

Runtime Verification

Lecture 1 : Introduction

<http://www.runtime-verification.org/course>

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The first lecture is an introduction to the emerging field of program monitoring, or *runtime verification*, as we shall coin it, and is broadly focused, in contrast to subsequent lessons. As homework after lesson 1 you are asked to install the AspectJ system, which will be the subject of the subsequent two lessons, and which will be used by other systems to be presented later in the course. In lesson 2 and 3 we shall see how AspectJ can be used to instrument and monitor Java programs. This will motivate more domain specific monitoring languages, to be presented later in the course.

A General Remark on Resources

All resources needed during the course, such as website addresses, papers, code examples, etc. will be available on the course website, organized according to the lectures where they are needed. This includes slides in pdf format. The powerpoint version is available upon request (powerpoint does not behave the same on different platforms, hence the pdf as default. Some animations only appear in the powerpoint version).

Installation

1. Install AspectJ on your preferred system. AspectJ works well in Eclipse for those who want to work with Eclipse.

Reading

1. Read the paper *An Overview of AspectJ*, Gregor Kiczales, Erik Hilsdale, Jim Hugunin, Mik Kersten, Jeffrey Palm and William G. Griswold.
2. Start browsing documentation.

Assignments

1. Try to write a small aspect and make it run.