





```
■ iterate(|cycle| {  
    cycle.filter(|&x| x > 0)  
    ■ map(|x| x - 1)  
    ■ exchange(|&x| x)  
})
```

```
fn main() {  
    timely::execute_from_args(std::env::args(), |worker| {  
  
        let input = worker.new_input();  
        let probe = worker.dataflow(|scope| {  
            input.to_stream(scope)  
  
                .probe()  
        });  
  
        for round in 0..10 {  
            input.send(round * round);  
            input.advance_to(round + 1);  
            while probe.less_than(input.time() - 2) {  
                worker.step();  
            }  
        }  
    });  
}
```



concurrent iterations

**better utilizations!**





```
// convenient!  
stream.map(logic);
```

```

fn main() {
    timely::execute_from_args(std::env::args(), |worker| {

        let input = worker.new_input();
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            input.to_stream(scope)
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        for round in 0..10 {
            input.send(round * round);
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            while probe.less_than(input.time() - 2) {
                worker.step();
            }
        }
    });
}

```

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```

        .iterate(|cycle| {
            cycle.filter(|&x| x > 0)
                .map(|x| x - 1)
                .exchange(|&x| x)
        })

```

while probe.less\_than(input.time() - 2) {