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## [Handle runtime panic with try macro](#)

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I'm trying to import a CSV file using [the csv crate](#), but the problem is that some fields contain non UTF8 values, so I'm getting a runtime panic:

```
thread '<main>' panicked at 'called `Result::unwrap()` on an `Err` value: Decode("Could not convert bytes \'FromUtf8Error { by
```

This is how my code looks like:

```
extern crate csv;

fn main() {
    let mut rdr = csv::Reader::from_file("data.csv").unwrap();
    for record in rdr.decode() {
        let rec: Vec<String> = record.unwrap();
        println!("{}", rec[0]);
    }
}
```

I'd like to error handle that panic situation somehow, so I was wondering should I maybe use a `try!` macro for that? Something like this:

```
let rec: Vec<String> = try!(record.unwrap());
```

Of course this is producing an error

```
error: the trait `rustc_serialize::serialize::Decodable` is not implemented for the type `core::result::Result<_, _>` [E0277]
```

What would be the correct syntax?

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asked May 26, 2015 at 15:41

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If you want to be more robust with respect to encoding, `rust-encoding` should help: [lifthrasiir.github.io/rust-encoding/encoding](#) --- Alternatively, you can decode into `Vec<Vec<u8>>` if you just want to ignore encoding altogether.

BurntSushi5 – [BurntSushi5](#)

2015-05-26 16:31:14 +00:00

Commented May 26, 2015 at 16:31

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You are facing two problems:

1. That's not how the `try!` macro works
2. You can't use `try!` in `main`

The [try! macro](#) is pretty simple. All it does is see if the argument is a `Result::Err`. If it is, the error is returned *from the current function*. If the argument is a `Result::Ok`, then the inner value is extracted and is the result of evaluating `try!`. Note that the argument must always be of type `Result`.

The second problem is that `main` is defined to *not return any values*. That means you can't use `try!` in `main`, as `try!` wants to return a value. Instead, you need to handle errors the "manual" way:

```
extern crate csv;

fn main() {
    let mut rdr = match csv::Reader::from_file("data.csv") {
        Ok(file) => file,
        Err(e) => println!("Put nicer error handling here"),
    };

    for record in rdr.decode() {
        let rec: Vec<String> = match record {
            Ok(rec) => rec,
            Err(e) => println!("Put nicer error handling here"),
        };
        println!("{}", rec[0]);
    }
}
```

I'd like to error handle that panic situation somehow

This is a common misconception. You **can't** handle panics. They aren't exceptions (and Rust doesn't have exceptions). Panics mean *thread death*. The best you can do is spawn a thread and deal with that thread dying. You don't really get to do anything specific. This is what the `Result` type is all about.

`Result::unwrap` and `Option::unwrap` are methods that mean "If this isn't `{Ok, Some}`, then panic right now".

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answered May 26, 2015 at 15:52

[Shepmaster](#)

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