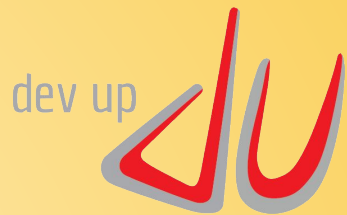




Reclaiming Software as a Craft

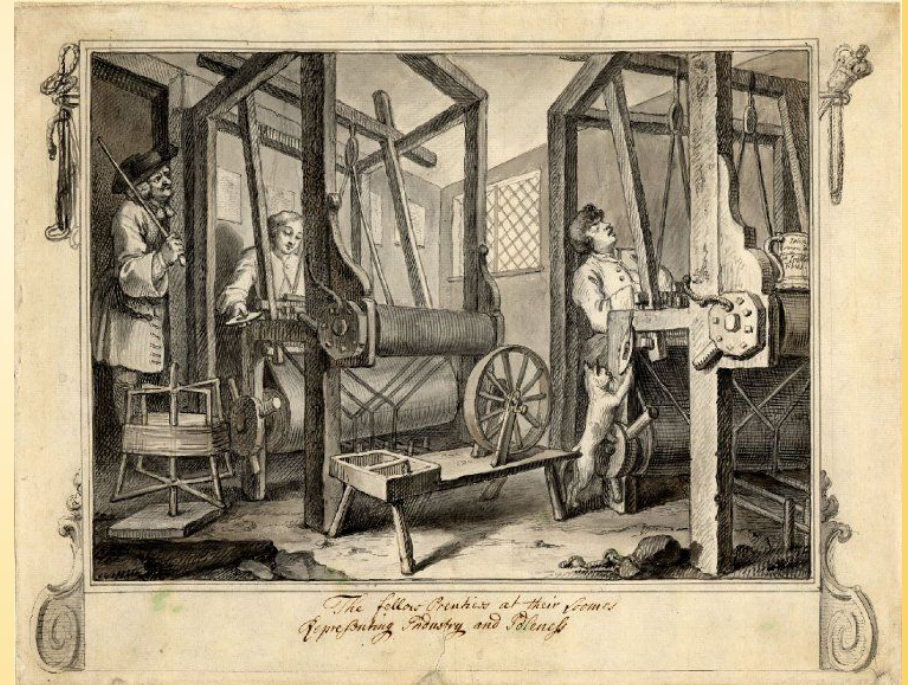
Darren Hale

Thank you to our Sponsors!



Areas of Focus

- Coding
- Operations
- Communication
- Learning

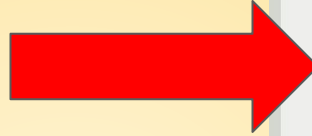
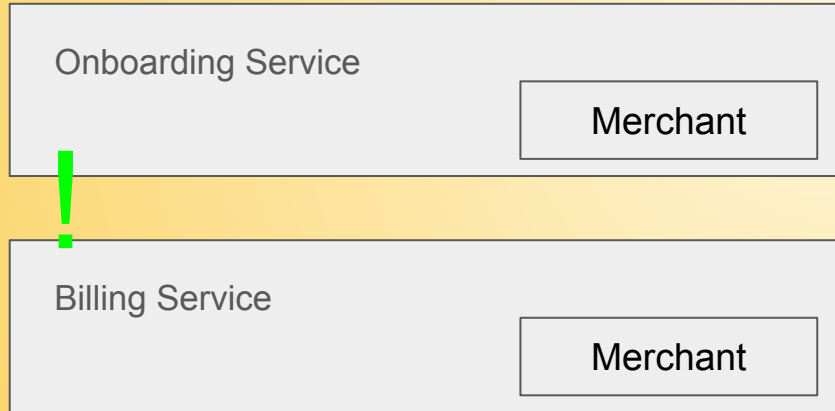


Coding



Coding

DRY (Don't Repeat Yourself)



```
namespace Samples
{
    public class Merchant
    {
        public int ID;
        public String Name;
        public String Address1;
        public String Address2;
        public String City;
        public String State;
        public String PostalCode;
        public decimal YearlyVolume;
        public int UserCount;
    }

    public class Address
    {
        public String Address1;
        public String Address2;
        public String City;
        public String State;
        public String PostalCode;
    }
}
```

Coding

Orthogonality



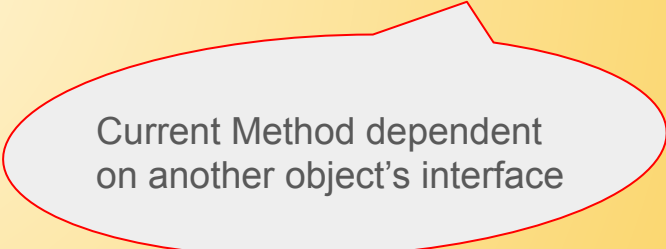
```
namespace Orthogonality
{
    public class Driver
    {
        public Result Drive(ICar automobile)
        {
            return automobile.Accelerate();
        }
    }

    public class Ferrari : ICar
    {
        public Result Accelerate()
        {
            this.ValidateFuel();
            this.ValidateRPM();
            this.GoFast();
            this.BluetoothController.DisconnectAll();
        }
    }
}
```

Coding

Minimize Coupling (Law of Demeter)

```
var bumperPrice = currentOrder.MainLineItem.Part[2].Price;
```



Current Method dependent
on another object's interface

Coding

Tracer Bullets



Coding Skeletons



Coding

Abstractions in Code, Details in Config

```
namespace Zoo
{
    public interface IAnimal
    {
        public String AnimalType;
        public String CommonName;
        public Covering CoveringType;
        public Color CoveringColor;
        public bool HoovesOrFeet;
        .
        .
        .
        public void Eat(INutrients food);
        public void Walk(CompassPoint direction, float distance);
        .
        .
        .
    }
}
```

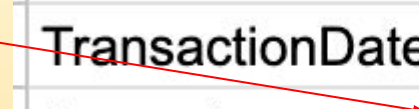
ID	AnimalType	CommonName	CoveringType	CoveringColor	HoovesOrFeet
1001	Mammal	Zebra	Fur	Mixed	Hooves
1002	Reptile	Iguana	Scales	Green	Feet
1003	Mammal	Panda	Fur	Mixed	Feet
1004	Marsupial	Koala	Fur	Gray	Feet

Coding

Code Deliberately

Don't deceive ourselves that something can't happen. (i.e. Y2K)

Oops!

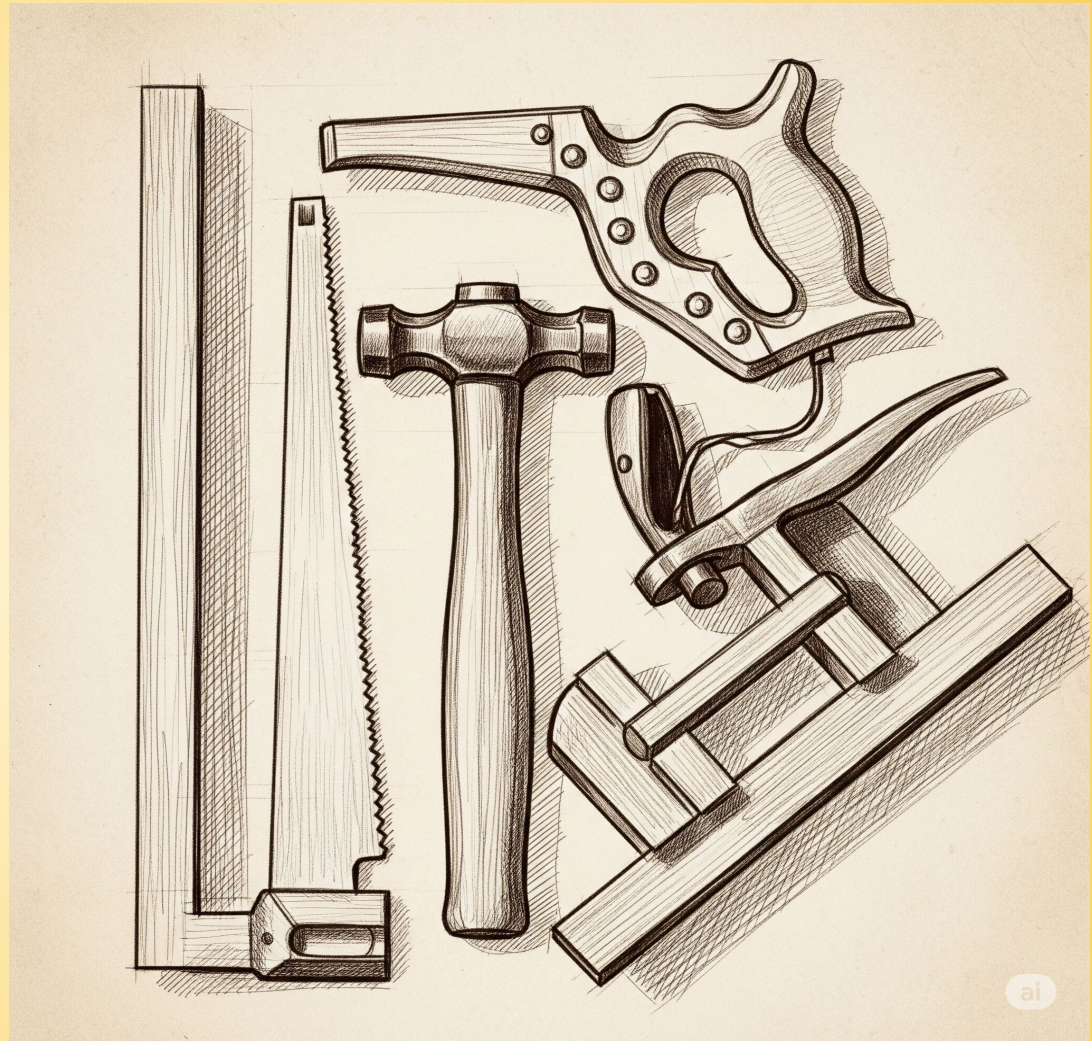


TransactionID	Int
TransactionDate	DateTime
Amount	Decimal(10,4)
CardNum	Encrypted
MerchantID	Int

Coding

Tooling

- Plain Text
- Editor
- CLI/Shell
- Source Control
- AI



Coding

Good Enough Code

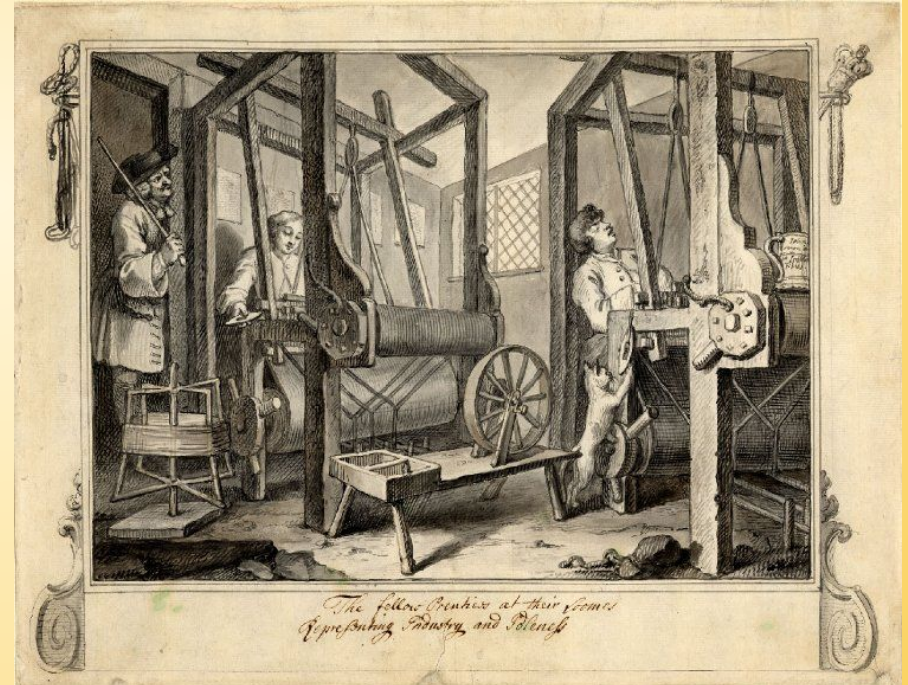


Coding

Unit Testing

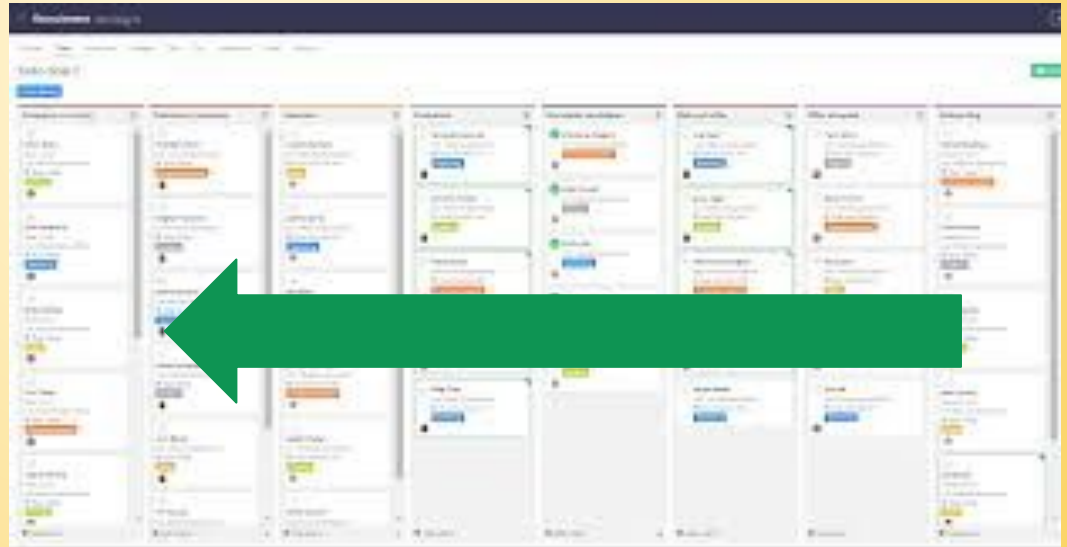
Unit Tests Help Us Design Code!

Operations



Operations

DevOps movement attempts to push operational concerns further left (toward the developer). This is great! I want to own everything!



Operations

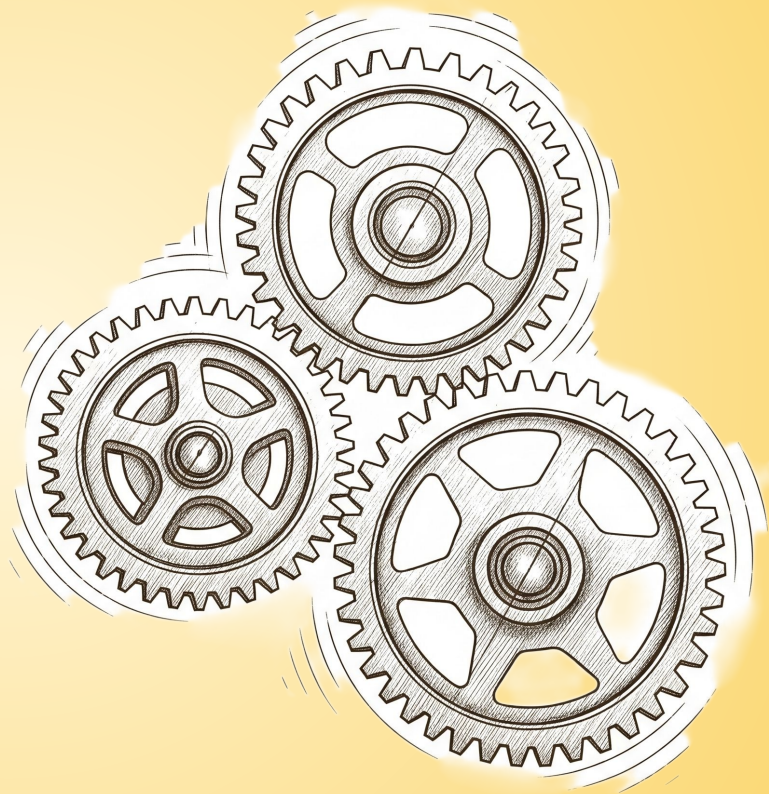
Many operational aspects of our work get easier when they become part of our *daily* work.

- ❑ Grab work ticket
- ❑ Pull Down Code
- ❑ Run Unit Tests
- ❑ Update code packages
- ❑ Address vulnerabilities
- ❑ Run Unit tests
- ❑ Implement code
- ❑ Run unit tests
- ❑ Commit and create PR
- ❑ Reap rewards!

Operations

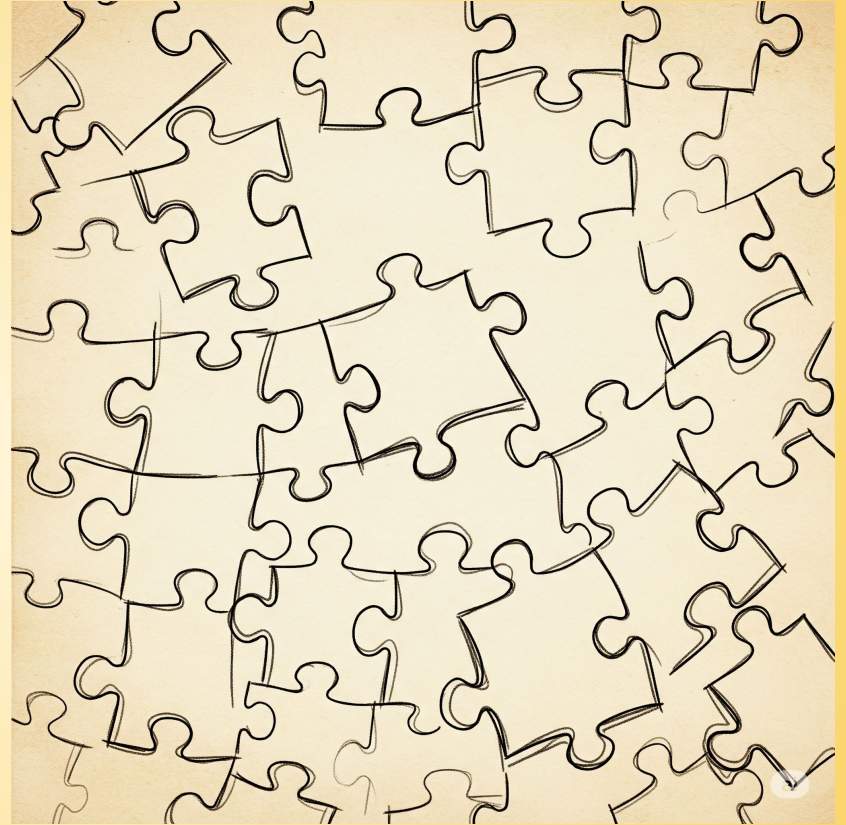
Automate Everything!

- Builds
- Tests
- Deployments
- Recovery
- etc.



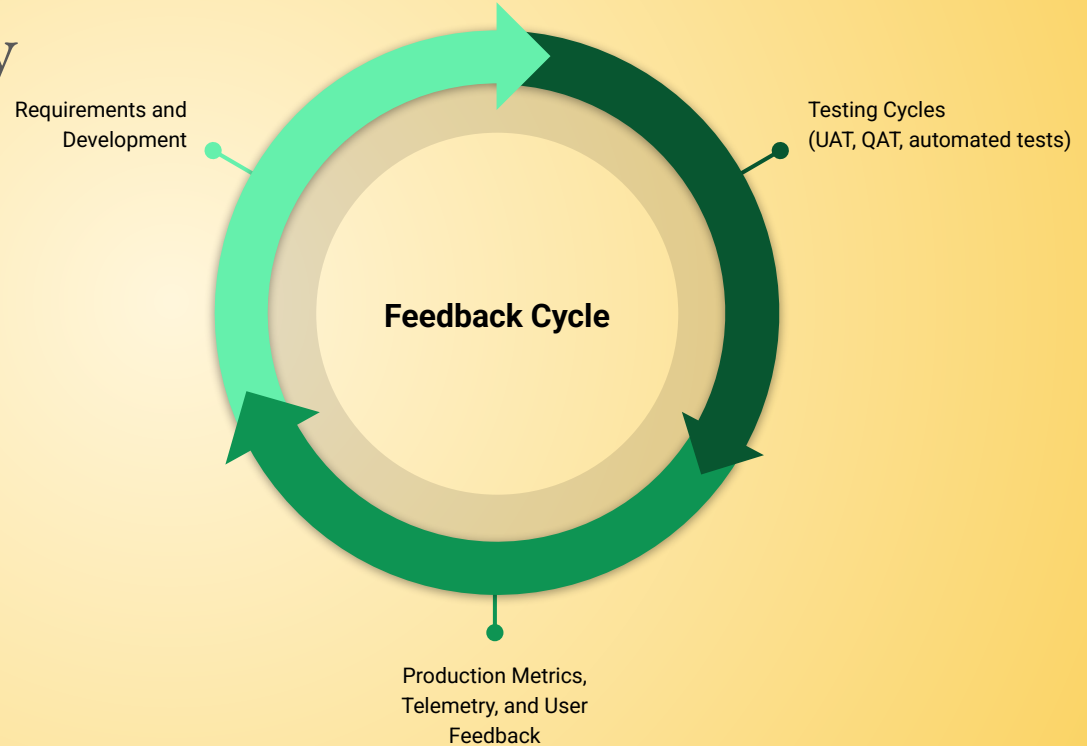
Operations

Low-risk Releases



Operations

Feedback and Telemetry



Operations

Optimize for:

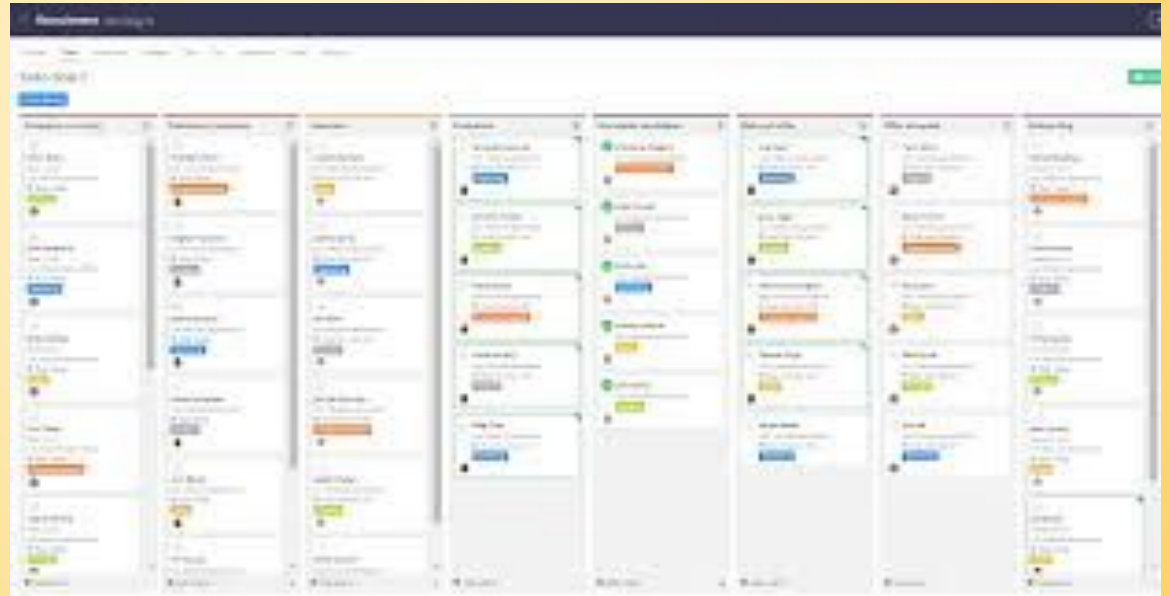
- Fast Delivery (left to right)
- Fast Feedback
- High-Trust Culture for Experimentation (can better utilize Tracer Bullets)

Communication



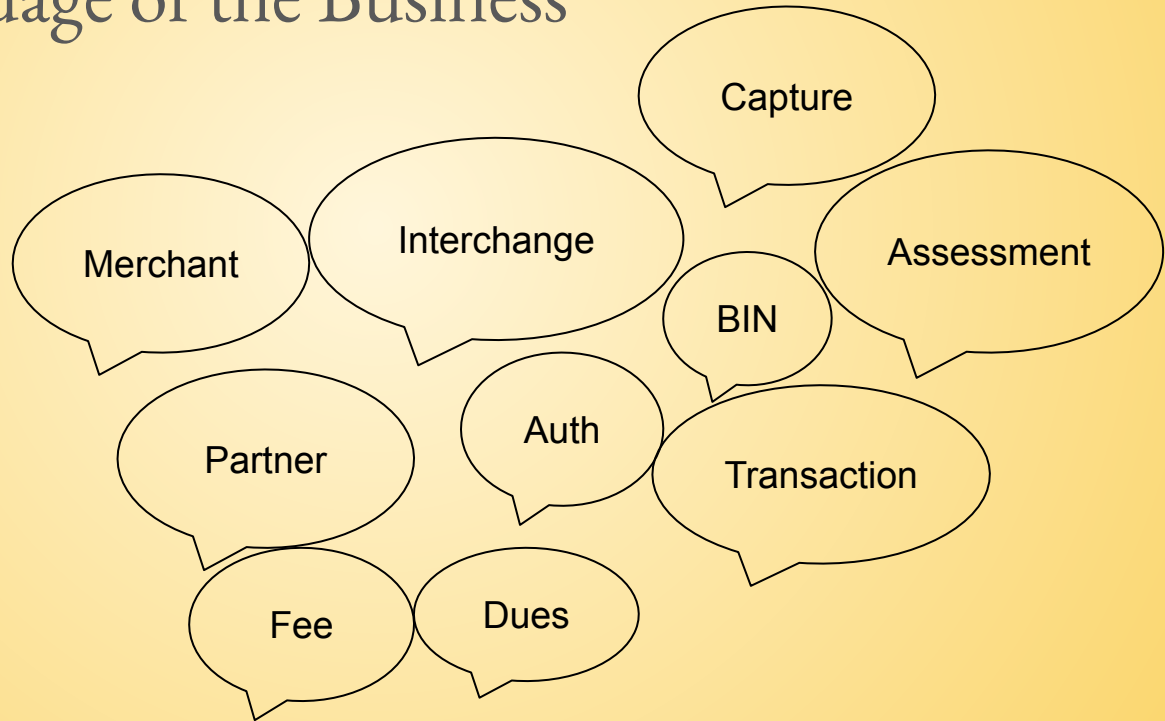
Communication

Make Work Visible



Communication

Code with Language of the Business



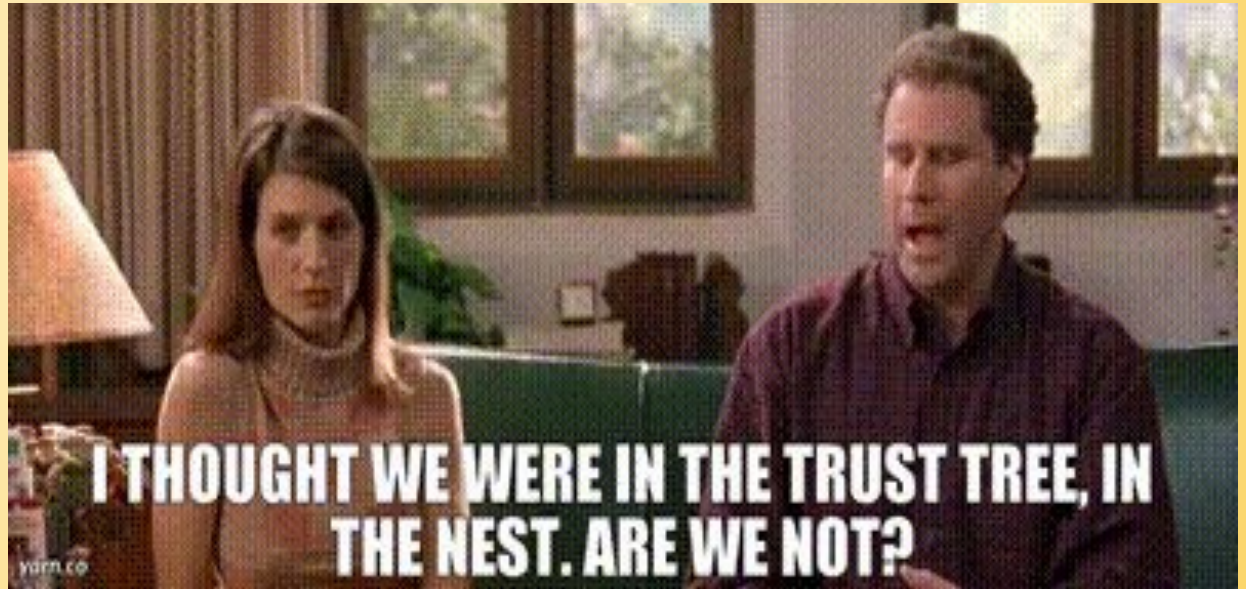
Communication

Coding is a Social Activity



Communication

Post Mortems



Communication

Retrospectives



Learning



Learning Continuously



Learning

Intellectual Curiosity (why?)



Learning

Feedback Loops

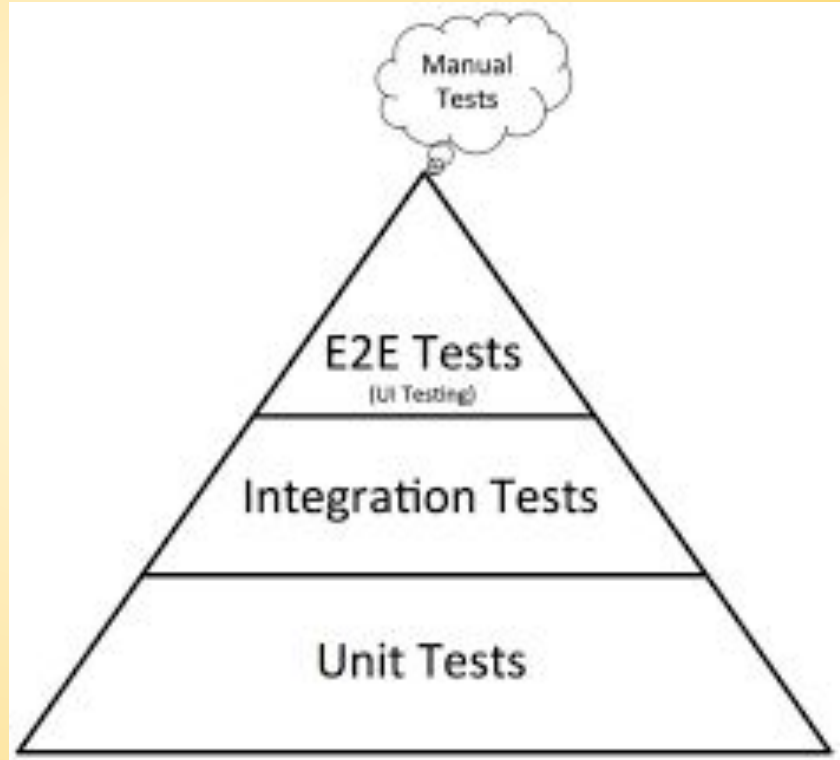
Unit Tests

Telemetry

Customers

Learning

Automated Tests



Learning

Each Other

Have Fun!



Questions?

References

Pragmatic Programmer, Andrew Hunt and David Thomas

The DevOps Handbook, Gene Kim, Jez Humble, Patrick DeBois, and John Willis

Site Reliability Engineering, Edited By: Betsy Beyer, Chris Jones, Jennifer Petoff, and Niall Richard Murphy



Reclaiming Software as a Craft

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