# BLG 475E: Software Quality and Testing
# Fall 2017-18

## Homework #3

## Deadline: 8th December 2017

Work in groups of **at most 3 people**, each group must submit ONE report to Ninova. You need to submit your report with the SAME group that you worked with during this week's class (27th November).

This homework aims at giving an understanding of software inspections. More specifically, the learning goal is to try **usage-based reading** (UBR) technique during inspection.

1. Download the requirements specification document and use cases document provided for a taxi management system under Sınıf Dosyaları/Inspections folder.

There are several defects seeded into the **requirements specification document**. It is required to identify seeded defects in the requirements specification document, based on ambiguity, correctness, and consistency of use cases. Also the requirements can be evaluated in terms of whether they are realistic, and verifiable.

You will follow UBR technique during your inspection. This technique utilizes prioritized use cases to guide reviewers through an inspection. More importantly, UBR drives the reviewers to focus on the software parts that are most important for a use. During your inspection activity, you should review the requirements specification document by following the prioritized use cases in the use case document. The use case document consists of 10 use cases in prioritized order with the most important use-case first.

2. You need to read both documents **individually**. It is highly recommended to spend at most 2 hours during this individual inspection. Report the defects you found in the Requirements Specification Document during your individual inspection activity. For reporting the defects, you may use the CodeInspection-IndividualTemplate file under Sınıf Dosyaları/Inspections.

3. After each group member reads and inspects the documents, you need to meet **with your group**, and conduct the inspection process. This meeting should also take at most 2 hours. Report the defects that your group found in the Requirements Specification Document.

While reporting the defects, you need to classify the defects into three categories:

***Severe Defects:*** Defects considered as the most important to the customer, defects in critical functions or frequently used functions.

***Moderate Defects:*** Moderately severe defects found in not so important functions than the severe ones.

***Minor Defects:*** Defects that do not affect the functionality too much.

These categories may seem unclear or subjective to you (True!). But it is your responsibility as a group to agree on these definitions and rank all defects according to these three categories. If you follow additional rules in your group during the categorization of the defects, clearly explain that in your report.

## Report

In your report, specify the meeting date, time, and planning details. Report the time spent during individual inspections and at group inspection meeting.

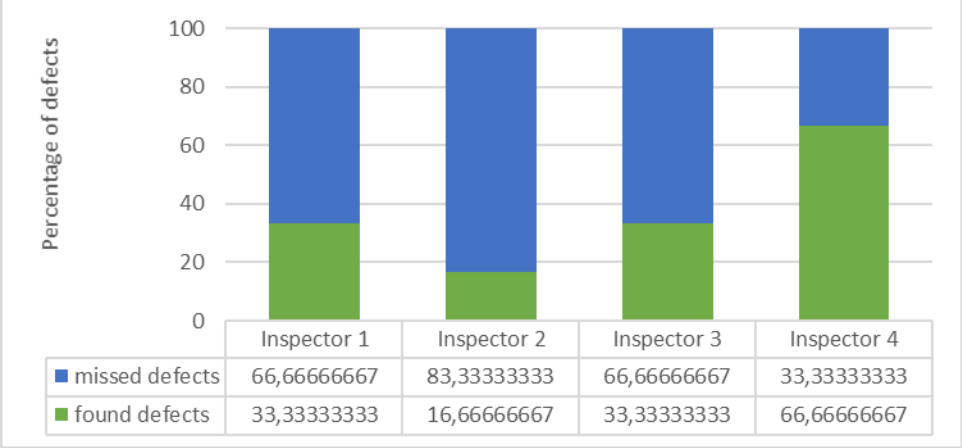
1. Use the table demonstrated below and report the number of defects that a) each member found in their individual inspections, b) all reviewers found, and c) a member missed but other members highlighted.

*For example*, the first member identified 8 severe defects while inspecting the document individually. Other members also found 2 of 8 defects, but they did not agree that the rest of the 6 defects are actually a defect. Additionally, the first member missed 4 severe defects that other members found.

Similarly, the second member identified 1 severe defect during individual inspection. Other members also agreed on that defect, however the second member missed 5 additional severe defects. In total 6 severe defects are reported by this group.

| **Inspection member** | **Severe defects (individually found /agreed by all reviewers/ missed by the inspector)** | **Moderately severe defects (individually found/ agreed by all reviewers / missed by the inspector)** | **Minor defects (individually found/ agreed by all reviewers/ missed by the inspector)** |
|---|---|---|---|
| **Name 1** | **e.g. 8 / 2 / 4** | | |
| **Name 2** | **e.g. 1/ 1 / 5** | | |
| **Name 3** | **e.g. 2 / 2 / 4** | | |
| **Name 4** | **e. g. 4/ 4 / 2** | | |
| | | | |
| **Final number of defects reported by all members** | **6** | | |

2. Illustrate the effectiveness of your inspection process through a figure. The figure below is an example showing the percentage of defects detected and missed by each inspector.




3. Provide a list of all defects found in your inspection meeting. For each defect, give the use case name/number, step number in the use case, and corresponding explanation in the requirements document.

4. Finally, using the capture-recapture method explained in the course slides, calculate and report the estimated number of total defects in the requirements specification document.