Folding Laundry

From zipping, filtering and folding – when your laundry gets Rusty

Mert Yildiz, 2024/09/25

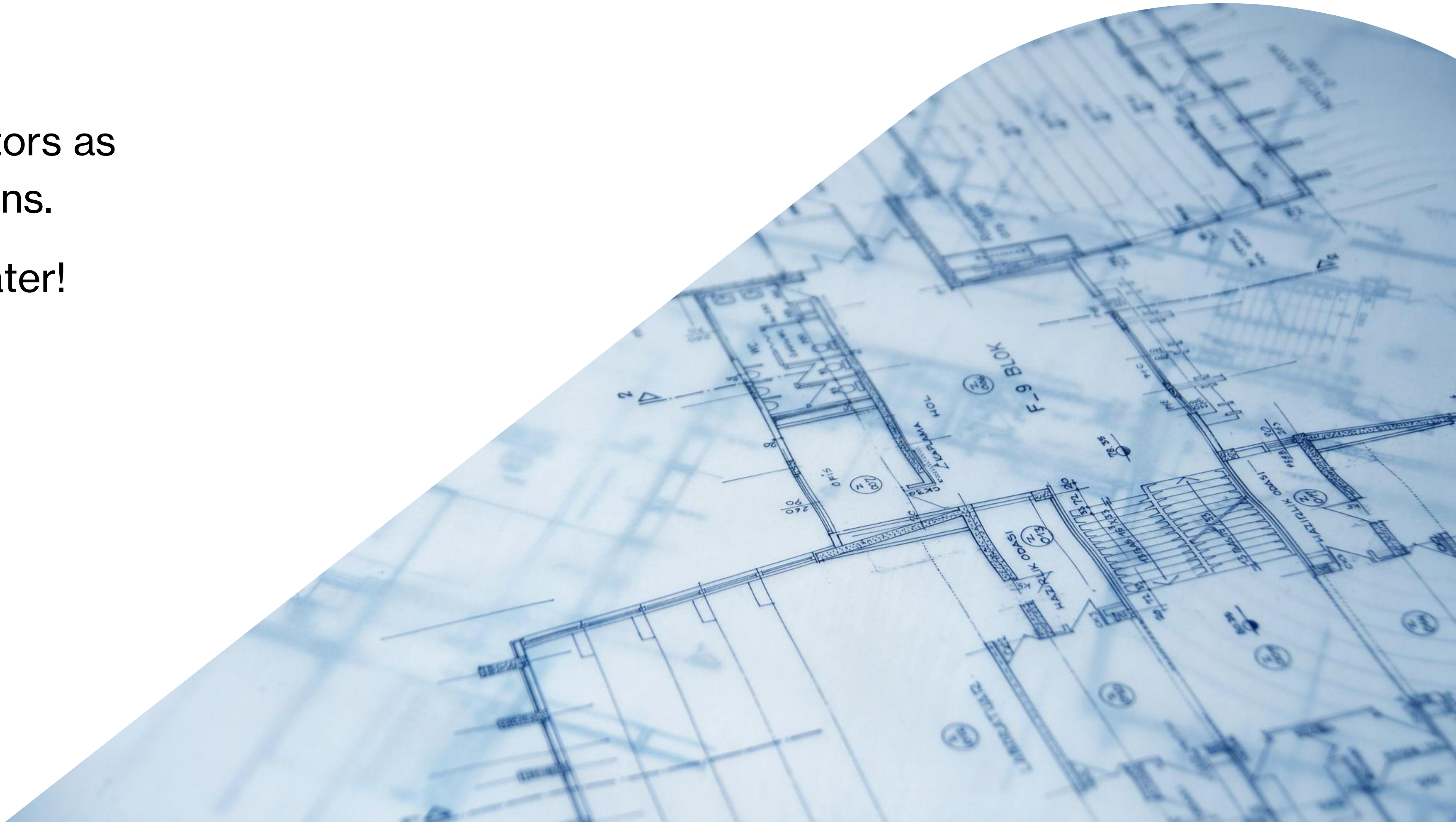
Agenda

1. (Quick) Introduction to iterators
2. (Quick) Introduction to chaining combinators
3. Exercises

1. Iterators as Blueprints

We can understand iterators as blueprints for computations.

Create them now – pay later!



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println!("{:#?}", result);
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```
[
    "54",
]
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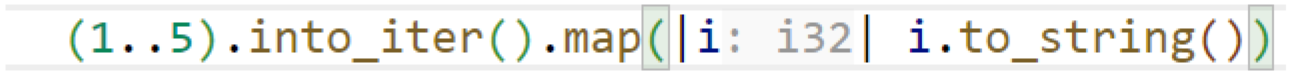
- `map()` – Transform type A to type B.



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(1..5).into_iter().map(|i: i32| i.to_string())
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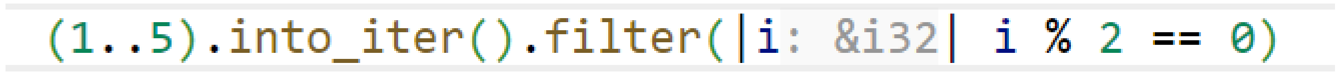
- `map()` – Transform type A to type B.
- `filter()` – Filter out elements.



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- `filter()` – Filter out elements.
- `filter_map()` – Transform and filter in one go!

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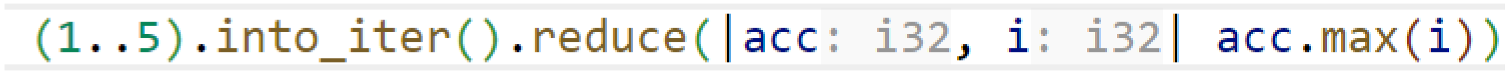

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(1..5).into_iter().reduce(|acc: i32, i: i32| acc.max(i))
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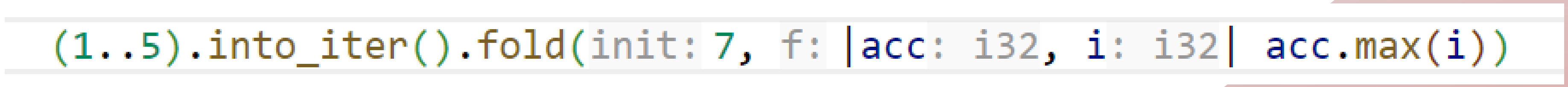
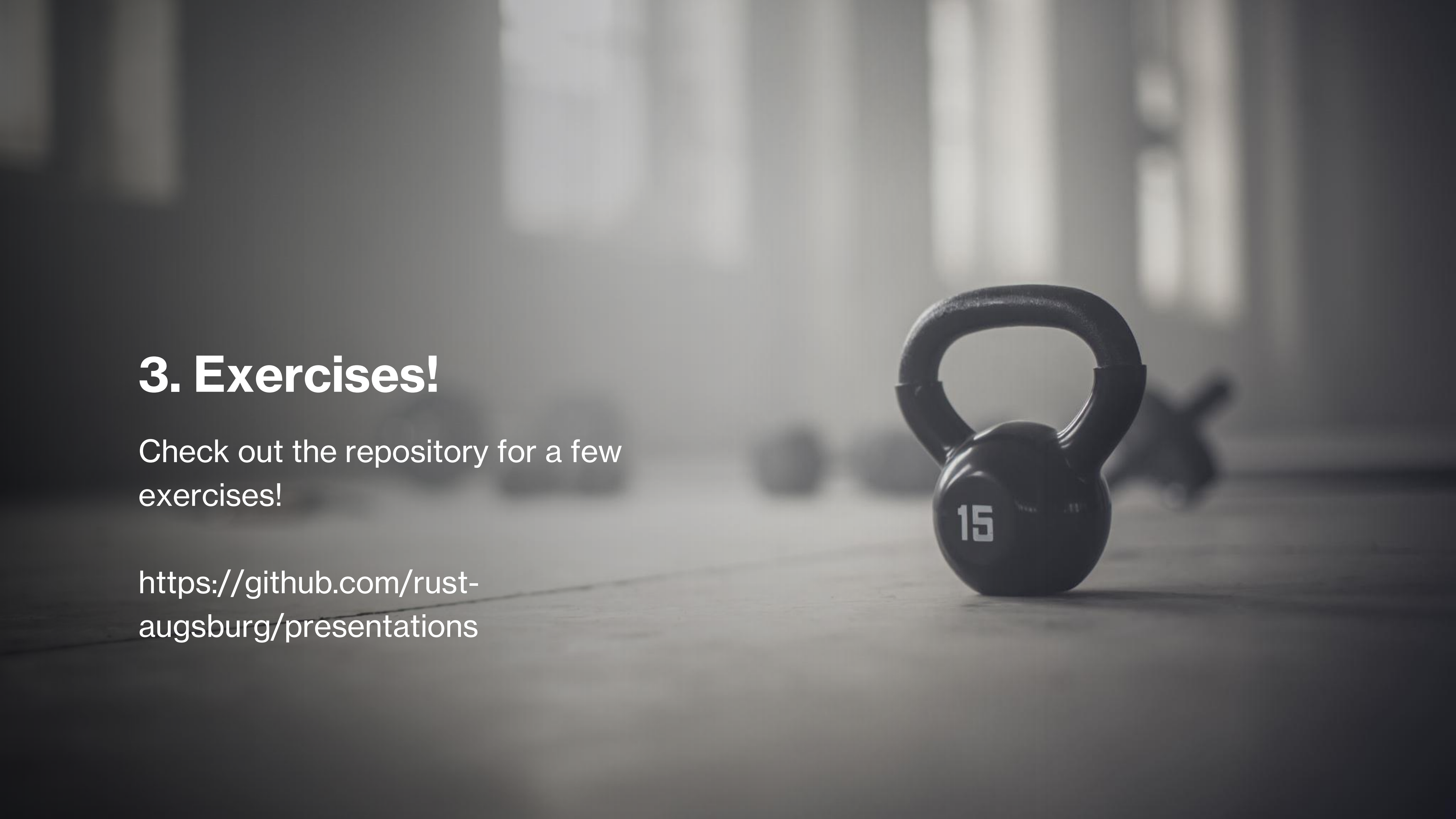
- `map()` – Transform type A to type B.
- `filter()` – Filter out elements.
- `filter_map()` – Transform and filter in one go!
- `reduce()` – Boil down n elements to only one!
- `fold()` – Like `reduce`, but you provide an inital value!



```
(1..5).into_iter().fold(init: 7, f: |acc: i32, i: i32| acc.max(i))
```



3. Exercises!

Check out the repository for a few exercises!

https://github.com/rust-augsburg/presentations

Contact

mert.yildiz@posteo.net