Final Words

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Legacy Code Is

Code developed with older technologies

Code inherited from an older version of the application

Code inherited from someone else

Code that is no longer under development, only patched

Code that has an excessive amount of technical debt

Modifying Legacy Code

Evaluate assumptions

Write automated code tests

Tests pass

Refactor

Tests pass

Make the change

Tests pass

Fixing Bugs in Legacy Code

Evaluate the bug

Write an automated code test

Test fails

Fix the Issue

Tests pass

Refactor?

Tests pass



For More Information

- Clean Code: Writing Code for Humans
- Code Contracts
- Refactoring Fundamentals
- Understanding and Eliminating Technical Debt
- Mastering Visual Studio 2012 (Automated Code Testing Module)

Defensive Coding

Clean Code



- Improves Comprehension
- Simplifies Maintenance
- Reduces Bugs

Testable Code



Unit Tests



- Improves Quality
- Confirms Maintenance
- Reduces Bugs

Validation

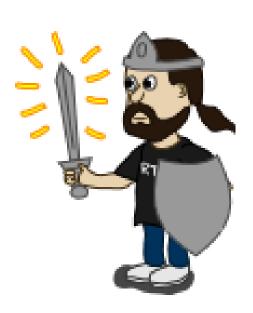
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Exception Handling



- Improves Predictability
- More Consistent
- Reduces Bugs

Defensive Coding



```
public void PlaceOrder(Customer customer,
                     Order order.
                     Payment payment,
                     bool allowSplitOrders,
                     bool emailReceipt)
customerRepositorv.Add(customer);
orderRepositorv.Add(order);
inventoryRepository.OrderItems(order,
                      allowSplitOrders);
payment.ProcessPayment(payment);
if (emailReceipt)
  customer.ValidateEmail():
  customerRepository.Update();
  emailLibrary.SendEmail(customer.EmailAddress,
                    "Here is your receipt");
```

Defensive Coding

