

Error handling with From

- Used internally by `try!` and `?` to convert returned error to error type in returned `Result`
- Used to force trait implementers user to provide conversion for custom error types

```

1  #[derive(Debug)]
2  pub struct InternalError(i32);
3
4  #[derive(Debug)]
5  pub enum ModuleError {
6      Internal(InternalError),
7      Other,
8  }
9
10 impl From<InternalError> for ModuleError {
11     fn from(error: InternalError) -> ModuleError {
12         ModuleError::Internal(error)
13     }
14 }
15
16 fn calculate(a: i32, b: i32) -> Result<i32, InternalError> {
17     if a >= b {
18         Ok(a - b)
19     } else {
20         Err(InternalError(a + b))
21     }
22 }
23
24 pub fn do_calculation(a: i32, b: i32) -> Result<i32, ModuleError> {
25     Ok(a + calculate(a, b)?)
26 }
27
28 fn main() {
29     println!("{:?}", calculate(2, 3));
30     println!("{:?}", do_calculation(2, 3));
31 }

```

```

Err(InternalError(5))
Err(Internal(InternalError(5)))

```