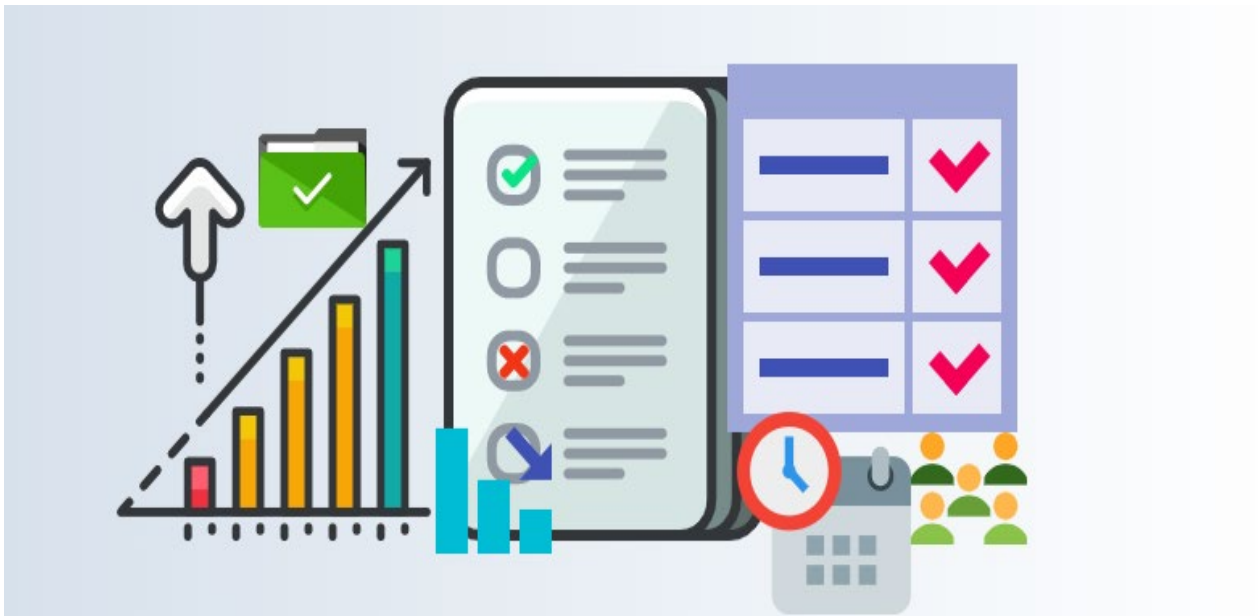# Relatório de Métricas e *Code Smells*

UC: Engenharia de Software

Realizado por- Grupo 18:

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Métricas

Metric	Total	Mean	Std. Dev.	Maximu...	Resource causing Maximum	Method
> McCabe Cyclomatic Complexity (avg/max per		1,514	1,681	13	/ES_Project/src/main/java/User.java	getCalendarEventList
> Number of Parameters (avg/max per method)		0,51	1,235	11	/ES_Project/src/main/java/CalendarEngine.java	submitPressed
> Nested Block Depth (avg/max per method)		1,21	0,721	5	/ES_Project/src/main/java/CalendarEngine.java	checkBoxPressed
> Afferent Coupling (avg/max per packageFragm		0	0	0	/ES_Project/src/main/java	
> Efferent Coupling (avg/max per packageFragm		14	5	19	/ES_Project/src/test/java	
> Instability (avg/max per packageFragment)		1	0	1	/ES_Project/src/main/java	
> Abstractness (avg/max per packageFragment)		0,065	0,065	0,13	/ES_Project/src/main/java	
> Normalized Distance (avg/max per packageFra		0,065	0,065	0,13	/ES_Project/src/main/java	
> Depth of Inheritance Tree (avg/max per type)		1,881	1,735	6	/ES_Project/src/main/java/FrameDashboard.java	
> Weighted methods per Class (avg/max per typ	368	8,762	13,295	69	/ES_Project/src/main/java/Calendar.java	
> Number of Children (avg/max per type)	7	0,167	0,652	4	/ES_Project/src/main/java/FrameDashboard.java	
> Number of Overridden Methods (avg/max per	12	0,286	0,825	4	/ES_Project/src/main/java/FrameDashboard.java	
> Lack of Cohesion of Methods (avg/max per typ		0,082	0,224	0,829	/ES_Project/src/main/java/CalendarEvent.java	
> Number of Attributes (avg/max per type)	45	1,071	2,052	7	/ES_Project/src/main/java/FrameLogin.java	
> Number of Static Attributes (avg/max per type	43	1,024	1,472	7	/ES_Project/src/main/java/Calendar.java	
> Number of Methods (avg/max per type)	191	4,548	6,06	36	/ES_Project/src/main/java/Calendar.java	
> Number of Static Methods (avg/max per type)	52	1,238	1,171	5	/ES_Project/src/main/java/CalendarEngine.java	
> Specialization Index (avg/max per type)		0,056	0,246	1,6	/ES_Project/src/main/java/FrameDashboard.java	
> Number of Classes (avg/max per packageFragr	42	21	2	23	/ES_Project/src/main/java	
> Number of Interfaces (avg/max per packageFra	2	1	1	2	/ES_Project/src/main/java	
> Number of Packages	2					
> Total Lines of Code	2577					
> Method Lines of Code (avg/max per method)	1452	5,875	17,153	128	/ES_Project/src/main/java/FrameLogin.java	FrameLogin

Code Smells

Long Method

Refactoring Type	Source Method	Variable Criterion	Block-Based Region	Duplicated/Extracted	Rate it!
>	CalendarEngine::public void startCalendar() throws java.text.ParseException, ...	weekControls			
>	CalendarEngine::public void checkBoxPressed(javax.swing.JCheckBox) thro...	events			
>	MongoDB::public java.io.File outputData(java.lang.String) throws java.io.IOE...	fw			
>	CalendarEngine::public void scheduleEvent()	buttons			
>	CalendarEngine::public void scheduleEvent()	ok			
>	CalendarEngine::public void avaliabilityChart() throws java.lang.reflect.Invoc...	totalMinutes			
>	MongoDB::public java.io.File outputData(java.lang.String) throws java.io.IOE...	json			
>	User::public ArrayList<CalendarEvent> getCalendarEventList() throws java.te...	ce			
>	MongoDB::public ArrayList<User> getUsers() throws java.io.IOException	userIDs			
>	IcsToJson::public java.io.File getJson(java.lang.String) throws java.io.IOExcep...	writer			
>	CalendarEvent::public void addToJson() throws java.io.IOException	e			
>	IcsToJson::public java.io.File getJson(java.lang.String) throws java.io.IOExcep...	writer			
>	MongoDB::public ArrayList<User> getUsers() throws java.io.IOException	user			
>	User::public ArrayList<CalendarEvent> getCalendarEventList() throws java.te...	events			
>	CalendarEngine::public void checkBoxPressed(javax.swing.JCheckBox) thro...	e			
>	CalendarEngine::public void newEventFrame(User)	frame			
>	CalendarEngine::public static boolean checkAvaliability(User, CalendarEvent...	dayEvents			
>	CalendarEngine::public void newEventFrame(User)	resadd			
>	CalendarEngine::public void newEventFrame(User)	startTimeLabel			
>	CalendarEngine::public void scheduleEvent()	cancelar			
>	CalendarEngine::public void startCalendar() throws java.text.ParseException, ...	toPDFButton			
>	JFrameToPDF::public static void ToPDF(javax.swing.JFrame) throws java.io.IO...	pdfDocument1			
>	CalendarEngine::public void avaliabilityChart() throws java.lang.reflect.Invoc...	userEvents			
>	CalendarEngine::public void checkBoxPressed(javax.swing.JCheckBox) thro...	users			
>	CalendarEngine::public void startCalendar() throws java.text.ParseException, ...	users			
>	Calendar::private void calculateScaleVars()	width			
>	CalendarEngine::public void newEventFrame(User)	dateLabel			
>	CalendarEngine::public void newEventFrame(User)	descriptionLabel			
>	CalendarEngine::public void newEventFrame(User)	descriptionText			
>	CalendarEngine::public void newEventFrame(User)	endTimeLabel			
>	CalendarEngine::public void newEventFrame(User)	nameLabel			
>	CalendarEngine::public void newEventFrame(User)	nameText			
>	CalendarEngine::public void newEventFrame(User)	title			
>	IcsToJson::public java.io.File getJson(java.lang.String) throws java.io.IOExcep...	file			
>	Calendar::private void calculateScaleVars()	height			
>	CalendarEngine::public void scheduleEvent()	us			
>	CalendarEngine::public void avaliabilityChart() throws java.lang.reflect.Invoc...	chart			
>	Calendar::private void drawString(java.awt.Graphics, java.lang.String, int, int)	y			
>	CalendarEngine::public void scheduleEvent()	user			
>	CalendarEventTest::static void setUpBeforeClass() throws java.lang.Exception	ce			
>	CalendarTest::static void setUpBeforeClass() throws java.lang.Exception	c1			

>	CalendarTest::static void setUpBeforeClass() throws java.lang.Exception	c1
>	CalendarTest::static void setUpBeforeClass() throws java.lang.Exception	c2
>	CalendarTest::static void setUpBeforeClass() throws java.lang.Exception	c3
>	CalendarTest::static void setUpBeforeClass() throws java.lang.Exception	c4
>	WeekCalendarTest::static void setUpBeforeClass() throws java.lang.Exception	w1
>	WeekCalendarTest::static void setUpBeforeClass() throws java.lang.Exception	w2
>	WeekCalendarTest::static void setUpBeforeClass() throws java.lang.Exception	w3
>	WeekCalendarTest::static void setUpBeforeClass() throws java.lang.Exception	w4
>	CalendarEngine::public void avaliabilityChart() throws java.lang.reflect.Invoc...	inRangeEvents
>	CalendarEngine::public void avaliabilityChart() throws java.lang.reflect.Invoc...	weekDays
>	CalendarEvent::public void addToJson() throws java.io.IOException	out
>	Calendar::private void drawGrid()	x1
>	Calendar::private java.time.DayOfWeek pixelToDay(double)	pixel
>	Calendar::private void drawDayHeadings()	day
>	Calendar::private void fireCalendarEmptyClick(java.time.LocalDateTime)	calendarEmptyClickEvent
>	Calendar::private void fireCalendarEmptyClick(java.time.LocalDateTime)	calendarEmptyClickEvent
>	Calendar::private void fireCalendarEventClick(CalendarEvent)	calendarEventClickEvent
>	Calendar::private void fireCalendarEventClick(CalendarEvent)	calendarEventClickEvent
>	CalendarEngine::public void resetPressed(javax.swing.JTextField, JComboBo...	res
>	CalendarEngine::public void submitPressed(User, javax.swing.JTextField, JCo...	res
>	CalendarEngine::public void submitPressed(User, javax.swing.JTextField, JCo...	output
>	Calendar::private void drawDayHeadings()	x

God Class

Refactoring Type	Source Class/General Concept	Extractable Concept	Source/Extracted accessed members	Rate it!

Feature Envy

Refactoring Type	Source Entity	Target Class	Source/Target accessed members	Rate it!

Type Checking

Refactoring Type	Type Checking Method	Abstract Method Name	System-Level Occ	Class-Level Occu	Average #statem	Rate it!