SMA: Software Modeling and Analysis

Practical Session

Week 05
Assignment 05

Discussion
You have to **attend the lecture to reveal such slides.**

*Disclaimer:
The content that has been shown on this slide is irrelevant for the exam.

:-)
A05 - Exercise 01 | General questions

• Is code reading a problem? Argue the answer.
  *Yes it is! Developers spend usually more than 50% of their time on code reading.*

• Give an example where a custom tool improved the productivity in addressing a problem or issue.
  - *status indicators → awareness of project state*
  - *customized IDE plug-ins → report a variety of issues*
  - *DIY tools → help in fixing things...*
Exercise 02 | Smalltalk coding

• **Write an inspector extension** that prints the instance of a DateAndTime object in the following format:
  YYYY-MM-DD HH:MM

```smalltalk
DateAndTime>>gtInspectorHumanReadableIn:
  composite <gtInspectorPresentationOrder: 10>
  composite text
  title: ’Human readable’;
  display: [ self asStringYMDHM ]
```
• How many inspector extensions exist that use a table presentation? Implement code that counts those extensions.

27. The required code:

(#gtInspectorPresentationOrder: pragmas intersection: #table senders) size
A05 - Exercise 03 | BONUS questions

• **Enumerate at least two different embedded artifacts** that are essential for a live document.
  - `CompiledMethod.extension` → enables inline code in inspector
  - `Color.extension` → shows color panels in inspector

• What is the **main difference between extensions** of the old and the new inspector?
  - The old extensions make use of the `<gtView>` pragma instead of the `<gtInspectorPresentationOrder>` pragma.
Assignment 06

Preview
General *knowledge*.

• What is cyclomatic complexity? Explain!
• Which other metrics do you know?
• Do metrics always express problems?
• How and when are nowadays metric checks in place?
A06 - Exercise 02 | Evaluation of metrics

Pharo coding.

First, write a query to...
• retrieve all classes with more than 42 methods.
• find all methods with a CYCLO larger than 84.

Then respond...
• What methods suffer from such a complexity?
• Is 84 a large CYCLO value?
More Pharo coding.

Write a query to...

• obtain classes that call deprecated methods.

• obtain all attributes that show certain properties, but are not declared as final.

• obtain a list of methods that make more than one call to deprecated classes.