
Fire Breathing Rubber Duckies

rAppla Metric Measurement Plan

Version 1.0

rAppla	Version: 1.0
Measurement Plan	Date: 11/May/14

Revision History

Date	Version	Description	Author
11/May/14	1.0	Metrics Measurement Plan for rAppla	rAppla Team

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1. Introduction

1.1 Purpose

This Measurement Plans aim is to describe the efficiency of code from the rAppla app through Metrics. The Metrics are calculated with a tool called “Metrics 1.3.6” that has been integrated in to the Eclipse IDE in which rAppla is being developed.

1.2 Scope

The Plan should provide the rAppla team members with helpful explanation of the calculated Metrics.

1.3 Overview

This document contains two most focused Metrics for Use cases of rAppla. The Metrics, which have been created by the tool “Metrics 1.3.6”, are shown in the screenshots, with a small explanation, below.

2. Management Goals and Subgoals

The measurements should enhance the development of rAppla. Furthermore it should help to zoom into potential trouble spots.

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4. Metrics

4.1 Metric 1: Too many static attributes

Metric	Total	Mean	Std. Dev.	Maxim...	Resource causing Maximum
Number of Parameters (avg/max per method)	0.924	1,179	10	/rAppla/src/app/rappla/calendar/Date.j	
Number of Static Attributes (avg/max per type)	149	2,129	5,446	33	/rAppla/gen/app/rappla/R.java
gen	93	8,455	10,866	33	/rAppla/gen/app/rappla/R.java
app.rappla	93	8,455	10,866	33	/rAppla/gen/app/rappla/R.java
src	56	0,949	2,078	9	/rAppla/src/app/rappla/calendar/Date.j
Effort Coupling (avg/max per packageFragment)	3,667	2,944	11	/rAppla/src/app/rappla/ui/fragments	
Specialization Index (avg/max per type)	0,167	0,371	1,667	/rAppla/src/app/rappla/activities/Settin	
Number of Classes (avg/max per packageFragment)	70	7,778	8,599	30	/rAppla/src/app/rappla/calendar
Number of Attributes (avg/max per type)	158	2,257	3,392	17	/rAppla/src/app/rappla/calendar/Event
Abstractness (avg/max per packageFragment)	0,034	0,065	0,182	/rAppla/src/app/rappla/ui/fragments	

The metric shown in this screenshot complains about high number of static attributes used in code.

The attributes are generated by XML Files in the Eclipse IDE. The metric points out that this can create problems within the rAppla app. Furthermore the code is also shown in the screenshot with the attributes, which the metric is complaining about. This metric is colored blue which means that this issue has a high number of the calculated metric but it is not that high and not necessarily to be of concern.

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4.2 Metric 2: Too many Parameters

The screenshot shows an IDE window titled 'Java - rAppla/src/app/rappla/calendar/Date.java - ADT'. The code editor displays the following Java code:

```
// Code below by Jeremy
public Date(String dateType, int year, int month, int day, int min, int sec, int ehour, int emin, int esec, int ehour) throws BogusDataException {
    super(dateType, "");
    this.dateType = dateType;
    this.year = year;
    this.month = month;
    this.day = day;
    this.hour = hour;
    this.minute = min;
    this.second = sec;
    this.ehour = ehour;
}
```

The 'Metrics' window at the bottom shows the following data:

Metric	Total	Mean	Std. Dev.	Maxim...	Resource causing Maximum
Number of Parameters (avg/max per method)	0,924	1,179	10	10	/rAppla/src/app/rappla/calendar/Date.java
src	0,924	1,179	10	10	/rAppla/src/app/rappla/calendar/Date.java
gen	0	0	0	0	
Number of Static Attributes (avg/max per type)	149	2,129	5,446	33	/rAppla/gen/app/rappla/R.java
gen	93	8,455	10,866	33	/rAppla/gen/app/rappla/R.java
app.rappla	93	8,455	10,866	33	/rAppla/gen/app/rappla/R.java
src	56	0,949	2,078	9	/rAppla/src/app/rappla/calendar/Date.java
Efferent Coupling (avg/max per packageFragment)	3,667	2,944	11	11	/rAppla/src/app/rappla/ui/fragments
Specialization Index (avg/max per type)	0,167	0,371	1,667	1,667	/rAppla/src/app/rappla/activities/Setting
Number of Classes (avg/max per packageFragment)	70	7,778	8,599	30	/rAppla/src/app/rappla/calendar

The metric shown in this screenshot complains that the method “public Date” has too many Parameters. It is marked red and should be of concern.