The standard library is special. Let's change that.

Jacob Pratt 2023-09-13 Albuquerque





Disclaimer

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- We already are making the standard library less special.

What inherently must be special-cased?

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 - We can eliminate lots of these as well.

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 - Original implementation renamed to
 #[rustc_deprecated] before Rust 1.0

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```
#[deprecated(suggestion = "beta")]
fn alpha() {}
```

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Usable with cargo fix and rust-analyzer.

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- This code can only exist because the compiler is coupled with the standard library.

Promise to never implement a trait

Allow opting out of auto traits

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MutexGuard<'_, ()> :!Send
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PhantomData<MutexGuard<'_, ()>> : !Send
PhantomData<Cell<()>> : !Send + !Sync
PhantomData<*mut ()> : !Send + !Sync
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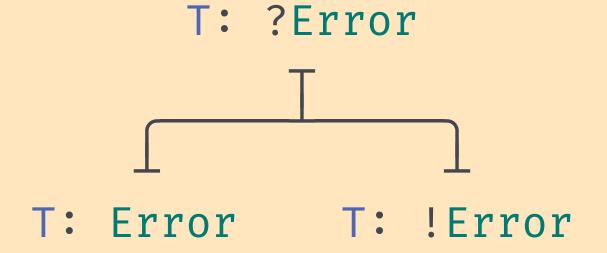
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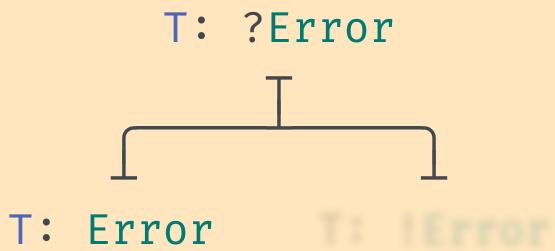
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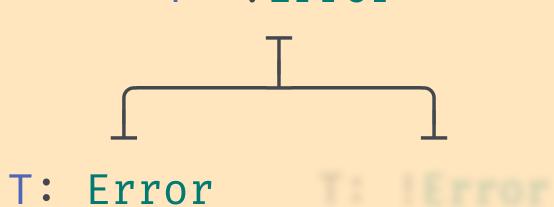
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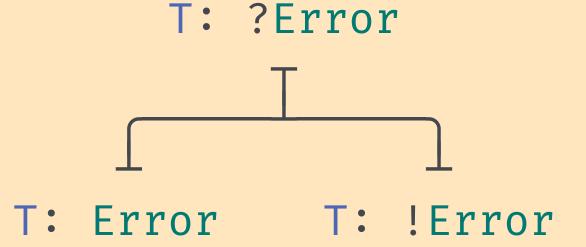
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impl<T> Default for [T; 0] {}
impl<T> Default for [T; 1]
where T: Default {}
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impl<T> Default for [T; 0] {}
default impl<T, const N: usize> Default for [T; N]
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Allows otherwise overlapping impls

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- "Relatively small extension to the trait system"

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pub trait Itertools: Iterator { /* ... */ }
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The end user chooses which crate's preludes to use.

```
[dependencies]
itertools = { prelude = true }
```

Stability attributes

```
#[stable(feature = "once_cell", since = "1.70.0")]
pub struct OnceCell<T> { /* ... */ }
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#[unstable(feature = "lazy_cell", issue = "109736")]
pub struct LazyLock<T, F = fn() -> T> { /* ... */ }
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Used to indicate if an item is stable or not

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• "Library authors can continue to use stability attributes"

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Jacob Pratt

- @jhpratt
- **@**
- @jhpratt@mastodon.social
- jacob@jhpratt.dev
- jhpratt.dev
- 0
- sponsor.jhpratt.dev





