



TDD -> A tale of two cities

Andreas Kleinbichler, 26/09/2025, SoCraTes Linz

Speaker

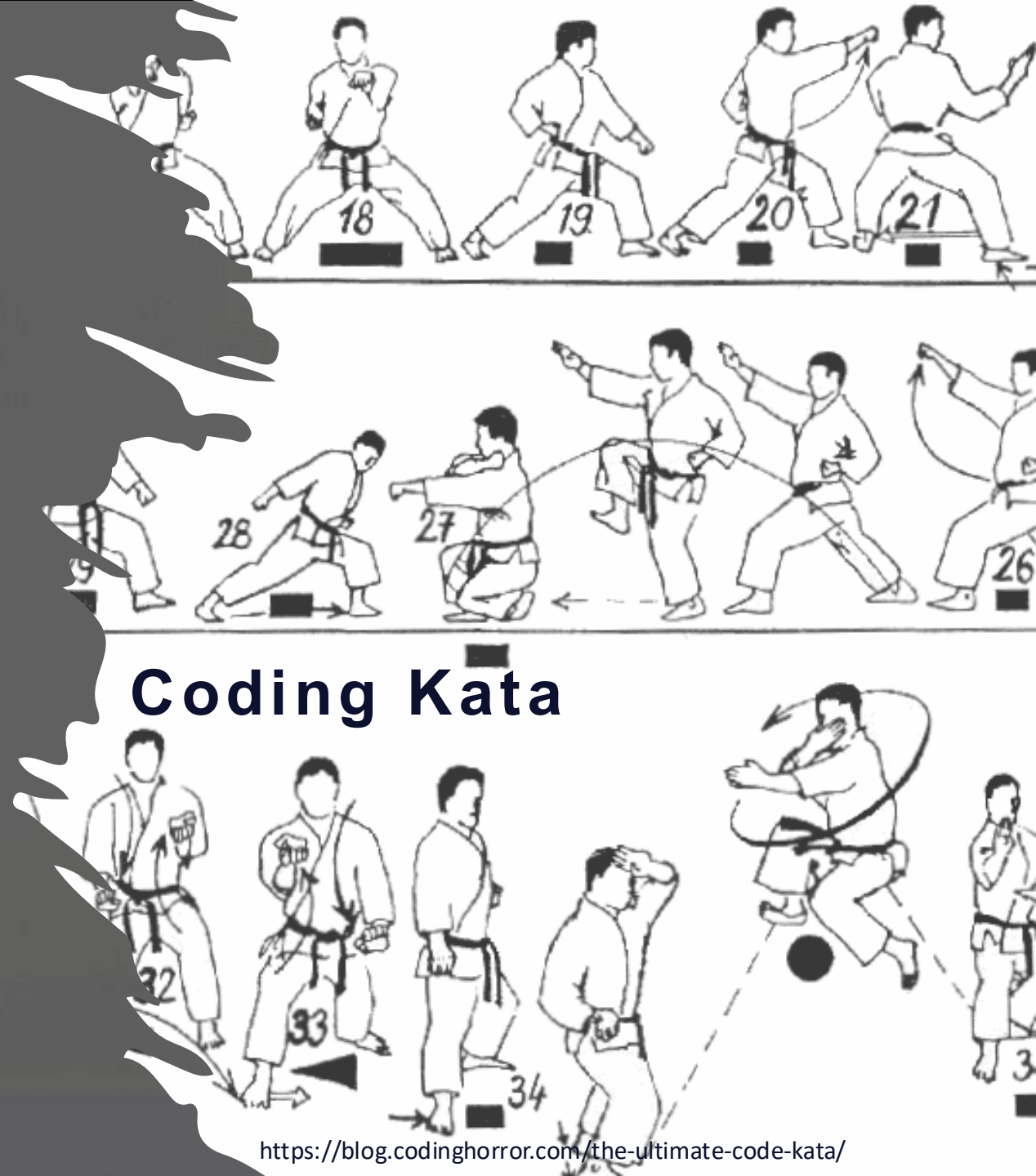
```
{  
  first-name: Andreas,  
  surname: Kleinbichler,  
  jobtitle: Engineering Manager,  
  company: Admiral Technologies,  
  lovesDevOps: true,  
  lovesTDD: true,  
  stack: [  
    "C#", "C/C++", "Angular", "SQL Server",  
    "MongoDB", "RabbitMq", "Docker", "K8s",  
    "AWS", "LINUX"  
  ]  
}
```



Active
listening



<https://hbr.org/2024/01/what-is-active-listening>



Coding Kata

<https://blog.codinghorror.com/the-ultimate-code-kata/>

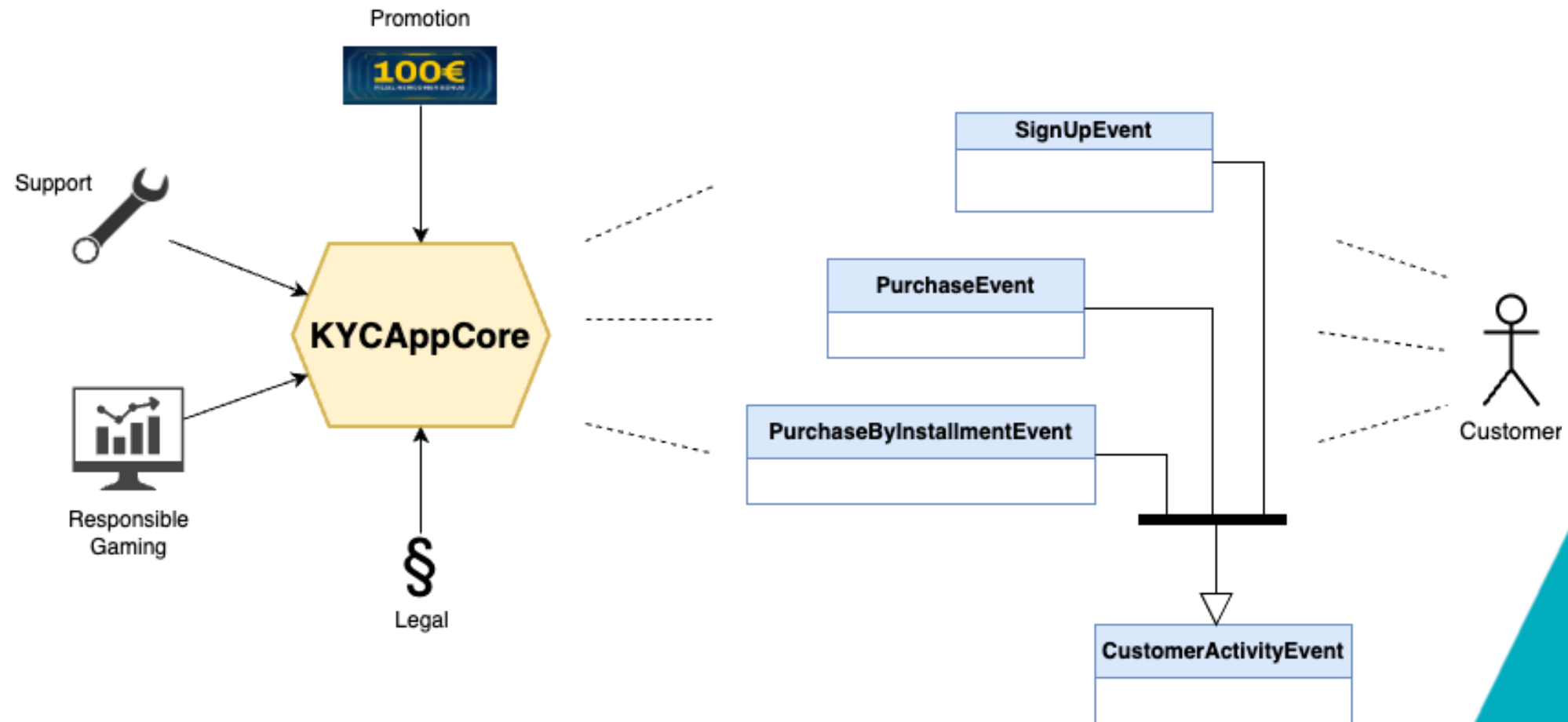
Link to Github

<https://github.com/AndiKleini/KnowYourCustomer>

#teamADMIRALTECHNOLOGIES

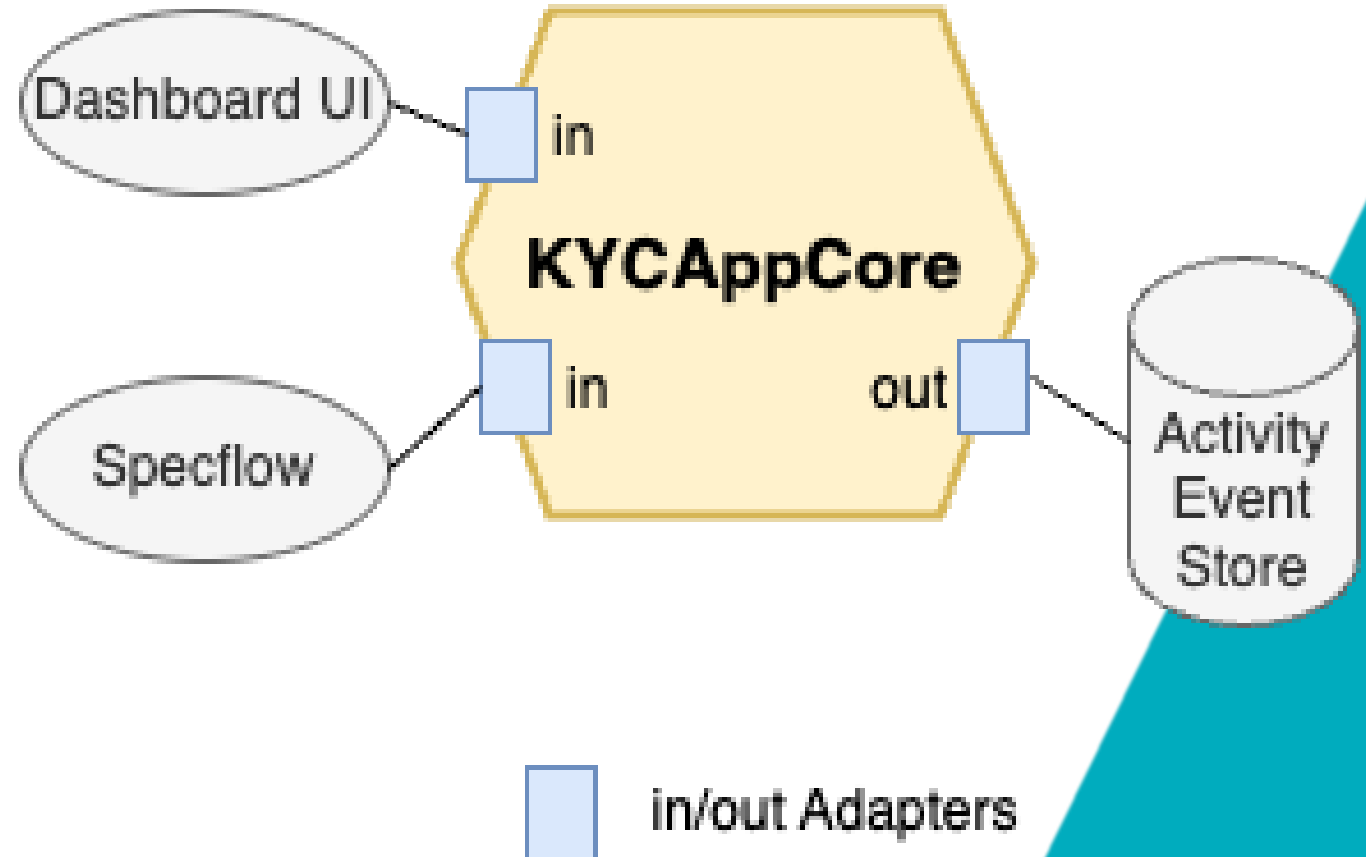
ADMIRAL
TECHNOLOGIES

KYC at Admiral Technologies



Ports and Adapters

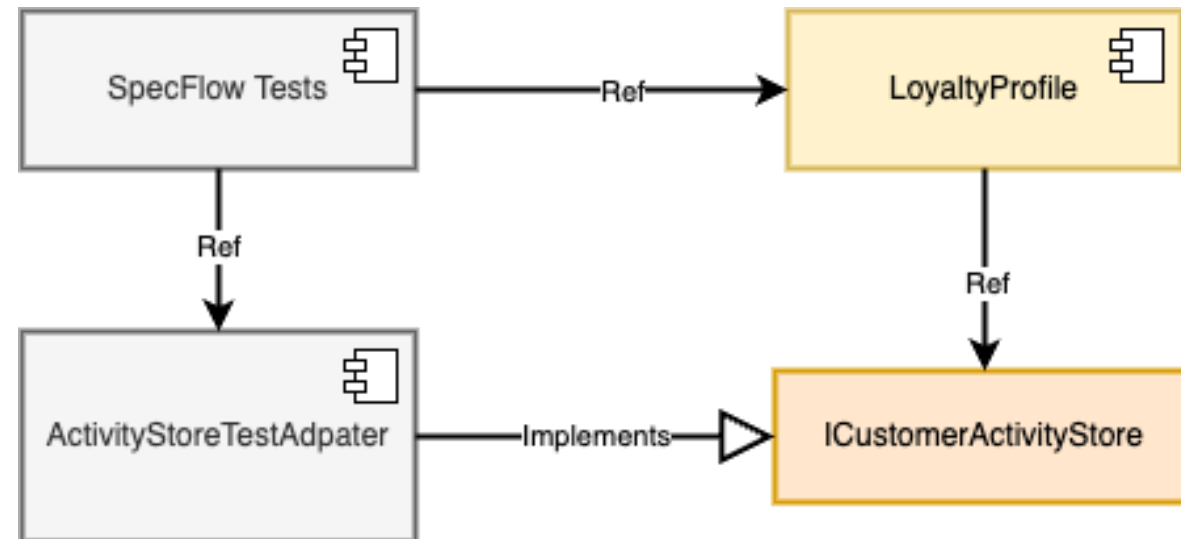
- Dependencies are resolved from outside to inside (never vice versa)
- Separate business logic from infrastructure or external clients by implementing adapters for communication



Dependencies

The loyalty profile (***Loyalty-Profile***) depends on the customer's activity store (***ICustomerActivityStore***) for accessing (pulling) required activity events.

The store's behavior is mocked during test executions by some hand rolled test adapter (***ActivityStore-Testadpater***).



Scenario (Gherkin)

Scenario: Loyalty Profile evaluates to five when registration happened exactly 366 days ago

Given the customer signed up 366 days ago
When the loyalty profile is evaluated
Then the value for the loyalty points is 5

GIVEN

WHEN

THEN

```
[Given(regex: "the customer signed up (.*) days ago")]
@ Andreas Kleinbichler
public void TheCustomerSignedUpDaysAgo(int daysSinceSignUp)
{
    var activityStoreTestAdapter = new ActivityStoreTestAdapter();
    activityStoreTestAdapter.Register(
        new SignUpActivityEvent(
            CustomerId: 1,
            DateTime.Now.AddDays(-daysSinceSignUp)));
    scenarioContext.Add(ActivityStoreTestAdapterKey, activityStoreTestAdapter);
}
```

```
[When(regex: @"the loyalty profile is evaluated")]
@ Andreas Kleinbichler
public async Task WhenTheLoyaltyProfileIsEvaluated()
{
    var loyaltyProfile = new LoyaltyProfile(
        activityStore: scenarioContext.Get<ActivityStoreTestAdapter>(ActivityStoreTestAdapterKey));
    await loyaltyProfile.GenerateProfile(customerId: 1);
    scenarioContext.Add(LoyaltyProfileUnderTestKey, loyaltyProfile);
}
```

```
[Then(regex: "the value for the loyalty points is (.*)")]
@ Andreas Kleinbichler
public void ThenTheValueForTheLoyaltyPointsIs(int expectedLoyaltyPoint)
{
    var loyaltyProfile = scenarioContext.Get<LoyaltyProfile>(LoyaltyProfileUnderTestKey);
    loyaltyProfile.Points.Should().Be(expectedLoyaltyPoint);
}
```

SpecFlow in 5 minutes

Run Tests



KycAppCoreSpecs

generated Jul 2, 2024 at 9:54 AM GMT+2

[Living Documentation](#) [Analytics](#)

Filter by Keyword	Filter by	<	>	X
Test results				
+ -				
KycAppCoreSpecs	1 Passed 0 Failed 0 Others			
Features	1 Passed 0 Failed 0 Others			
LoyaltyProfiler				
Loyalty Profile evaluates to zero when registration happened within the last 365 days				
Loyalty Profile evaluates to zero when registration happened exactly 365 days ago				
Loyalty Profile evaluates to five when registration happened exactly 366 days ago				
Loyalty Profile evaluates to error when no signup event exists				
Loyalty Profile points are evaluating to 5 * X * 2 when registration happened longer than 365 days				

#teamADMIRALTECHNOLOGIES

ADMIRAL
TECHNOLOGIES

The first user story

Story:

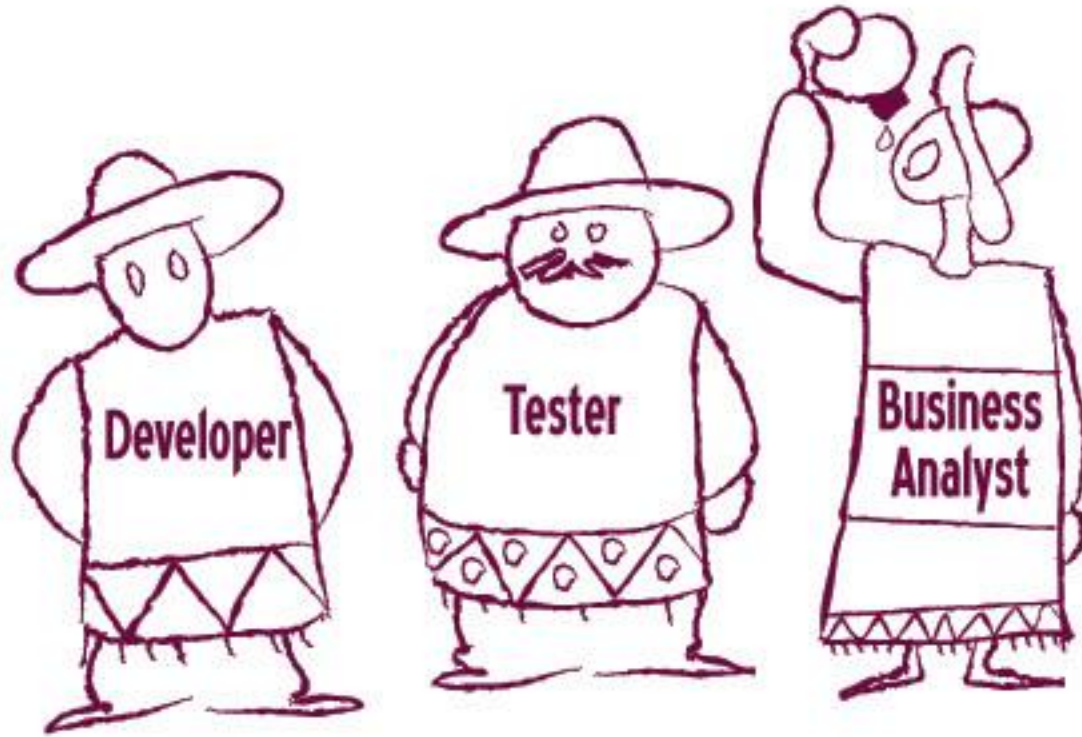
As a marketing manager I want to rank customers based on their loyalty, so that I can guarantee being fair with promotions.

Due to limited budget promotions must be restricted to the most loyal customers.

A proper ranking would support us in doing appropriate selections.

Example: *I have a budget of 3000 € and I want to promote 100 customers with 30 €. How should I choose ?*

A new feature is requested



<https://www.linkedin.com/pulse/three-amigos-desired-team-behavior-format-shereen-samuel>

Add the specs

Scenario:

*Loyalty Profile points are evaluating to $5 + X * 2$ when registration is longer ago than 365 days and purchases with the amount of X were made within the last 30 days*

Given the customer signed up **<DaysPassedSinceSignUp>** days ago
And the customer spent more than **<MoneySpent>** between **<FromDaysAgo>** and **<ToDaysAgo>** days ago
When the loyalty profile is evaluated
Then the value for the loyalty points is **<ExpectedLoyaltyPoints>**

Examples:

DaysPassedSinceSignUp	MoneySpent	FromDaysAgo	ToDaysAgo	ExpectedLoyaltyPoints
500	5000	30	0	105

Coding part starts here

Happy Coding

Takeaways

Try staying in the test method during writing your automated tests by utilizing the IDEs code generation features.

Switch between testing styles (Detroit, London, outside in, inside out,...)

Concentrate on business language by writing your specs.

Stakeholders should explain the problem not the solution.
You have to understand the why.

For each feature start with a failing test.

Make use of methods/patterns/styles (e.g.: hexagonal architecture) to separate business aspects from infrastructure.



#teamADMIRALTECHNOLOGIES

Any Questions ?



Thank you very much

#teamADMIRALTECHNOLOGIES

ADMIRAL

TECHNOLOGIES

ADMIRAL Sportwetten GmbH

Novomaticstraße 5
2352 Gumpoldskirchen, Österreich

Tel: +43 2252 60 70 90 – 999

E-Mail: service@admiral.at