Practical Workshop 8
Team Software Inspections

Task
In this practical class, groups of 2 or 3 students will perform code inspections for defect
detection on a short fragment of Java code.

1. You have up to 20 minutes to perform the inspection, and complete your defect
report forms. At the beginning, note the starting time on your form, and fill in your
name and a group identifier. Try to find as many defects as possible in the code
provided. Any defects you discover should be noted in the Defect Report Form.
Remember that a defect is a deviation from the specification. That is, something that
would go on to cause a failure of the system if left uncorrected. It does not mean errors
of a stylistic nature.

2. Once you have finished your inspection, write down your finishing time on the
Defect Report form. Also, make some notes about how you went about detecting
errors: Did you walk through the code? How did you approach the problem?

3. At the end of the session you are encouraged to check your detected defects against
other group’s defects. Do not alter your defect report form (!), but do consider, for any
defects you missed, what sort of techniques might have helped you find them?, and
how you could improve the efficiency and completeness of your inspection technique in
future?

References

Bruegge and Dutoit, Object Oriented Software Engineering, 2nd Edition, Prentice Hall
2004 (Days of month example p 457 reproduced below)

Alastair Dunsmore and Marc Roper and Murray Wood,
The Development and Evaluation of Three Diverse Techniques for Object-Oriented
Code Inspection, In IEEE Transactions on Software Engineering, Volume 29 , Issue 8

Alastair Dunsmore, Investigating Effective Inspection of Object-Oriented Code, PhD
Thesis, Department of Computer and Information Sciences, University of Strathclyde,
Glasgow, 2002

Bente Anda and Dag I. K. Sjoberg, Towards an Inspection Technique for Use Case
Models, In SEKE '02: Proceedings of the 14th international conference on Software
10.1145/568760.568785 (thanks for Edwin Karema for this reference)
1. public class MonthOutOfBounds extends Exception {
2. }
3. public class YearOutOfBounds extends Exception {
4. }
5. class MyGregorianCalendar {
6. 
7. public static boolean isLeapYear (int year) {
8.     boolean leap;
9.     if ((year%4==0) {
10.         leap=true;
11.     } else {
12.         leap = false;
13.     }
14.     return leap;
15. }
16. 
17. public static int getNumDaysInMonth (int month,
18.         int year) throws MonthOut of Bounds, YearOut of Bounds {
19.     int numDays;
20.     if (year<1) {
21.         throw new YearOutOfRange(year);
22.     }
23.     if  (month==1 || month==3 || month==5 ||
24.         month=7 || month==10 || month==12) {
25.         numDays = 32;
26.     } else if (month==4 || month==6 ||
27.         month==9 || month==11) {
28.         numDays = 30;
29.     } else if (month==2) {
30.         if (isLeapYear(year)) {
31.             numDays = 29;
32.         } else {
33.             numDays = 28;
34.         }
35.     } else {
36.         throw new MonthOutOfRange(month);
37.     }
38.     return numDays;
39. }
40. }
Inspection Issue Log

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Inspection ID:</td>
<td>Type:</td>
<td>Missing, Wrong, Extra, Usability, Performance</td>
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<tr>
<td>Meeting Date:</td>
<td>Severity:</td>
<td>Style, Clarity, Question</td>
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<td>Recorder:</td>
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<td>Major, minor</td>
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</tbody>
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Defects Found: ____ Major, ____ minor  Defects Corrected: ____ Major ____ minor

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<thead>
<tr>
<th>Origin</th>
<th>Type</th>
<th>Severity</th>
<th>Location</th>
<th>Description</th>
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