

Politecnico di Milano
A.A. 2016-2017
Prof. Elisabetta Di Nitto

Students:
Andrea Facchini - 874891
Andrea Milanta - 878403
Antonio Gianola - 877235

PowerEnjoy

Electric Car-sharing Service

**CODE
INSPECTION**

Andrea Facchini
Antonio Gianola
Andrea Milanta

Index

1. Introduction	3
1.1 Purpose	3
1.2 Scope	3
1.3 Reference Documents	3
1.4 Overview	3
2. Functional Role	4
2.1 Project	4
2.2 ShippingEvent.java	4
2.3 ShippingEstimateWrapper.java	4
3. Code Inspection Checklist	5
3.1 ShippingEvent.java	5
3.2 ShippingEstimateWrapper.java	8
4. Effort Spent	11

1. Introduction

1.1 Purpose

The purpose of this document is to inspect the provided code and identify any issue.

1.2 Scope

The classes assigned to our group for inspection are located in the same package:

../apache-ofbiz-

16.11.01/applications/order/src/main/java/org/apache/ofbiz/order/shoppingcart/shipping/

The classes are the following:

../apache-ofbiz-

16.11.01/applications/order/src/main/java/org/apache/ofbiz/order/shoppingcart/shipping/ShippingEstimateWrapper.java

../apache-ofbiz-

16.11.01/applications/order/src/main/java/org/apache/ofbiz/order/shoppingcart/shipping/ShippingEvents.java

In the following document, they will be called only by the class name: respectively ShippingEstimateWrapper.java and ShippingEvents.java.

1.3 Reference Documents

- apache-ofbiz-16.11.01 Java Project.
- Code Inspection Assignment Task Description.pdf
- Code Inspection Assignment Table.xlsx

1.4 Overview

The document is organized in the following sections:

1. Introduction

This section introduces the purpose and explains the general aspects of the document.

2. Functional Role

This section analyses the functional role of the assigned classes.

3. Code Inspection Checklist

In this section are shown the result of the analysis of the code according to the code inspection checklist.

Note: the section includes a final evaluation of generic issues not included in the checklist.

4. Effort Spent

This section contains the hour of work and the distribution of task between the group members.

Andrea Facchini
Antonio Gianola
Andrea Milanta

2. Functional Role

2.1 Project

Apache OFBiz® is an open source product for the automation of enterprise processes that includes framework components and business applications for ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), E-Business / E-Commerce, SCM (Supply Chain Management), MRP (Manufacturing Resource Planning), MMS/EAM (Maintenance Management System/Enterprise Asset Management).

OFBiz stands for Open For Business.

2.2 ShippingEvent.java

The class ShippingEvents is a static class used for processing shipping fees.

In particular, it contains many methods that return different estimates for the shipping fees according to different types of shipments.

2.3 ShippingEstimateWrapper.java

The class ShippingEstimateWrapper provides a wrapper to access shipping estimates and methods. It allows to load and get shipping methods and estimates.

Also it calculates the sum of the prices of the items in the cart, possibly by accessing the database.

3. Code Inspection Checklist

3.1 ShippingEvent.java

1. Naming Conventions

1. No issues detected.
2. No issues detected.
3. No issues detected.
4. No issues detected.
5. No issues detected.
6. No issues detected.
7. **Line 57:** public static final String module does not fulfill naming conventions for constants.

2. Indention

8. Indent of 5 spaces: Line **128, 266, 328**.
9. No issues detected.

3. Braces

10. Braces convention used: "Kernighan and Ritchie".
11. No issues detected.

4. File Organization

12. No issues detected.
13. The following lines exceed 80 characters but it won't be practical to break them.
Line **59-61, 70-72, 76, 98, 114, 121, 139, 158, 159, 183, 187, 224, 232, 246, 256, 258, 264, 265, 280, 285, 285, 291, 296, 311, 315, 335, 341, 348, 362, 380, 387, 389**.
The following lines exceed 80 characters and could easily be reduced.
Line **141, 142, 150-152, 156, 201, 374, 375, 377, 378**.
14. The following lines exceed 120 characters and should be reduced.
Line **88, 100-102, 105, 130-132, 136-138, 140, 145-148, 155, 157, 185, 257, 275, 300, 310, 323, 326, 346, 354, 358, 372, 376, 382**.

5. Wrapping Lines

15. No issues detected.
16. No issues detected.
17. No issues detected.

6. Comments

- 18. Methods lack a main description but there are comments within each method that adequately identify the main functions.
- 19. There is no commented out code.

7. Java Source Files

- 20. No issues detected.
- 21. No issues detected.
- 22. There is no Javadoc documentation for the class.
- 23. There is no Javadoc documentation for the class.

8. Package and Import Statements

- 24. No issues detected.

9. Class and Interface Declaration

- 25. No issues detected.
- 26. No issues detected.
- 27. **getShipGroupEstimate** is long and it would be advisable to break it or use sub-methods.

10. Initialization and Declarations

- 28. No issues detected.
- 29. No issues detected.
- 30. No issues detected.
- 31. No issues detected.
- 32. No issues detected.
- 33. See checklist item 39.

11. Method Calls

- 34. No issues detected.
- 35. No issues detected.
- 36. No issues detected.

12. Arrays

- 37. No issues detected.
- 38. No issues detected.
- 39. Some arrays are obtained from functions and not via constructor. It is not considered an issue.

13. Object Comparison

- 40. No issues detected.

14. Output Format

- 41. No issues detected.
- 42. Error messages are comprehensive but do not provide guidance as how to correct the problem.
- 43. No issues detected.

15. Computation, Comparison and Assignments

- 44. No issues detected.
- 45. No issues detected.
- 46. No issues detected.
- 47. No issues detected.
- 48. No issues detected.
- 49. No issues detected.
- 50. No issues detected.
- 51. No issues detected.

16. Exceptions

- 52. No issues detected.
- 53. No issues detected.

17. Flow of Control

- 54. There are no switch statements.
- 55. There are no switch statements.
- 56. No issues detected.

18. Files

- 57. The class does not access any external file.
- 58. The class does not access any external file.
- 59. The class does not access any external file.
- 60. The class does not access any external file.

19. Generic Issues

The class has methods with many parameters.

This is not considered good programming practice. In fact, methods with long parameters highly increase the risk of misspell or getting the parameter order wrong.

Also there are present different methods with the same name but different parameters and return types.

Although this is allowed by the compiler it is very bad practice and should be addressed at least with a method rename.

3.2 ShippingEstimateWrapper.java

1. Naming Conventions

1. No issues detected.
2. No issues detected.
3. No issues detected.
4. No issues detected.
5. No issues detected.
6. No issues detected.
7. **Line 40:** public static final String module does not fulfill naming conventions for constants.

2. Indention

8. No issues detected.
9. No issues detected.

3. Braces

10. Braces convention used: "Kernighan and Ritchie".
11. No issues detected.

4. File Organization

12. No issues detected.
13. The following lines exceed 80 characters but it won't be practical to break them.
Line **40, 59, 63, 81 – 84, 97, 98, 108, 111, 112 – 117, 119, 134.**
14. The following lines exceed 120 characters and should be reduced.
Line **82, 84, 114, 116.**

5. Wrapping Lines

15. No issues detected.
16. No issues detected.
17. No issues detected.

6. Comments

18. The code isn't adequately commented. The only comment present is the license.
Classes and methods have no comments at all.
19. There is no commented out code.

7. Java Source Files

20. No issues detected.
21. No issues detected.
22. There is no Javadoc documentation for the class.
23. There is no Javadoc documentation for the class.

8. Package and Import Statements

24. No issues detected.

9. Class and Interface Declaration

25. The constructor is not the first method listed. It is preceded by a static method that returns an object of this class.

26. No issues detected.

27. No issues detected.

10. Initialization and Declarations

28. No issues detected.

29. No issues detected.

30. No issues detected.

31. No issues detected.

32. No issues detected.

33. No issues detected.

11. Method Calls

34. No issues detected.

35. No issues detected.

36. No issues detected.

12. Arrays

37. No issues detected.

38. No issues detected.

39. No issues detected.

13. Object Comparison

40. No issues detected.

14. Output Format

41. No issues detected.

42. No issues detected.

43. No issues detected.

15. Computation, Comparison and Assignments

- 44. No issues detected.
- 45. No issues detected.
- 46. No issues detected.
- 47. No issues detected.
- 48. No issues detected.
- 49. No issues detected.
- 50. No issues detected.
- 51. No issues detected.

16. Exceptions

- 52. Catch statements are too general.
 - Line 87:** GenericEntityException exception.
 - Line 99:** Throwable object.
- 53. Logging for debug purposes only.

17. Flow of Control

- 54. There are no switch statements.
- 55. There are no switch statements.
- 56. No issues detected.

18. Files

- 57. The class does not access any external file.
- 58. The class does not access any external file.
- 59. The class does not access any external file.
- 60. The class does not access any external file.

19. Generic Issues

No generic issues have been found.

The constructor may be set as **private**.

The static method getWrapper provides a new instance of the class, thus removing the need to call the constructor from outside the class.

4. Effort Spent

Work Division

section	Paragraph	author	revised by
Introduction		Milanta	Gianola
Functional Role		Gianola	Milanta
Code Inspection Checklist			
	ShippingEvent	Milanta Gianola	Gianola
	ShippingEstimateWrapper	Facchini	Gianola
Effort Spent		Facchini	Milanta

Working Hours

	Week I							Week IV							Totale
	23	24	25	26	27	28	29	30	31	1	2	3	4	5	
Antonio Gianola						2	2							1	5
Andrea Facchini						2	2							1	5
Andrea Milanta		3					1							1	4

Andrea Facchini
Antonio Gianola
Andrea Milanta