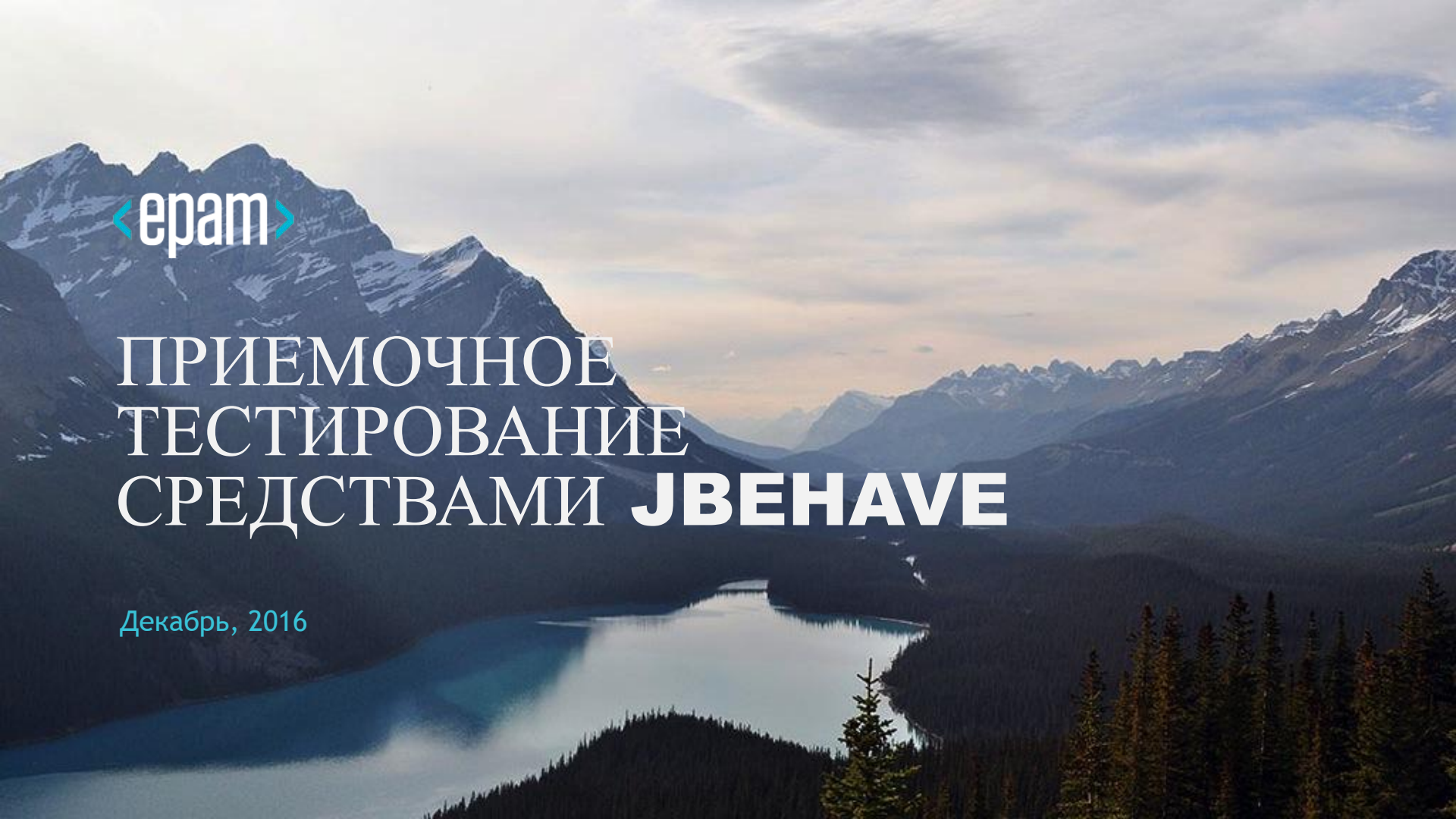
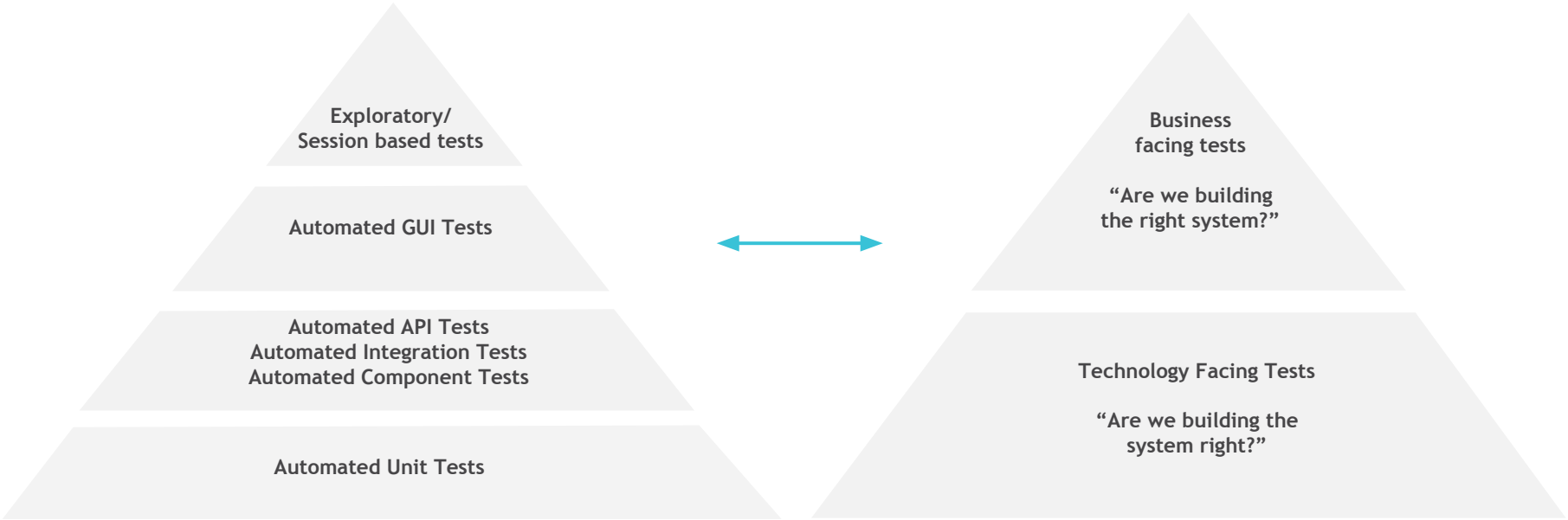


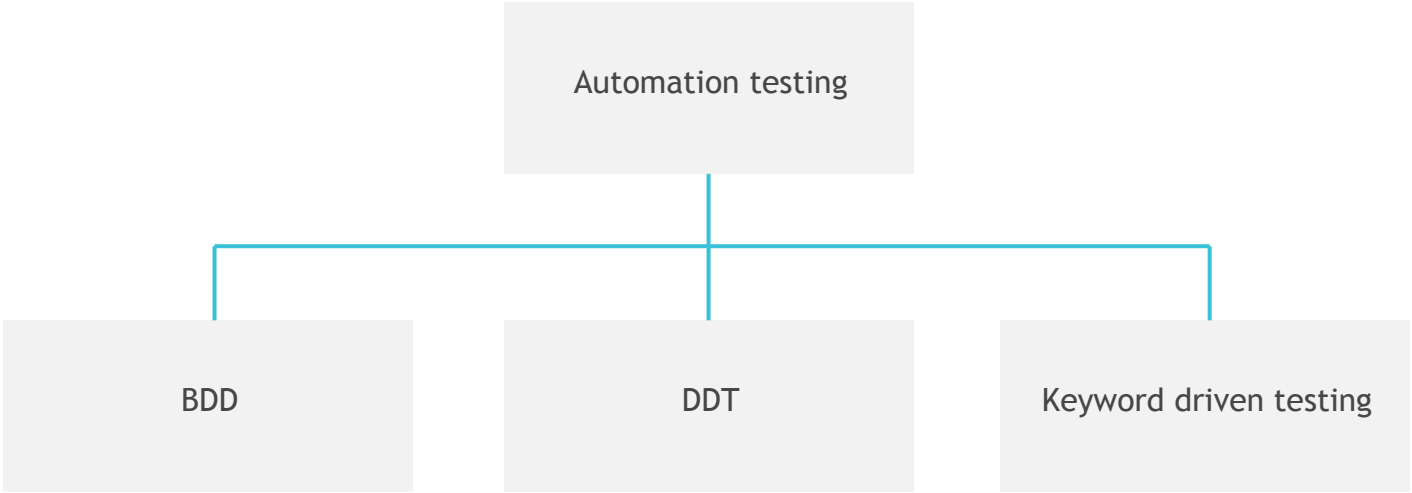
ПРИЕМОЧНОЕ ТЕСТИРОВАНИЕ СРЕДСТВАМИ JBEHAVE

Декабрь, 2016

УРОВНИ ТЕСТИРОВАНИЯ



СТРУКТУРА АВТОМАТИЗИРОВАННОГО ТЕСТИРОВАНИЯ



ПОДХОДЫ В АВТОМАТИЗИРОВАННОМ ТЕСТИРОВАНИИ

1. **KDT (Keyword Driven Testing)**
   - тесты, управляемые ключевыми словами
2. **DDT (Data Driven Testing)**
   - позволяет данные хранить отдельно от тестов
3. **BDD (Behavior-driven development)**
   - разработка, основанная на поведении

BDD ПОДХОД

GIVEN	WHEN	THEN
<Исходное состояние>	<Событие>	<Результат>

BDD ФРЕЙМВОРКИ

BDD FRAMEWORKS

behat

```
Feature: Product basket
  In order to buy products
  As a customer
  I need to be able to put interesting products into a basket

  Rules:
  - VAT is 20%
  - Delivery for basket under £10 is £3
  - Delivery for basket over £10 is £2

  Scenario: Buying a single product under £10
    Given there is a "Sith Lord Lightsaber", which costs £5
    When I add the "Sith Lord Lightsaber" to the basket
    Then I should have 1 product in the basket
    And the overall basket price should be £9
```

Cucumber

```
Feature: Google Test

    Background: Open Google
        Given I open "http://www.google.com/webhp?hl=en"

    Scenario: Perform Search
        Given I don't see "Search Results Link"
        When I type "Test query" into "Search Field"
        And I click "Search Button"
        Then I see "Search Results Link"
```

specflow
Cucumber for .NET

```
Feature: Calculator

        In order to avoid silly mistakes
        As a math idiot
        I want to be told the sum of two numbers

@mytag
Scenario: Add two numbers
        Given I have entered 50 into the calculator
        And I have also entered 70 into the calculator
        When I press add
        Then the result should be 120 on the screen
```

УРОВНИ ФРЕЙМВОРКА АВТОМАТИЗАЦИИ И **PAGEOBJECT**

TEST SCRIPTS ← TEST DATA

↓

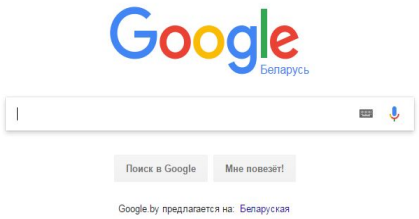
TEST STEPS

↓

ACTION/UTILITIES

↓

UI LAYER




```
<input class="gsfi" id="lst-ib" maxlength="2048" name="q" autocomplete="off"
```

```
public class SearchPage {

System.setProperty("webdriver.chrome.driver", "/path/to/chromedriver");
WebDriver driver = new ChromeDriver();
driver.get("http://www.google.by");

public static By SEARCH = By.xpath("//input[@name='q'] ");

WebelEment searchInput = driver.findElement(SEARCH);
searchInput.sendKeys("Apple");
searchInput.submit();

}
```

JBEHAVE

trader_is_alerted_of_status.story

```
Scenario:  trader is not alerted below threshold

Given a stock of symbol STK1 and a threshold of 10.0
When the stock is traded at 5.0
Then the alert status should be OFF

Scenario:  trader is alerted above threshold

Given a stock of symbol STK1 and a threshold of 10.0
When the stock is traded at 11.0
Then the alert status should be ON
```

TraderSteps.java

```java
public class TraderSteps { // look, Ma, I'm a POJO!!

    private Stock stock;

    @Given("a stock of symbol $symbol and a threshold of $threshold")
    public void aStock(String symbol, double threshold) {
        stock = new Stock(symbol, threshold);
    }

    @When("the stock is traded at $price")
    public void theStockIsTradedAt(double price) {
        stock.tradeAt(price);
    }

    @Then("the alert status should be $status")
    public void theAlertStatusShouldBe(String status) {
        ensureThat(stock.getStatus().name(), equalTo(status));
    }
}
```

Trader.java

```java
@DefaultUrl("http://localhost:9000/admin/categories/new")
public class EditCategoryPage extends PageObject {

    @FindBy(id="object_label")
    WebElement label;

    @FindBy(id="object_code")
    WebElement code;

    @FindBy(name="_save")
    WebElement saveButton;

    @FindBy(xpath = "//input[@value='Delete Category']")
    WebElement deleteButton;

    public EditCategoryPage(WebDriver driver) {
        super(driver);
    }

    public void saveNewCategory(String labelValue, String codeValue) {
        typeInto(label, labelValue);
        typeInto(code, codeValue);
        saveButton.click();
    }

    public void clickOnDelete() {
        deleteButton.click();
    }
}
```

TEST SCRIPTS → TEST SCRIPTS → UI LAYER

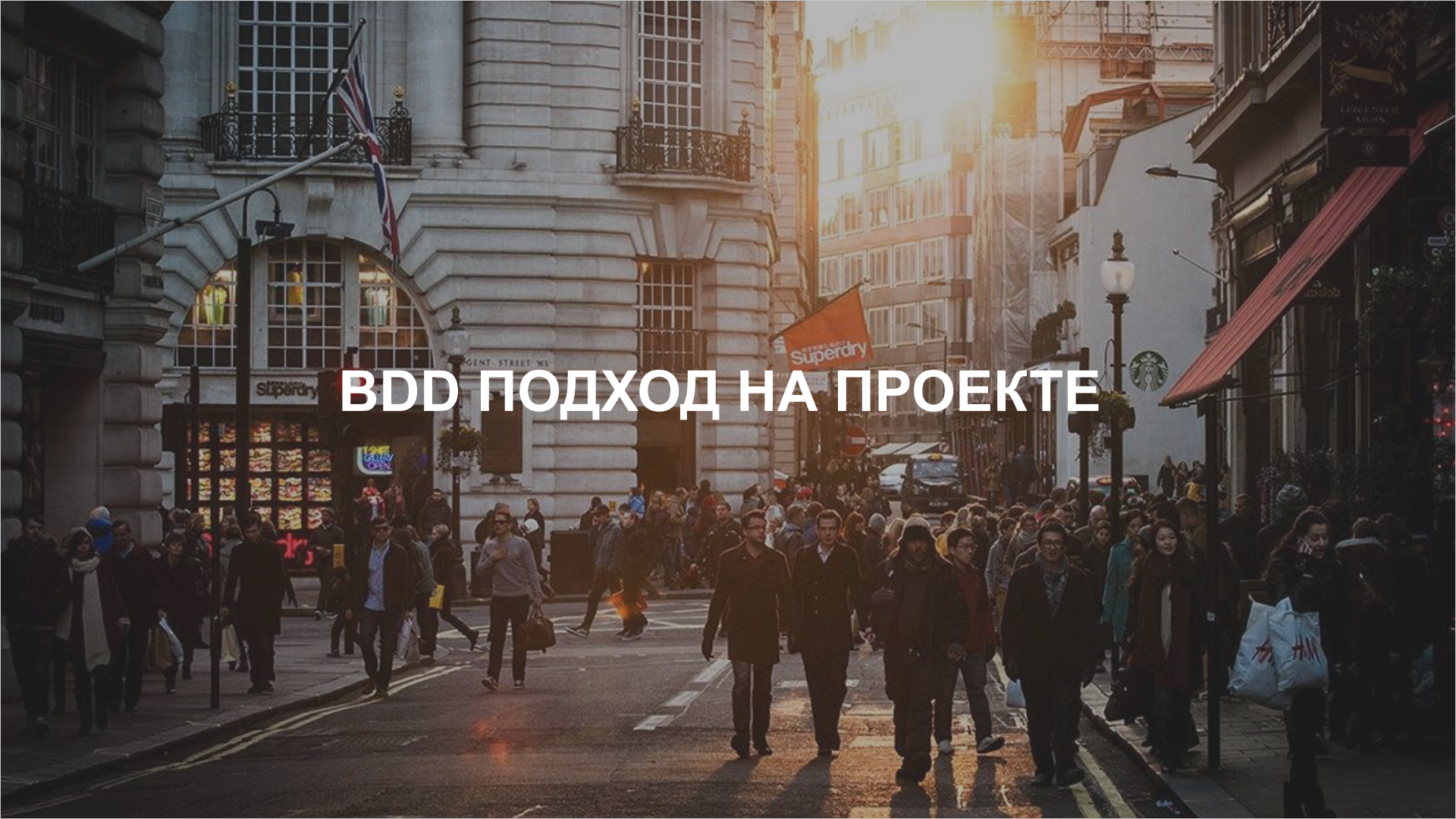
JBEHAVE

```
public abstract class TraderStory extends JUnitStory {

    public TraderStory() {
        configuredEmbedder().embedderControls().doGenerateViewAfterStories(true).doIgnoreFailureInStories(true)
                .doIgnoreFailureInView(true).useThreads(2).useStoryTimeoutInSecs(60);
    }

    @Override
    public Configuration configuration() {
        return new MostUsefulConfiguration();
    }

    @Override
    public InjectableStepsFactory stepsFactory() {
        return new InstanceStepsFactory(configuration(), new TraderSteps(new TradingService()));
    }
}
```

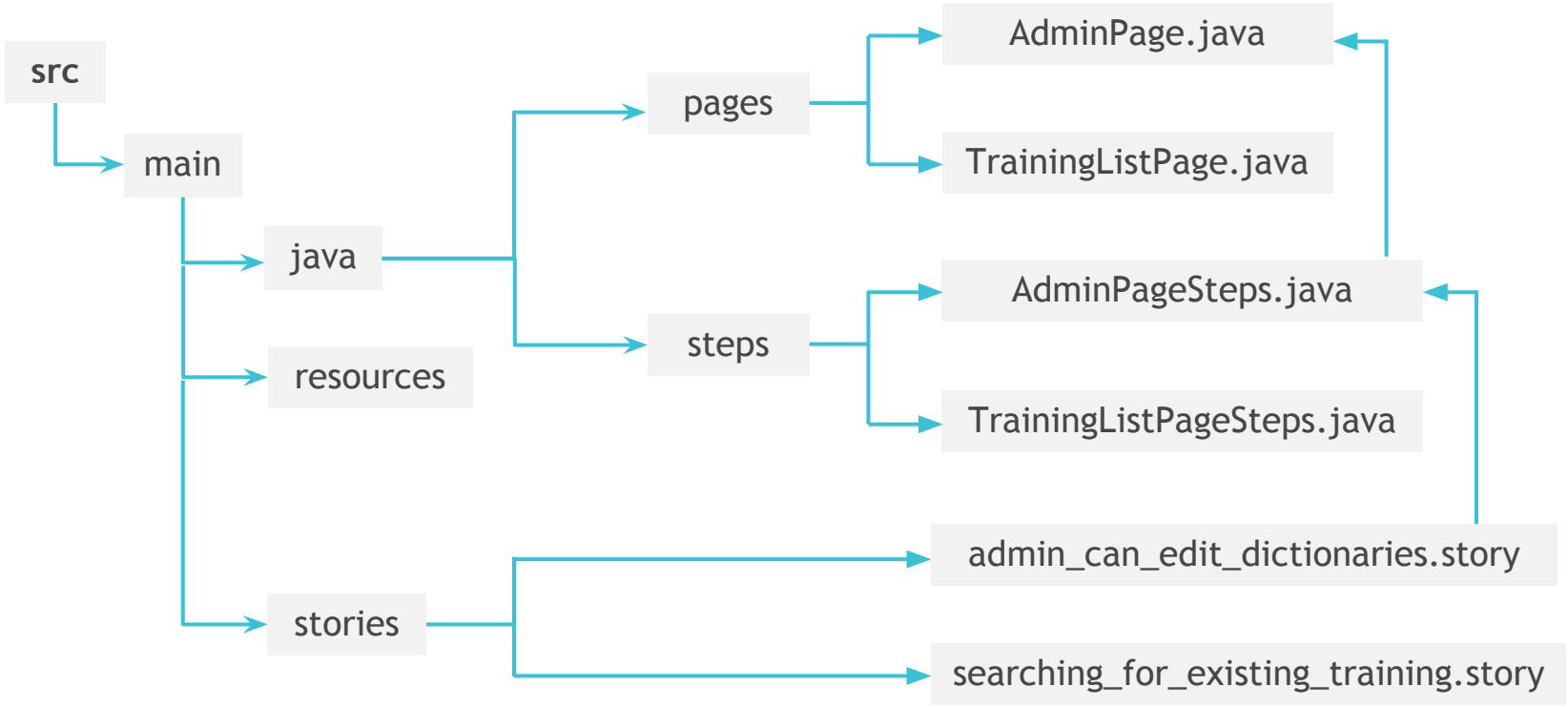


BDD ПОДХОД НА ПРОЕКТЕ

ФУНКЦИОНАЛ ПРОЕКТА

1	Создание тренингов	• обеспечивает полное описание курсов, которые доступны в каталоге
2	Расписание	• запланированный тренинг с опредленным тренером, расписанием и местоположением
3	Обработка запросов	• управление регистрацией пользователей на тренинг: перемещение в запланированные события, отметка посещаемости, сбор фидбеков

СТРУКТУРА ТЕСТОВОГО ПРОЕКТА



ТЕСТОВЫЙ СЦЕНАРИЙ

admin_can_edit_dictionaries.story

Meta:
@testType ui
@user //users/admin/xUsername
@xmlFile testdata/smoke/smokeTestData.xml

Scenario: Administrator can edit Categories
Given user logs in with 'Administrator' role
When user clicks 'Admin' tab
And user clicks Add button
And user types random records name
And user types 'TestName' records short name
And user clicks Ok button
And user clicks Save dictionary button
And user clicks edit icon on new added record
And user types 'newTestName' records short name
And user clicks Ok button
And user clicks Save dictionary button
Then new record Short Name is 'newTestName'

ТЕСТОВЫЙ КЛАСС

AdminPageSteps.java

```
public class AdminPageSteps {

@When("user clicks '$tabName' tab")
public void goToTab(String tabName) {
    getPage().goToTab(tabName);
}

@When("user clicks Add button")
public void clickAddButton() {
    getPage().clickAddButton();
}

@Then("new record exists in list")
public void checkNewRecordExists() {
    String recordName = RecordsStorage.getLastCreatedRecord().getName();
    Assert.assertTrue(String.format(Messages.NEW_RECORD_NOT_DISPLAYED, recordName), getPage().isRecordExist(recordName));
}
    .. .. .. .. .. .. .. .. ..
}
```

PAGE OBJECT

AdminPage.java

```
public class AdminPage extends CustomAbstractPage {

        protected static final By ADD_BUTTON = By.cssSelector(".ui-button-add-label.ui-button-add-label--green");
        protected static final By MODAL_BODY = By.className("ui-modal__body");
        protected static final String RECORD_ROW_XPATH = "//td[1]//div[text()='{0}']/../../..";

         public void clickAddButton() {
           _findElement(ADD_BUTTON).click();
           _findElement(MODAL_BODY);
          }

        public boolean isRecordExist(String name) {
            return isElementVisible(formatXpath(RECORD_ROW_XPATH, name), PropertyConstants.LOWEST_WAIT);
         }


          .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. .. ..
}
```

СПАСИБО ЗА ВНИМАНИЕ!