsum: dolor,
        sit: amet,
    };
}

false:
fn lorem<T:Eq>(t:T) {
    let lorem:Dolor = Lorem {
        ipsum:dolor,
        sit:amet,
    };
}
```

See also: space_before_colon.

space_before_colon

Leave a space before the colon.

- Default value: false
- Possible values: true, false
- Stable: No (tracking issue: #3365)

false (default):

```
fn lorem<T: Eq>(t: T) {
   let lorem: Dolor = Lorem {
     ipsum: dolor,
     sit: amet,
```

```
};
true:
fn lorem<T : Eq>(t : T) \{
    let lorem : Dolor = Lorem {
        ipsum : dolor,
        sit : amet,
    };
}
See also: space_after_colon.
spaces_around_ranges
Put spaces around the .., ..=, and ... range operators
   • Default value: false
   • Possible values: true, false
   • Stable: No (tracking issue: #3367)
false (default):
fn main() {
    let lorem = 0..10;
    let ipsum = 0..=10;
    match lorem {
        1..5 \Rightarrow foo(),
        _ => bar,
    match lorem {
        1..=5 => foo(),
        _ => bar,
    }
    match lorem {
        1...5 => foo(),
        _ => bar,
    }
}
true:
fn main() {
    let lorem = 0 .. 10;
```

```
let ipsum = 0 ..= 10;

match lorem {
    1 .. 5 => foo(),
    _ => bar,
}

match lorem {
    1 ..= 5 => foo(),
    _ => bar,
}

match lorem {
    1 ... 5 => foo(),
    _ => bar,
}
```

struct_field_align_threshold

The maximum diff of width between struct fields to be aligned with each other.

- Default value : 0
- $\bullet\,$ Possible values: any non-negative integer
- Stable: No (tracking issue: #3371)

0 (default):

```
struct Foo {
    x: u32,
    yy: u32,
    zzz: u32,
}

20:
struct Foo {
    x: u32,
    yy: u32,
    zzz: u32,
}
```

struct_lit_single_line

Put small struct literals on a single line

- Default value: true
- Possible values: true, false

• Stable: No (tracking issue: #3357)

```
true (default):
fn main() {
    let lorem = Lorem { foo: bar, baz: ofo };
}

false:
fn main() {
    let lorem = Lorem {
        foo: bar,
        baz: ofo,
    };
}

See also: indent_style.
```

struct_lit_width

Maximum width in the body of a struct literal before falling back to vertical formatting. A value of 0 (zero) results in struct literals always being broken into multiple lines. Note this occurs when use_small_heuristics is set to Off.

- Default value: 18
- Possible values: any positive integer that is less than or equal to the value specified for max_width
- Stable: Yes

By default this option is set as a percentage of max_width provided by use_small_heuristics, but a value set directly for struct_lit_width will take precedence.

See also max_width, use_small_heuristics, and struct_lit_single_line

struct_variant_width

Maximum width in the body of a struct variant before falling back to vertical formatting. A value of 0 (zero) results in struct literals always being broken into multiple lines. Note this occurs when use_small_heuristics is set to Off.

- Default value: 35
- Possible values: any positive integer that is less than or equal to the value specified for max_width
- Stable: Yes

By default this option is set as a percentage of max_width provided by use_small_heuristics, but a value set directly for struct_variant_width will take precedence.

tab_spaces

```
Number of spaces per tab
```

- Default value: 4
- Possible values: any positive integer
- Stable: Yes

```
4 (default):
```

```
fn lorem() {
    let ipsum = dolor();
    let sit = vec![
        "amet consectetur adipiscing elit amet",
        "consectetur adipiscing elit amet consectetur.",
    ];
}

2:
fn lorem() {
    let ipsum = dolor();
    let sit = vec![
        "amet consectetur adipiscing elit amet",
        "consectetur adipiscing elit amet consectetur.",
    ];
}
```

trailing_comma

See also: hard_tabs.

How to handle trailing commas for lists

- Default value: "Vertical"
- Possible values: "Always", "Never", "Vertical"
- Stable: No (tracking issue: #3379)

"Vertical" (default):

```
fn main() {
    let Lorem { ipsum, dolor, sit } = amet;
    let Lorem {
        ipsum,
        dolor,
        sit,
```

```
amet,
        consectetur,
        adipiscing,
    } = elit;
}
"Always":
fn main() {
    let Lorem { ipsum, dolor, sit, } = amet;
    let Lorem {
        ipsum,
        dolor,
        sit,
        amet,
        consectetur,
        adipiscing,
    } = elit;
}
"Never":
fn main() {
    let Lorem { ipsum, dolor, sit } = amet;
    let Lorem {
        ipsum,
        dolor,
        sit,
        amet,
        consectetur,
        adipiscing
    } = elit;
}
See also: match_block_trailing_comma.
```

trailing_semicolon

Add trailing semicolon after break, continue and return

```
• Default value: true
```

- Possible values: true, false
- Stable: No (tracking issue: #3378)

true (default):

```
fn foo() -> usize {
    return 0;
}

false:
fn foo() -> usize {
    return 0
}
```

type_punctuation_density

Determines if + or = are wrapped in spaces in the punctuation of types

- Default value: "Wide"
- Possible values: "Compressed", "Wide"
- Stable: No (tracking issue: #3364)

"Wide" (default):

```
fn lorem<Ipsum: Dolor + Sit = Amet>() {
    // body
}
"Compressed":
fn lorem<Ipsum: Dolor+Sit=Amet>() {
    // body
```

unstable_features

}

Enable unstable features on the unstable channel.

- Default value: false
- Possible values: true, false
- Stable: No (tracking issue: #3387)

use_field_init_shorthand

Use field initialize shorthand if possible.

- Default value: false
- Possible values: true, false
- Stable: Yes

```
false (default):
struct Foo {
    x: u32,
    y: u32,
    z: u32,
}
fn main() {
    let x = 1;
    let y = 2;
    let z = 3;
    let a = Foo { x, y, z };
    let b = Foo { x: x, y: y, z: z };
}
true:
struct Foo {
    x: u32,
    y: u32,
    z: u32,
}
fn main() {
    let x = 1;
    let y = 2;
    let z = 3;
    let a = Foo \{ x, y, z \};
}
```

use_small_heuristics

This option can be used to simplify the management and bulk updates of the granular width configuration settings (fn_call_width, attr_fn_like_width, struct_lit_width, struct_variant_width, array_width, chain_width, single_line_if_else_max_width), that respectively control when formatted constructs are multi-lined/vertical based on width.

Note that explicitly provided values for the width configuration settings take precedence and override the calculated values determined by use_small_heuristics.

• Default value: "Default"

• Possible values: "Default", "Off", "Max"

• Stable: Yes

Default (default): When use_small_heuristics is set to Default, the values for the granular width settings are calculated as a ratio of the value for max_width.

```
The ratios are: * fn_call_width - 60% * attr_fn_like_width - 70% *
struct_lit_width - 18% * struct_variant_width - 35% * array_width - 60%
* chain_width - 60% * single_line_if_else_max_width - 50%
For example when max_width is set to 100, the width settings are: *
fn_call_width=60 \quad * \quad attr_fn_like_width=70 \quad * \quad struct_lit_width=18
* struct_variant_width=35 * array_width=60 * chain_width=60
single_line_if_else_max_width=50
and when max_width is set to 200: *fn_call_width=120 * attr_fn_like_width=140
* struct_lit_width=36 * struct_variant_width=70 * array_width=120 *
chain width=120 * single line if else max width=100
enum Lorem {
    Ipsum,
    Dolor(bool),
    Sit { amet: Consectetur, adipiscing: Elit },
}
fn main() {
    lorem(
        "lorem",
        "ipsum",
        "dolor",
        "sit",
        "amet",
        "consectetur",
        "adipiscing",
    );
    let lorem = Lorem {
        ipsum: dolor,
        sit: amet,
    };
    let lorem = Lorem { ipsum: dolor };
    let lorem = if ipsum { dolor } else { sit };
```

Off: When use_small_heuristics is set to Off, the granular width settings are functionally disabled and ignored. See the documentation for the respective width config options for specifics.

}

```
enum Lorem {
    Ipsum,
    Dolor(bool),
    Sit {
        amet: Consectetur,
        adipiscing: Elit,
    },
}
fn main() {
    lorem("lorem", "ipsum", "dolor", "sit", "amet", "consectetur", "adipiscing");
    let lorem = Lorem {
        ipsum: dolor,
        sit: amet,
    };
    let lorem = if ipsum {
        dolor
    } else {
        sit
    };
}
Max: When use_small_heuristics is set to Max, then each granular width
setting is set to the same value as max_width.
So if max_width is set to 200, then all the width settings are also set to 200.
* fn_call_width=200 * attr_fn_like_width=200 * struct_lit_width=200
* struct_variant_width=200 * array_width=200 * chain_width=200 *
single_line_if_else_max_width=200
enum Lorem {
    Ipsum,
    Dolor(bool),
    Sit { amet: Consectetur, adipiscing: Elit },
}
fn main() {
    lorem("lorem", "ipsum", "dolor", "sit", "amet", "consectetur", "adipiscing");
    let lorem = Lorem { ipsum: dolor, sit: amet };
    let lorem = if ipsum { dolor } else { sit };
}
            * max_width * fn_call_width * attr_fn_like_width *
See also:
```

```
\verb|struct_lit_width| * \verb|struct_variant_width| * array_width| * chain_width| * single_line_if_else_max_width|
```

use_try_shorthand

Replace uses of the try! macro by the? shorthand

- Default value: false
- Possible values: true, false
- Stable: Yes

```
false (default):
fn main() {
    let lorem = ipsum.map(|dolor| dolor.sit())?;
    let lorem = try!(ipsum.map(|dolor| dolor.sit()));
}
true:
fn main() {
    let lorem = ipsum.map(|dolor| dolor.sit())?;
}
```

version

Which version of the formatting rules to use. Version::One is backwards-compatible with Rustfmt 1.0. Other versions are only backwards compatible within a major version number.

- Default value: One
- Possible values: One, Two
- Stable: No (tracking issue: #3383)

Example

```
version = "Two"
```

where_single_line

Forces the where clause to be laid out on a single line.

- Default value: false
- Possible values: true, false
- Stable: No (tracking issue: #3359)

```
false (default):
impl<T> Lorem for T
where
    Option<T>: Ipsum,
    // body
true:
impl < T > Lorem for T
where Option<T>: Ipsum
    // body
See also brace_style, control_brace_style.
wrap_comments
Break comments to fit on the line
  • Default value: false
  • Possible values: true, false
  • Stable: No (tracking issue: #3347)
false (default):
// Lorem ipsum dolor sit amet, consectetur adipiscing elit,
// sed do eiusmod tempor incididunt ut labore et dolore
// magna aliqua. Ut enim ad minim veniam, quis nostrud
// exercitation ullamco laboris nisi ut aliquip ex ea
// commodo consequat.
// Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididun
true:
// Lorem ipsum dolor sit amet, consectetur adipiscing elit,
// sed do eiusmod tempor incididunt ut labore et dolore
// magna aliqua. Ut enim ad minim veniam, quis nostrud
// exercitation ullamco laboris nisi ut aliquip ex ea
// commodo consequat.
```

Internal Options

${\tt emit_mode}$

Internal option

make_backup

Internal option, use --backup

print_misformatted_file_names

Internal option, use -l or --files-with-diff