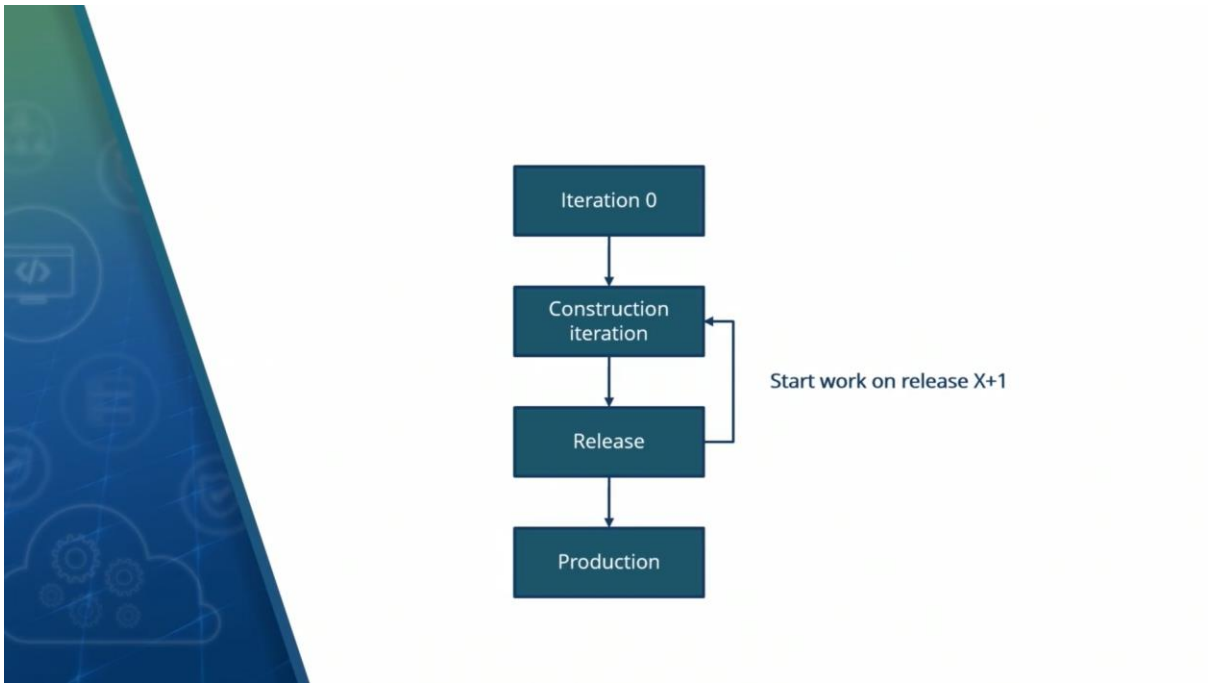
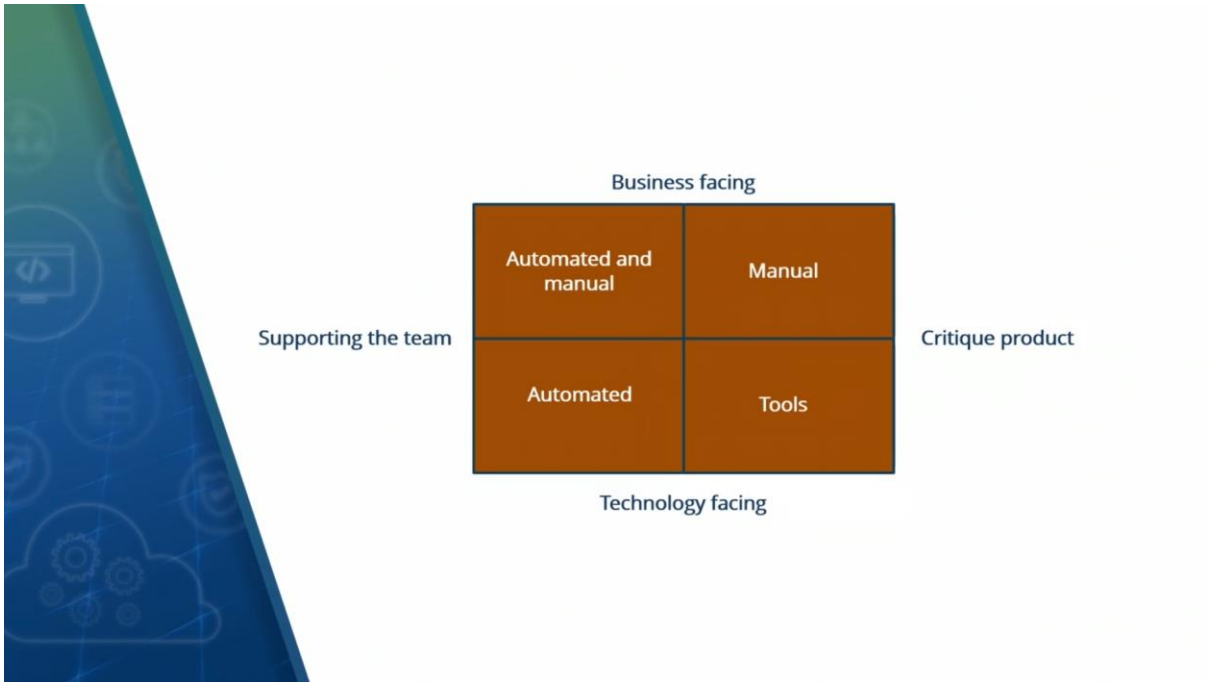
Agile testing principles

A T strategies



A T Plan checklist

Agile testing Quadrant



Result test pattern
State test pattern
Database test pattern
Integration test pattern
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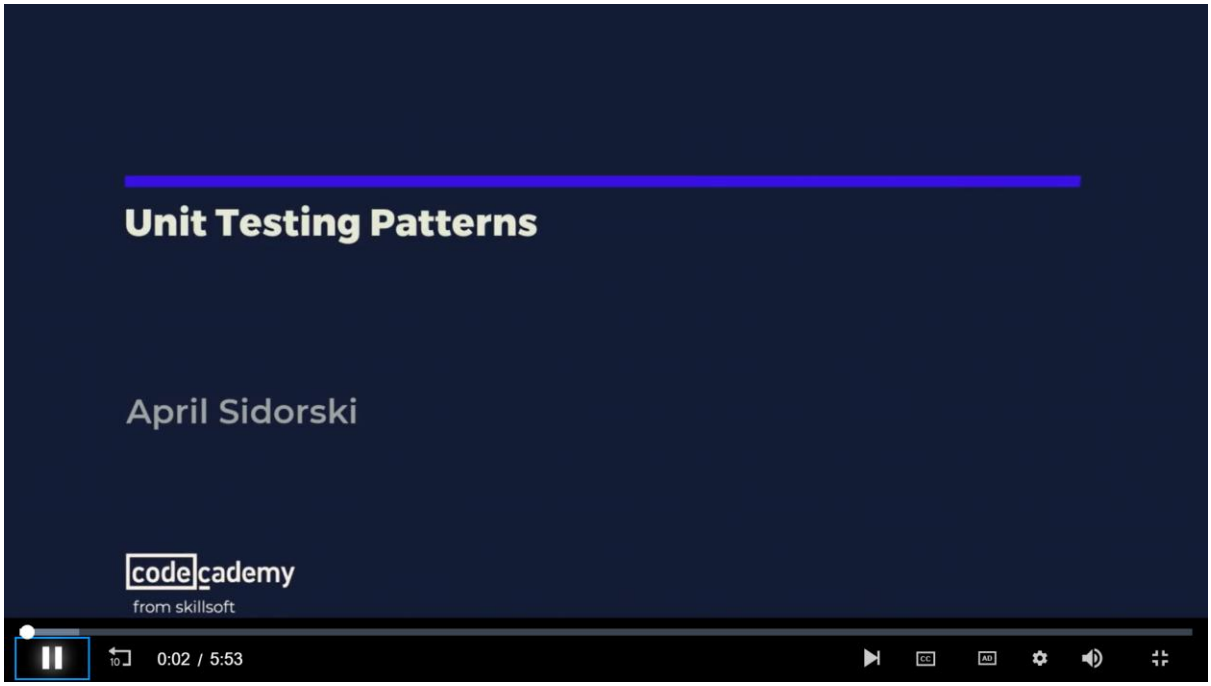
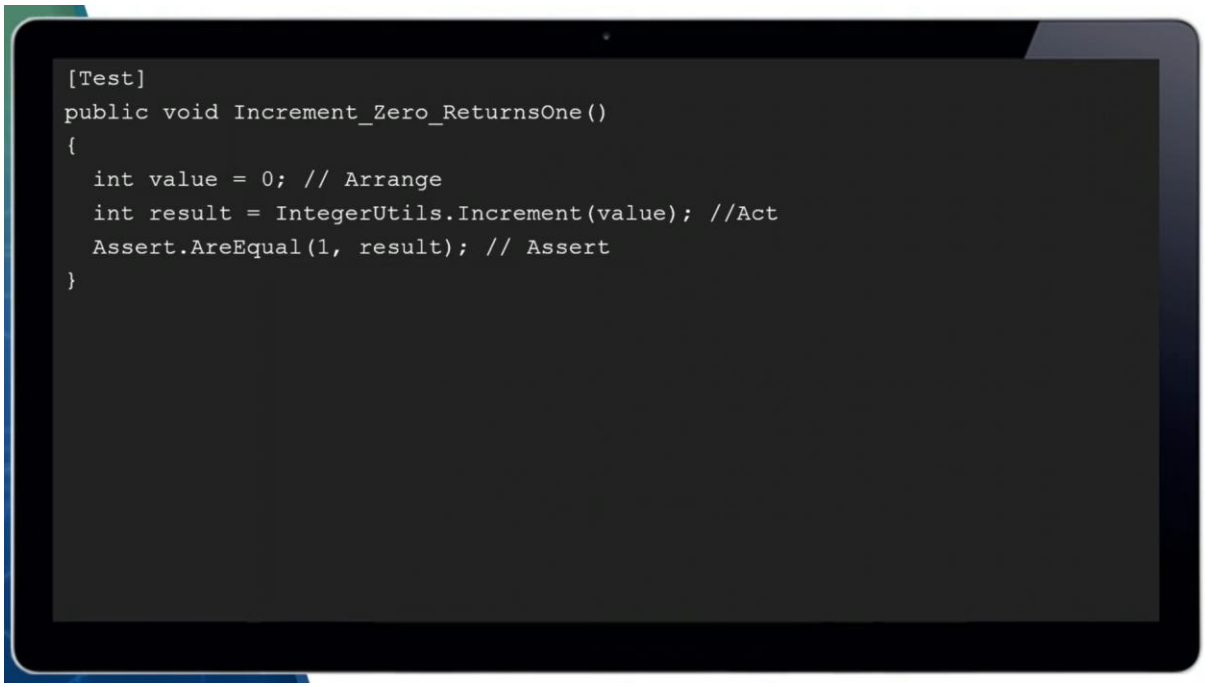
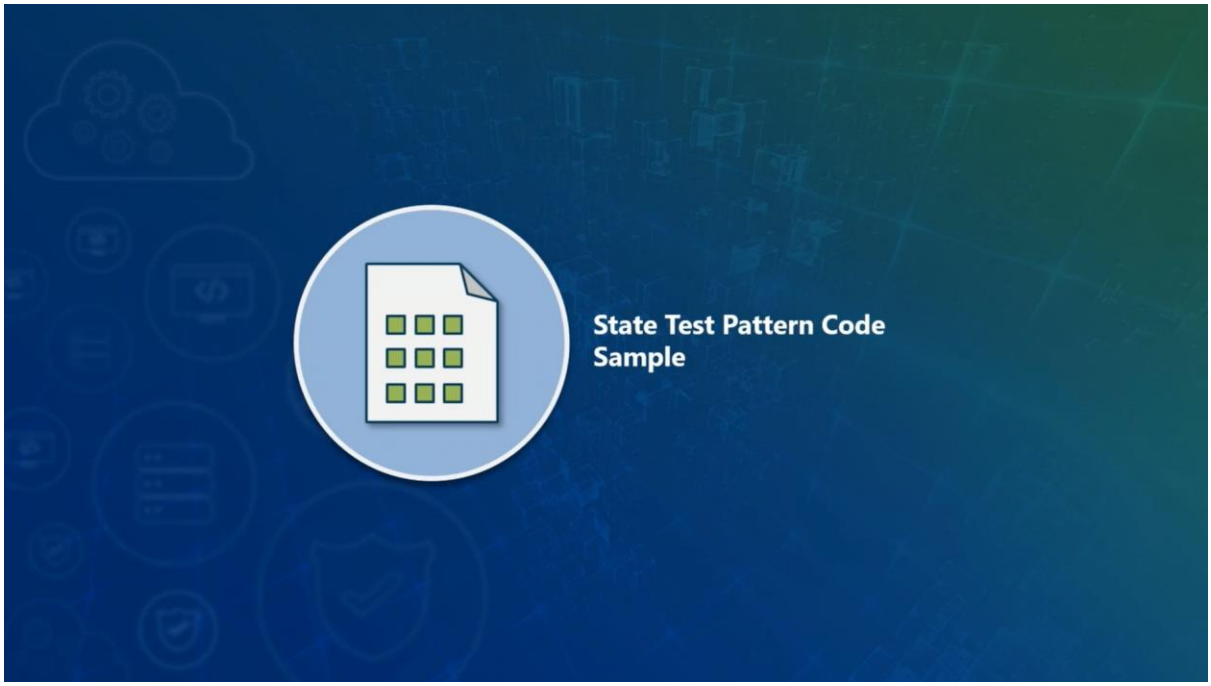
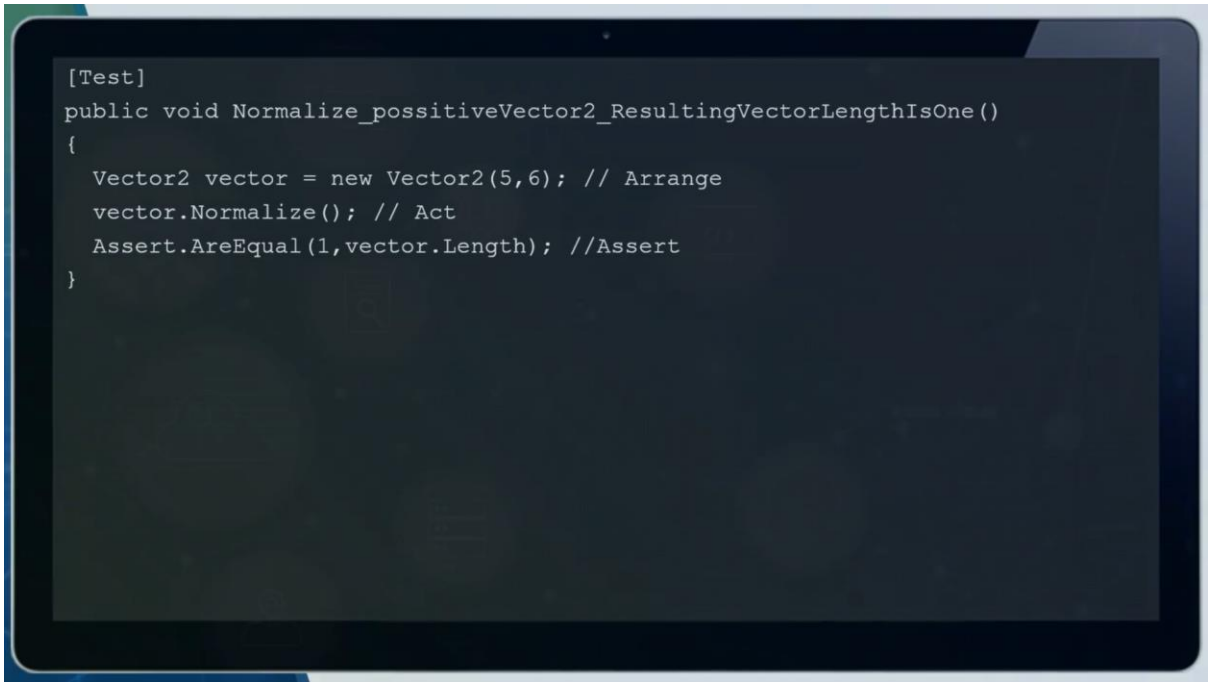
Result Test Pattern Code Sample
0:40 / 5:53


Unit Testing Patterns
April Sidorski
codecademy
from skillsoft
0:02 / 5:53


[Test]
public void Increment_Zero_ReturnsOne()
{
int value = 0; // Arrange
int result = IntegerUtils.Increment(value); //Act
Assert.AreEqual(1, result); // Assert
}





```
[Test]
public void Normalize_possitiveVector2_ResultingVectorLengthIsOne()
{
  Vector2 vector = new Vector2(5,6); // Arrange
  vector.Normalize(); // Act
  Assert.AreEqual(1,vector.Length); //Assert
}
```

Database Test Pattern Code Sample
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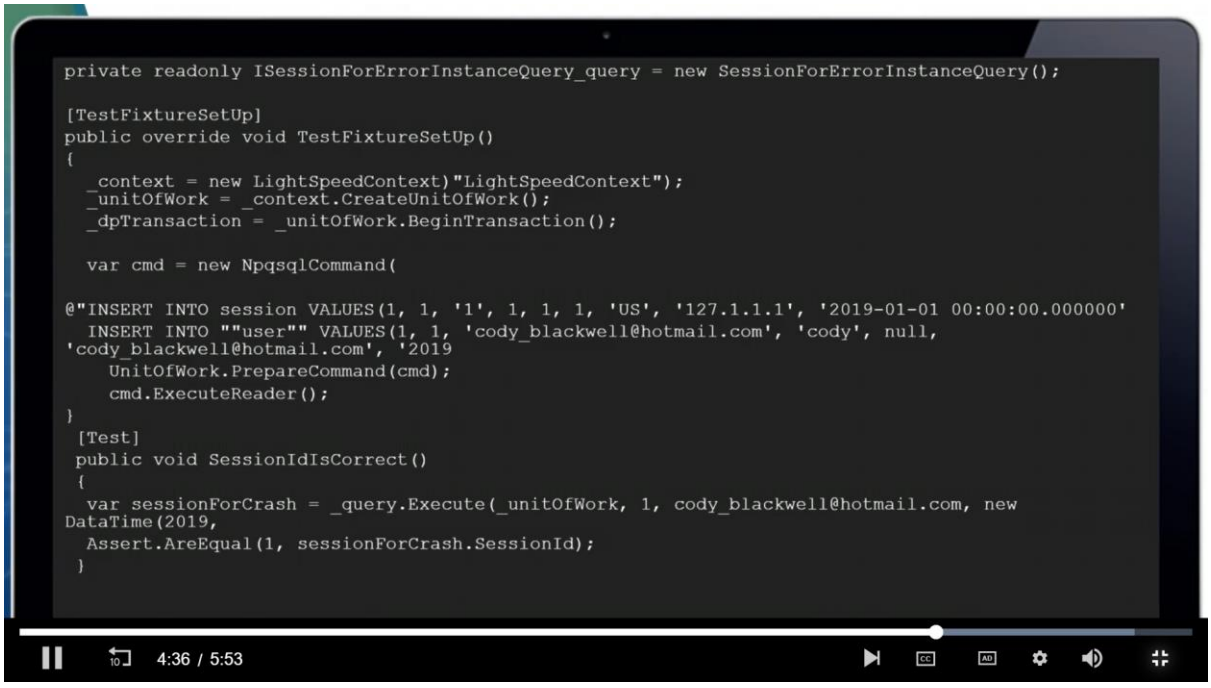
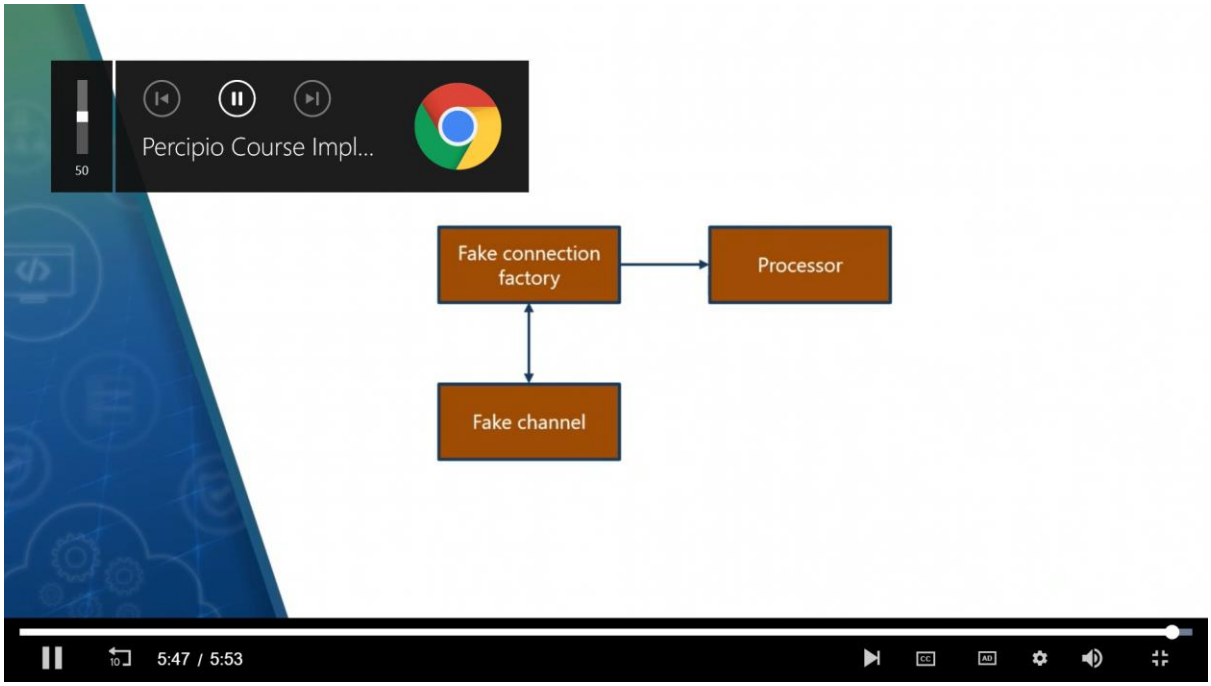
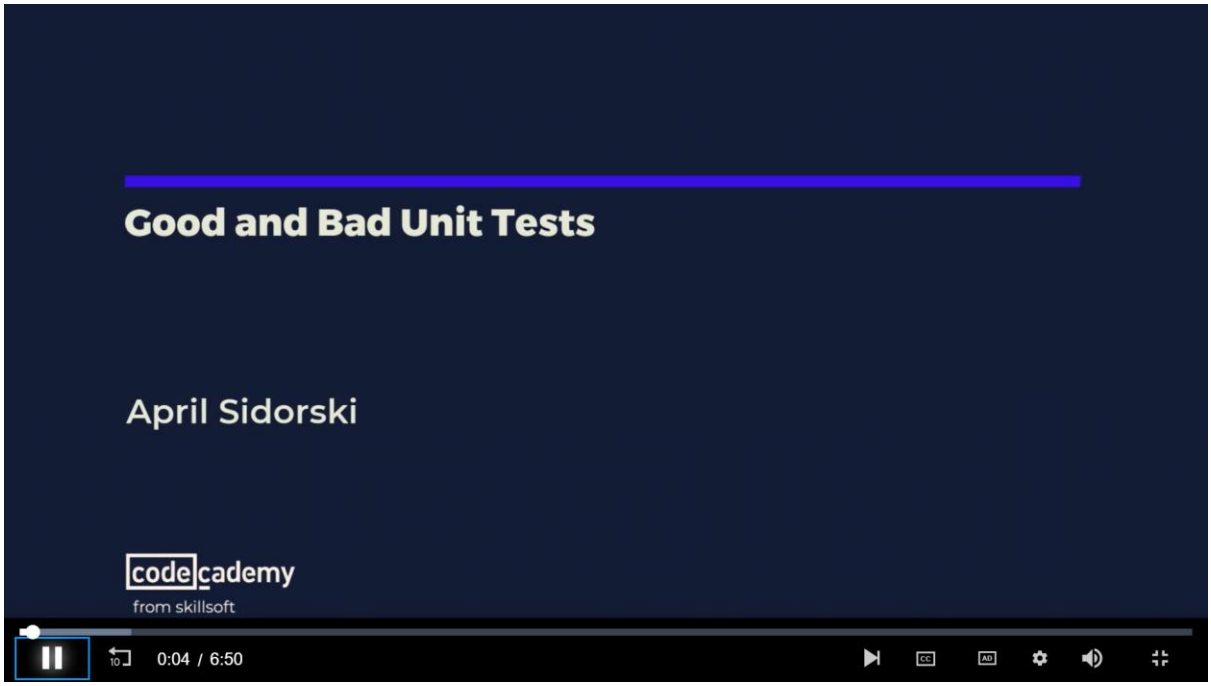

private readonly ISessionForErrorInstanceQuery _query = new SessionForErrorInstanceQuery();
[TestFixtureSetUp]
public override void TestFixtureSetUp()
{
_context = new LightSpeedContext)"LightSpeedContext");
_unitOfWork = _context.CreateUnitOfWork();
_dpTransaction = _unitOfWork.BeginTransaction();
var cmd = new NpqsqlCommand(
@"INSERT INTO session VALUES(1, 1, '1', 1, 1, 1, 'US', '127.1.1.1', '2019-01-01 00:00:00.000000'
INSERT INTO ""user"" VALUES(1, 1, 'cody_blackwell@hotmail.com', 'cody', null,
'cody_blackwell@hotmail.com', '2019
UnitOfWork.PrepareCommand(cmd);
cmd.ExecuteReader();
}
[Test]
public void SessionIdIsCorrect()
{
var sessionForCrash = _query.Execute(_unitOfWork, 1, cody_blackwell@hotmail.com, new
DataTime(2019,
Assert.AreEqual(1, sessionForCrash.SessionId);
}
4:36 / 5:53


50
Percipio Course Impl...
Fake connection factory
Processor
Fake channel
5:47 / 5:53


Good and Bad Unit Tests
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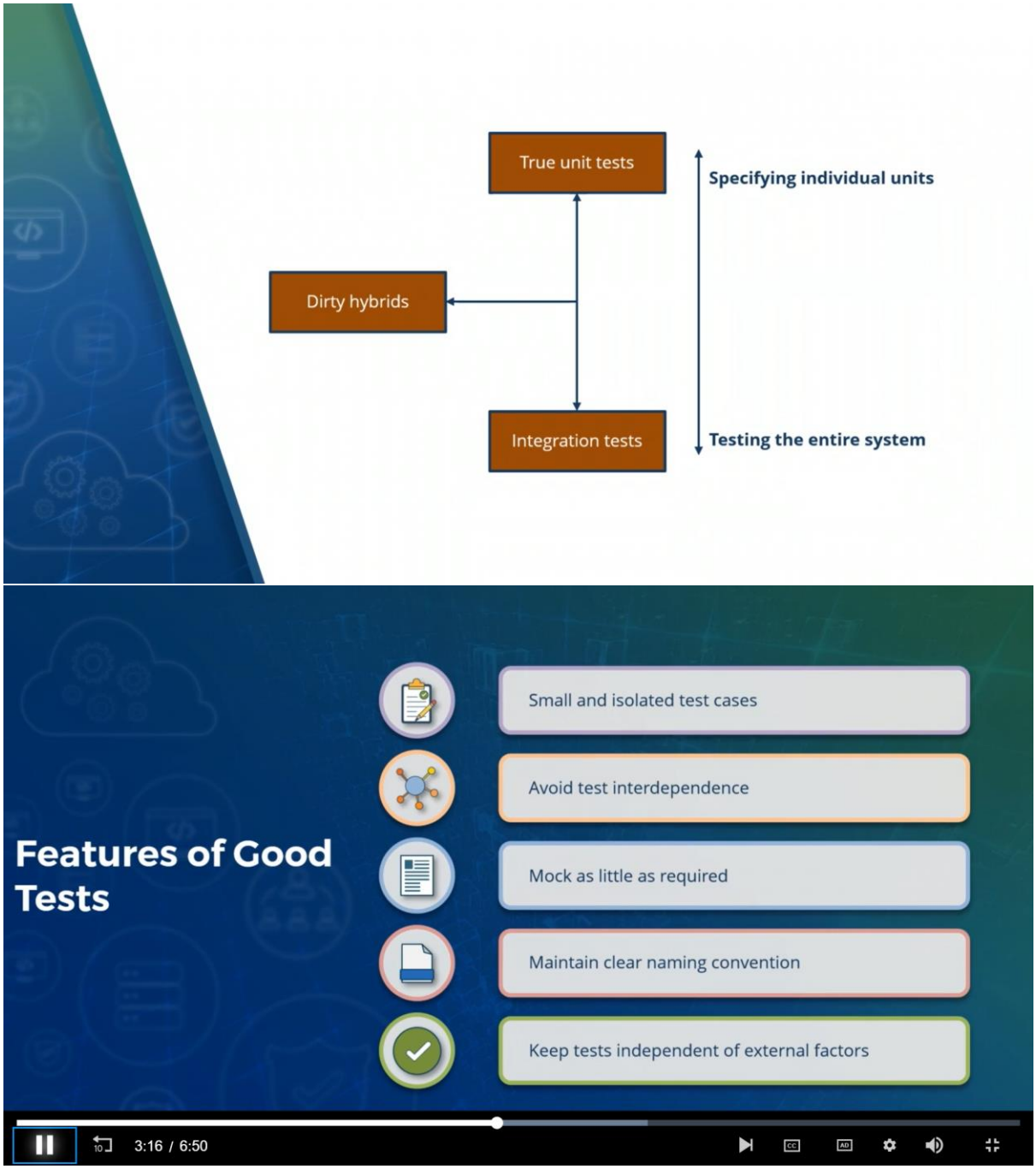
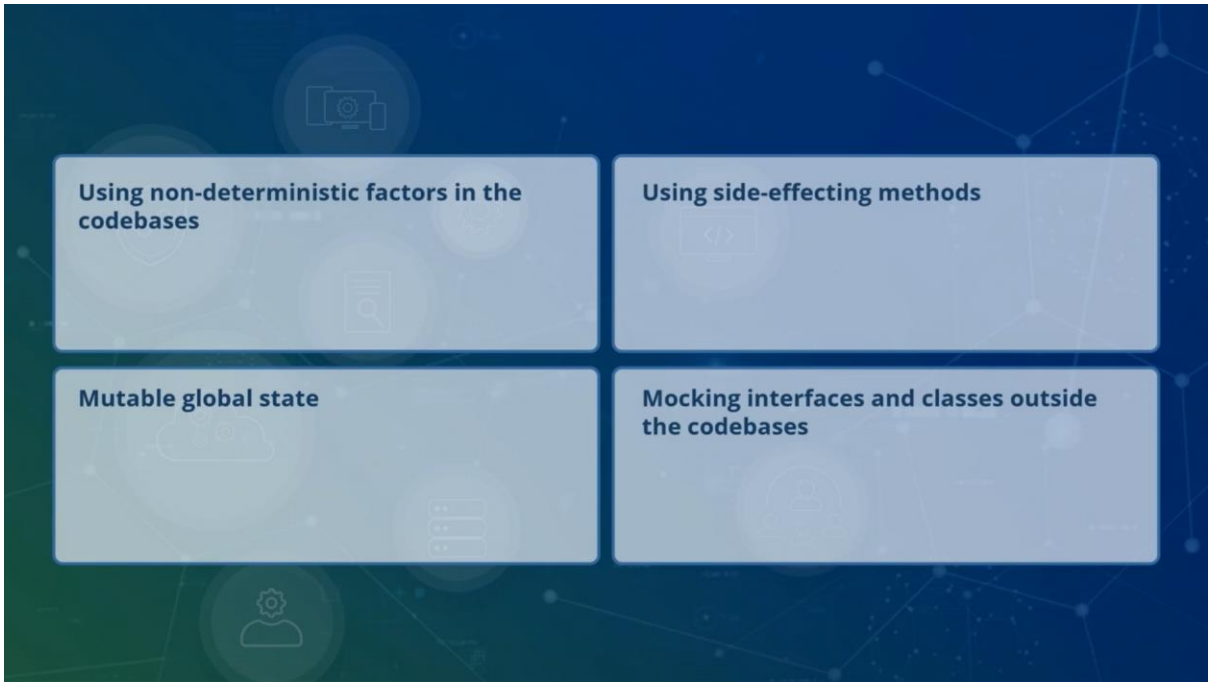
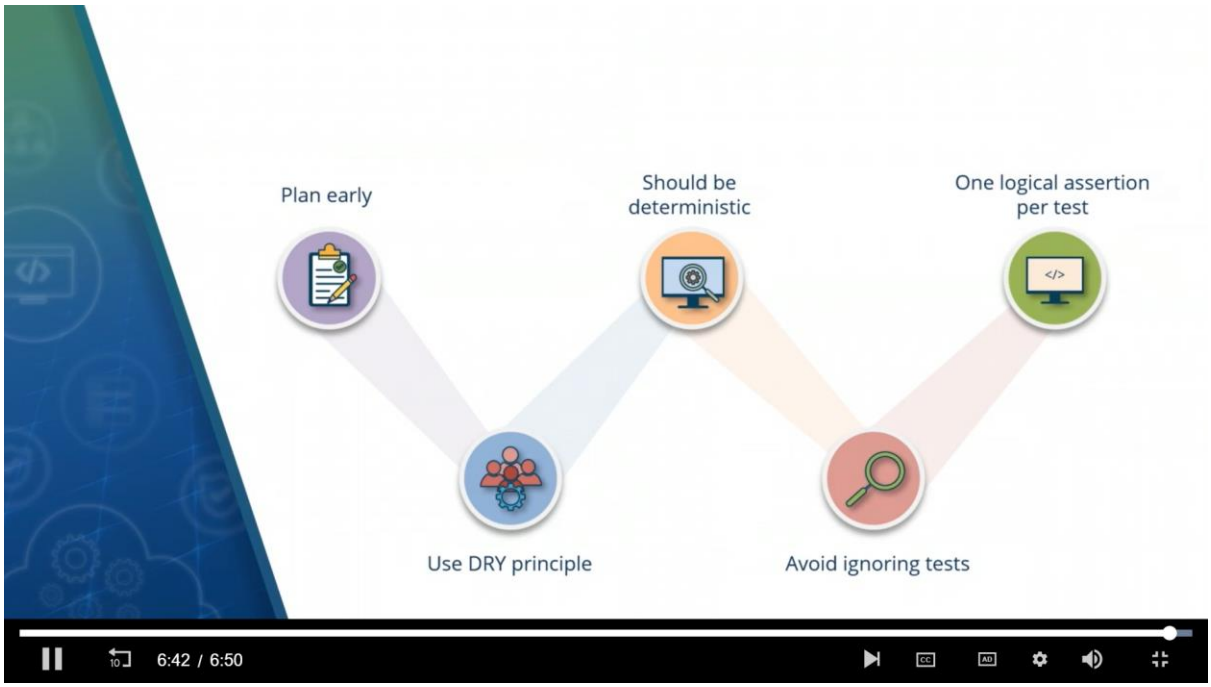
codecademy
from skillsoft
0:04 / 6:50



Bad unit test



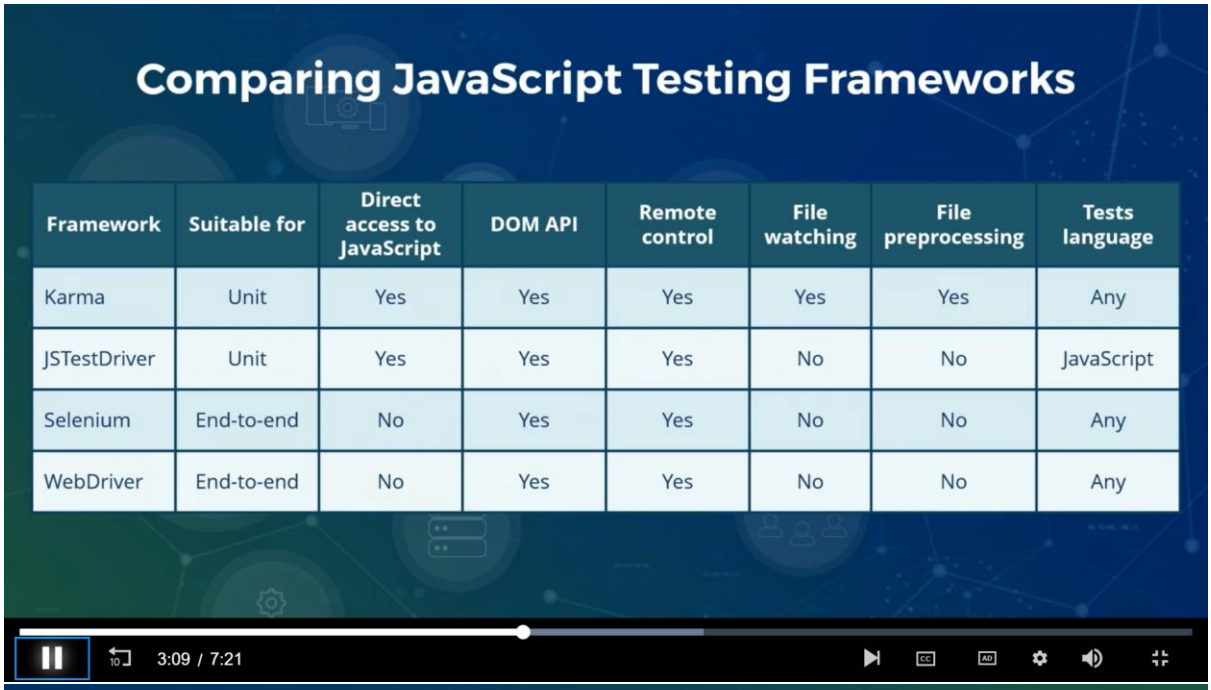
Writing good tests

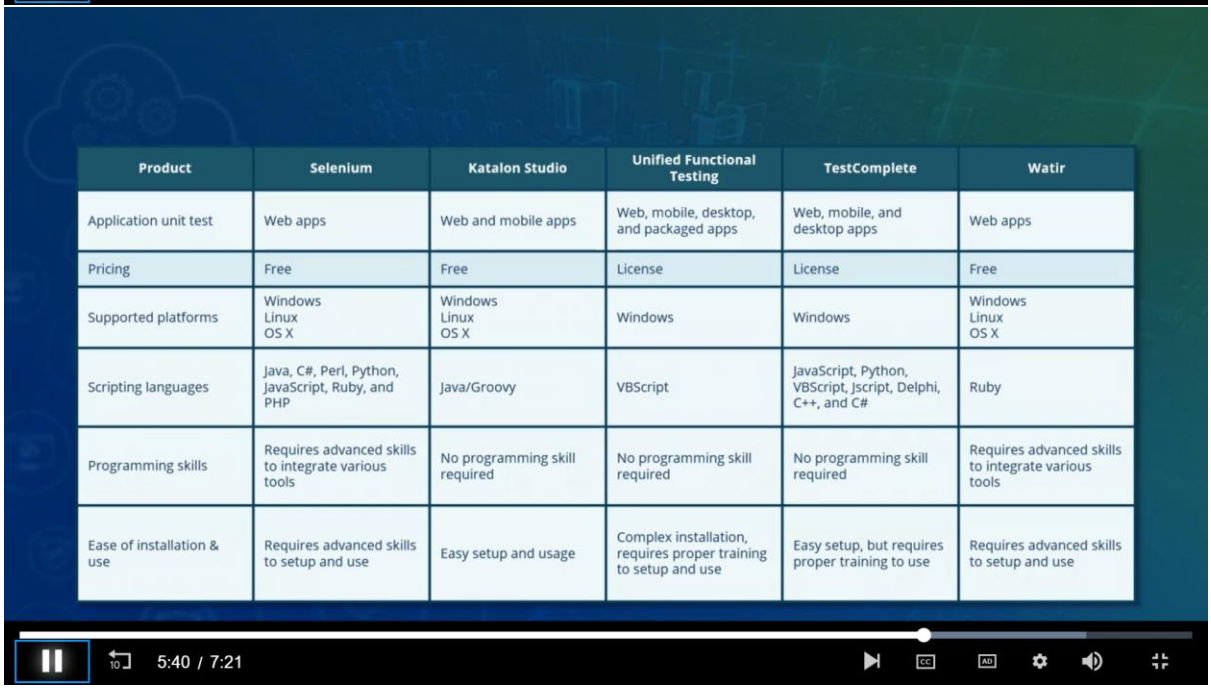


Unit Testing Framework Comparison
April Sidorski
codecademy
from skillsoft
0:04 / 7:21

Test automation frameworks
Module-based
Library architecture
Data-driven
Keyword-driven
Hybrid
BDD
2:08 / 7:21

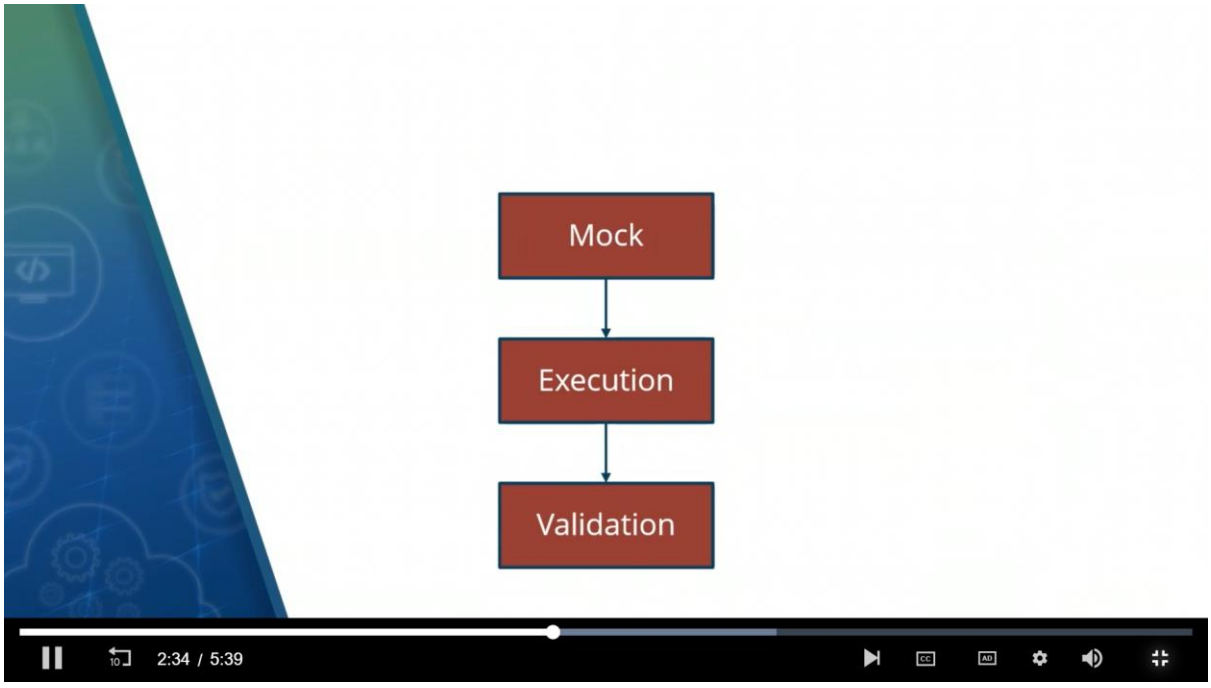
	JUnit4	TestNG
Automation testing	Yes	Yes
Suite test	Yes	Yes
Ignore test	Yes	Yes
Exception test	Yes	Yes
Timeout	Yes	Yes
Parameterized test	Yes	Yes
Dependency test	No	Yes

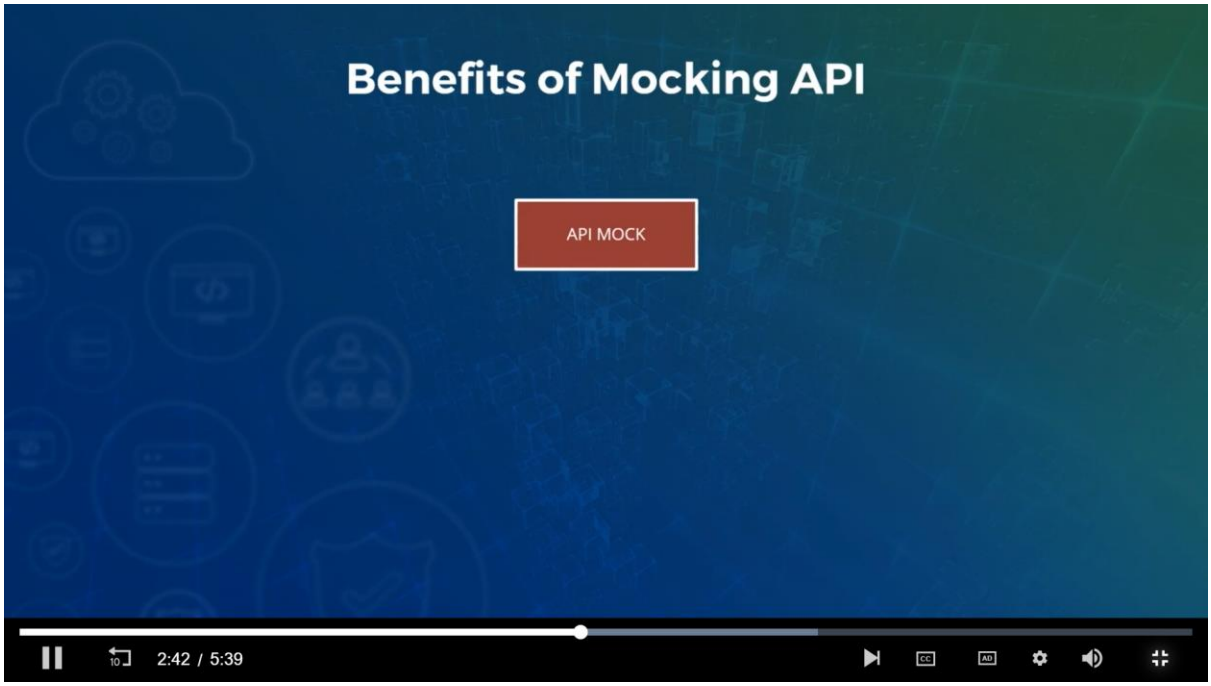




Types of test Doubles

Dummy object
Stub class
Fake objects
Mock object


Mock
Execution
Validation
2:34 / 5:39


Benefits of Mocking API
API MOCK
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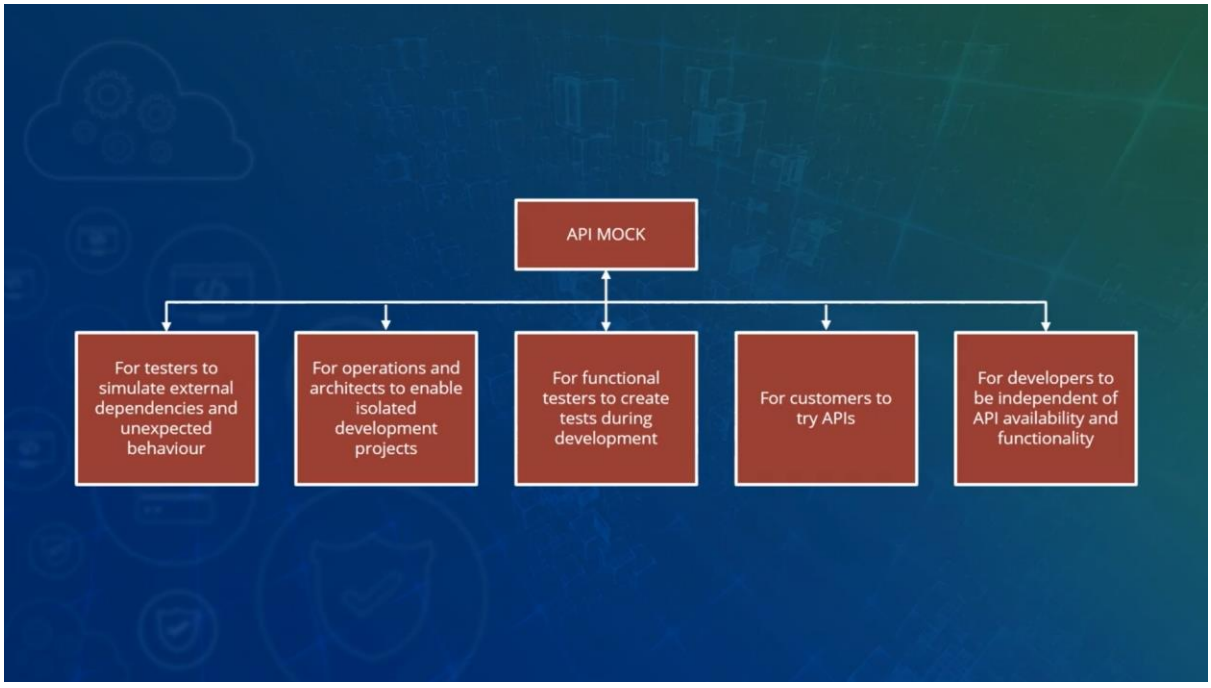
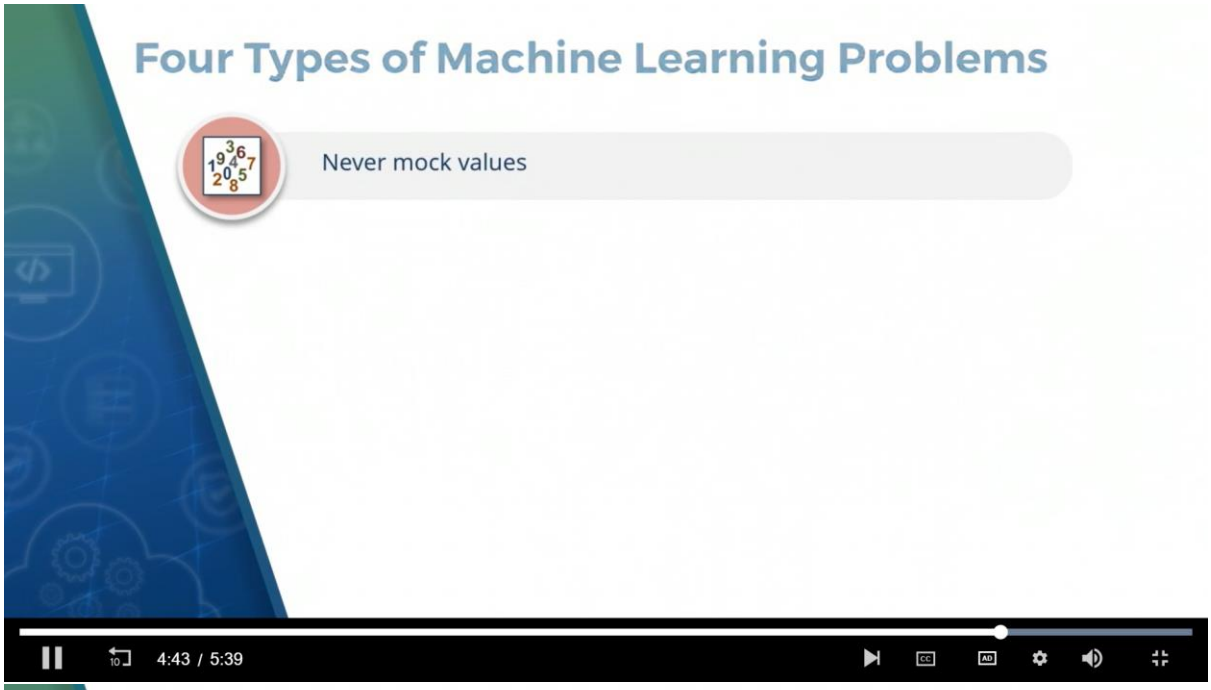

API MOCK
For testers to simulate external dependencies and unexpected behaviour
For operations and architects to enable isolated development projects
For functional testers to create tests during development
For customers to try APIs
For developers to be independent of API availability and functionality


Four Types of Machine Learning Problems
Never mock values
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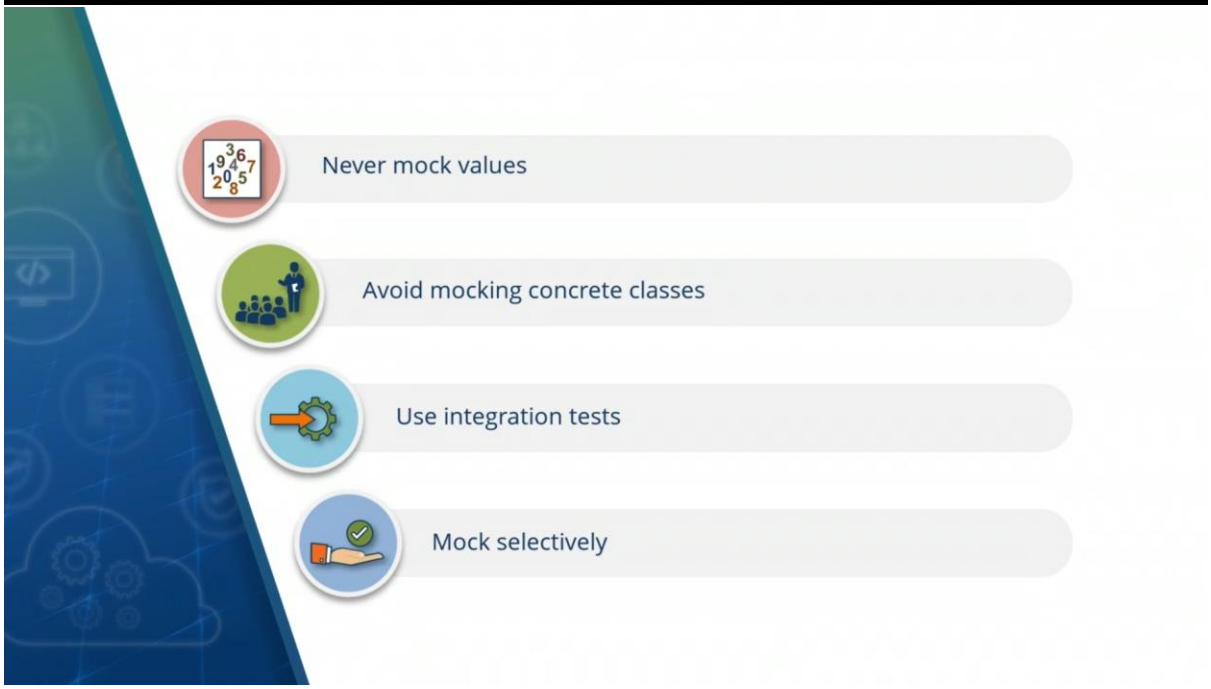
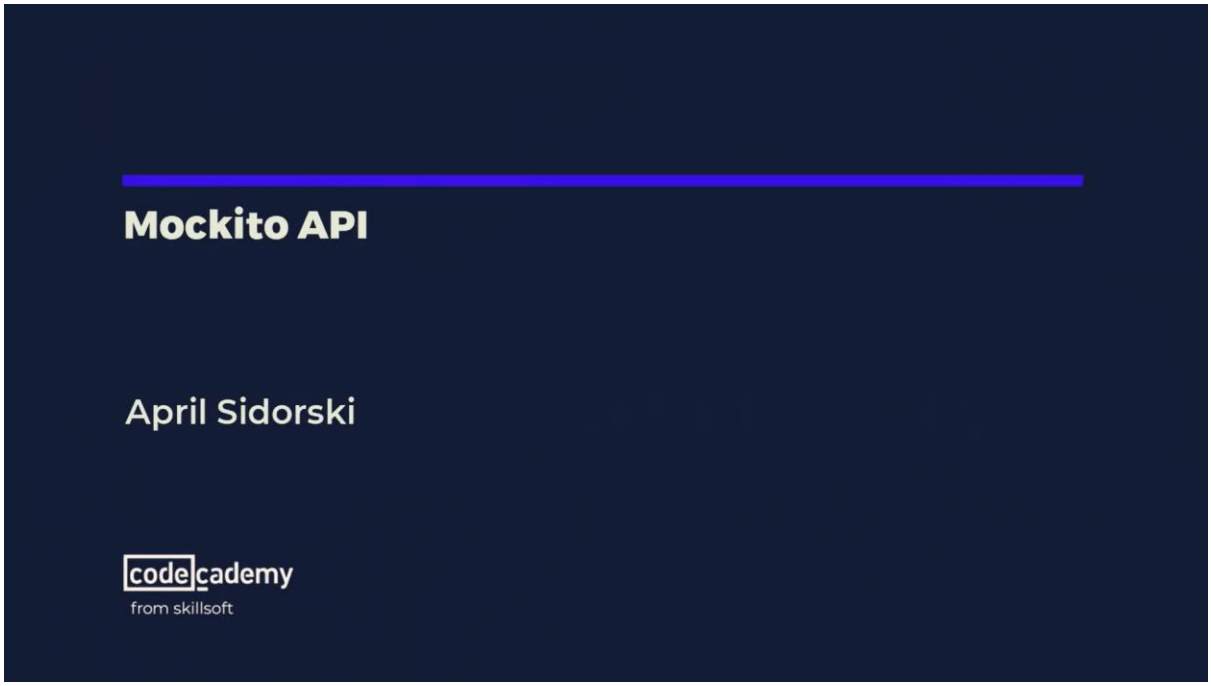

Never mock values
Avoid mocking concrete classes
Use integration tests
Mock selectively


Mockito API
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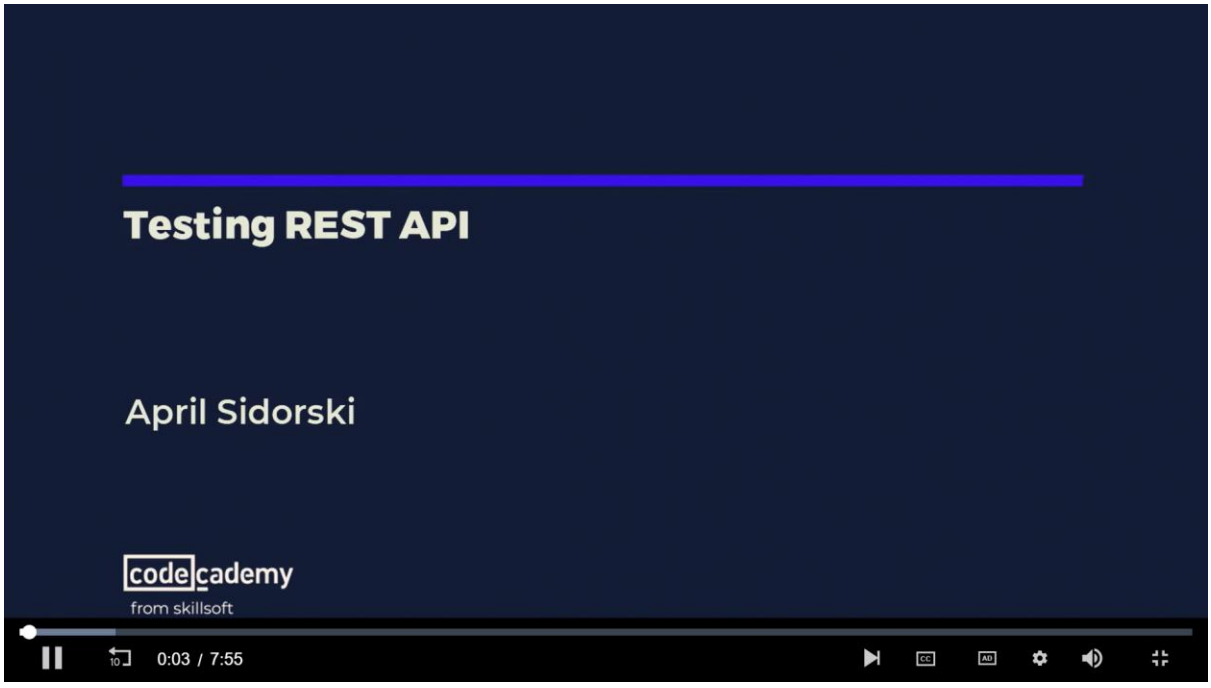
Testing REST API
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0:03 / 7:55