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# **Parental Controller for Android Development Case**

**Version 2.0**

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Development Case	Date: 01/01/2012

## Revision History

Date	Version	Description	Author
01/01/2012	1.1	Modify Development Case	H.M.G.C.Karunaratne
13/02/2012	1.5	Modify for mid-evaluation	H.M.G.C.Karunaratne
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# Development Case

## 1. Introduction

### 1.1 Purpose

The purpose of development case of parental controller for Android is to lists the artifacts that are part of the process, along with guidance on the tools used to create them. This collects the details of RUP disciplines verses choosing of artifacts and reports. It gives a collection of the artifacts and reports, generated throughout the project.

### 1.2 Scope

The artifacts and reports will be output though the project process cycle.

### 1.3 Definitions, Acronyms, and Abbreviations

RUP – Rational Unified Process

QA – Quality Assurance

### 1.4 References

The Rational Unified Process:

<http://www.ts.mah.se/RUP/RationalUnifiedProcess/>

Android:

<http://developer.android.com/index.html>

### 1.5 Overview

This document contains the development activities with respect to disciplines of the Rational Unified Process to software application of Parental Controller for Android. Section 2 contains an overview of the development process and it describes the usage of terminology and describes in detail. Section 3 describes the disciplines which are use in/not.

## 2. Overview of the Development Case

### 2.1 Lifecycle Model

The Life cycle model is employed by RUP. In Inception phase, it gathers the information about feasibility of the project for the purpose with approval of project, maintain some documents to identify the requirement of the project, for documentation the project and to risk maintain. In Construction phase, it has two iteration with deliverable out comes.

### 2.2 Disciplines

Few of disciplines which are addressed in RUP may not follow under this project due to the project is a small scale project; develop by single person and some academic needs. But some of mandatory documents are generated and maintained with software engineering best practices. Disciplines such as Configuration and Change Management, Business Modeling and Deployment are not inherently use in this project.

### 2.3 Discipline Configuration

The purpose of this section is to explain how the discipline configuration works. This includes an explanation of the purpose for the various tables and for each of the sections that describe the various disciplines listed in the section titled *Disciplines*.

#### 2.3.1 Workflow

This section is to detail any changes made to the structure of the workflow itself. Since, this is an individual project and due to it is easy to handle and to there may not be compulsory as mention in schedule some of them can be remove.

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### 2.3.2 Artifacts

This section describes how the artifact will be used. It includes some additional local artifacts which are specialized for the project. The following table is used to describe each artifact.

Artifacts	How to Use				Review Details	Tools Used	Templates/Examples
	Incep	Elab	Const	Trans			

#### 2.3.2.1 Explanation of the table

Column Name	Purpose	Contents/Comments
<b>Artifacts</b>	The name of the artifact.	A reference to the artifact in the Rational Unified Process or to a local artifact definition held as part of the development case.
<b>How to Use</b>	Qualify how the artifact is used across the lifecycle.	Decide for each phase: Must have Should have Could have Won't have These are defined in section Artifact Classification(2.4)
<b>Review Details</b>	Define the review level, and review procedures to be applied to the artifact.	Decide on the review level: Formal-External Formal-Internal Informal None For details see the section Review Procedure(2.5)
<b>Tools Used</b>	Definition of the tool (or tools), used to produce the artifact.	References to the details of the tools used to develop and maintain this artifact.
<b>Templates/Examples</b>	The templates to be used and examples of artifacts using the templates.	References to templates and examples. This could be referenced to either the templates or examples in the Rational Unified Process, or to local templates and examples.

### 2.3.3 Notes on Artifacts

This section has three main purposes:

It contains a list all artifacts that you won't use and the motives behind your decision for not using them.

It contains a reference to the project's Configuration Management Plan, which describes the configuration management strategy to be used when working on these artifacts. The Configuration Management Plan allows developers to answer questions such as:

When do I release my artifact?

Where do I put my newly created or modified artifact?

Where do I find existing artifacts for the project?

If the Development Case is a an organization-level development case, this is where you add notes on what each project will consider when they decide what to do with the artifact. Use the predefined table below as a starting point.

Artifacts	How to Use	Reason
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#### 2.3.4 Reports

This section lists the reports to be used.

Reports	How to Use	Templates/Examples	Tools Used

#### 2.3.5 Notes on the Reports

This section will list all reports that the project has decided it **Won't** use and the motives behind why it decided not to use them.

#### 2.3.6 Additional Review Procedures

This section captures any additional review procedures that are required for the artifacts used in the discipline. These supplement the general Review Procedures described in the *Overview* section of this document.

#### 2.3.7 Other Issues

This section captures any outstanding issues with the discipline's configuration and can be used as an issues list when the Development Case is being built.

### 2.4 Artifact Classification

An artifact is a deliverable of the process. It is often developed within one core workflow, although there are exceptions. The artifacts are organized in the workflow where they are created. To describe how an artifact will be used, we use the following classification scheme

- **Must** - major artifact and may cause problems later in development if it's not produced.
- **Should** – if it is possible, can produce. But it can be negotiable.
- **Could** - artifact doesn't have to be produced. It adds value and if there's enough time.
- **Won't** - won't use this artifact

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## 2.5 Review Procedures

The project uses the following review levels:

- **Formal-External** - This artifact is part of the delivery at a specific milestone and requires some form of approval by the customer, the sponsor or some other external stakeholder
- **Formal-Internal** - This artifact is formally reviewed internally by the project
- **Informal** - This artifact is reviewed, but not formally approved
- **None** - This artifact does not need to be reviewed or approved

## 2.6 Sample Iteration Plans

### 2.6.1 Inception Phase

The List the sample iteration plans used during Inception.

2.6.1.1 **Verbal Confirmation of Project:** Approve by project evaluator

2.6.1.2 **Feasibility study document:** The feasibility study was done to verify the technical feasibility and on time delivery.

2.6.1.3 **Vision document:** To identify features of the Android app in very abstract level with documenting.

2.6.1.4 **Project schedule:** Developed a grant chat for the project work flow using openproj open source software

2.6.1.5 **Project development case:** This is the collection of various artifacts during the project development activities.

### 2.6.2 Elaboration Phase

2.6.2.1 **System requirement document:** Detailed documentation about features and requirements defined in the vision document

2.6.2.2 **Architecture document:** This is the structure of the product

### 2.6.3 Construction Phase

2.6.3.1 **Two iterations development:** After every week a weekly progress report will be produced. There will be a mid demonstration to identify any changes for the project or process.

### 2.6.4 Transition Phase

2.6.4.1 **React on necessary changers:** During mid evaluation and based on weekly report the evaluator (stakeholder) give the feedback on the product and according to those, do necessary changers.

## 3. Disciplines

### 3.1 Business Modeling

#### 3.1.1 Workflow

Since this is a small scale application and an academic project. Due to time limitations and other specific artifact or report was generated for business modeling. This is going to be an open source project and application can be freely download by Android app brain. The main target of this project will be the parents.



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### 3.2 Requirements

Requirements describe what each of the following sections will contain.

#### 3.2.1 Workflow

Vision document collects the features and the requirements in very abstract level. The software requirements specification document will have the more details in micro level. Since programmer is novice for this technology and due to lot of ambiguities and the requirement indeed, the use cases are removed.

#### 3.2.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Stakeholder Requests	Must	Must	Must	Should	Formal-Internal	–	–
Software Requirements Specification	Must	Must	Must	Must	Formal-External	Microsoft Office Word	RUP template
Vision	Must	Must	Must	Must	Formal External	Microsoft Office Word	RUP template

#### 3.2.3 Notes on the Artifacts

Artifacts	How to Use	Reason

#### 3.2.4 Additional Review Procedures

Additional artifacts may be depending on the demand of stakeholder.

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### 3.3 Analysis & Design

Analysis and Design describes what each of the following sections will contain.

#### 3.3.1 Workflow

Only the Software Architecture Document is produced for this discipline. After completing this, project implementation has to be started. Understanding the Moodle architecture and its plugging API is necessary to prepare the system architecture of the proposed plugging. The interface between the plugging and the Moodle is very important for integrating the final product with Moodle

#### 3.3.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Protocol	Won't	Won't	Must	Must	Formal-Internal	Android API, SMTP	–
Software Architecture Document	Could	Must	Must	Must	Formal-External	Microsoft Office Word	RUP template

#### 3.3.3 Notes on the Artifacts

Artifact	How to Use	Reason

### 3.4 Implementation

Implementation describes what each of the following sections needs to contain.

#### 3.4.1 Workflow

The implementation is done in two iterations.

First iteration: 3 week development with end of 4<sup>th</sup> week with a demonstration.

Second iteration: 4 week development and end of 8<sup>th</sup> week with final demonstration

Weekly: Generate weekly report and submit to the evaluator

#### 3.4.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Component	Could	Must	Must	Must	Informal	Eclipse IDE, Android SDK, Android simulator	–

#### 3.4.3 Notes on the Artifacts

Artifacts	How to Use	Reason

### 3.5 Testing

Testing describes what each of the following sections needs to contain.

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### 3.5.1 Workflow

Testing is involved with development of app until it released (final demonstration). Testing has to be done with own build proto type. Hence, there is a flexibility of changing to need as possible.

### 3.5.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Test Case	Won't	Could	Must	Must	Informal	Android	
Test Class	Won't	Could	Must	Must	Informal	Android	
Test Plan	Won't	Could	Must	Must	Informal	Android	
Test Results	Won't	Could	Must	Must	Informal	Android	

### 3.5.3 Notes on the Artifacts

Artifacts	How to Use	Reason

## 3.6 Deployment

Deployment describes what each of the following sections needs to contain.

### 3.6.1 Workflow

The final product will be implemented by 15<sup>th</sup> March, 2012. Further enhancement or feathers remove will be done according to feasibility of the project. The final demonstration will be done using two Android simulator phones.

### 3.6.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
End-User Support Material	Won't	Won't	Won't	Must	Formal-External	Android text	
Installation Artifacts	Won't	Won't	Could	Could	Informal		
Product	Won't	Won't	Must	Must	Formal-External	Android	
Release Notes	Won't	Could	Could	Must	Formal-External	MS word, HTTP	

### 3.6.3 Notes on the Artifacts

Artifacts	How to Use	Reason

### 3.6.4 Additional Review Procedures

## 3.7 Configuration & Change Management

Configuration & Change Management describes what each of the following sections needs to contain.

### 3.7.1 Workflow

This type of apps can be found in Android developers' code base. Hence, the probability of changing

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requirements is very low. The number of requirement may be change due to time constrains and instruct by evaluator.

Any change done to the project must be documented by weekly reports.

### 3.7.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Workspace	Won't	Could	Must	Must	None	Eclipse	

## 3.8 Project Management

Project Management describes what each of the following sections needs to contain.

### 3.8.1 Workflow

Project Schedule and a QA plan will be prepared in inception phase

Weekly report will be prepared through the construction phase.

### 3.8.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			
Quality Assurance Plan	Could	Must	Must	Must	Formal-External	MS word	RUP template
Feasibility	Must	Won't	Won't	Won't	Formal-Internal	MS word	
Software Development Plan	Must	Must	Must	Must	Formal-External	Openproj	
Status Assessment (weekly reports)	Won't	Could	Must	Must	Formal-External	MS word	RUP template

### 3.8.3 Notes on the Artifacts

Problems which are raised though the project development may be report to the evaluator and react on instruction provide. Due to that ambiguity work flow may be change.

Artifacts	How to Use	Reason

### 3.8.4 Additional Review Procedures

The weekly report will be reviewed by project evaluators to assess the effort put during that week and guide to achieve the targets of the project.

## 3.9 Environment

Environment describes what each of the following sections needs to contain.

### 3.9.1 Workflow

Technologies are identified and integrate with tools and use programming development guide line provide by Android. Eclipse use to develop the app.

### 3.9.2 Artifacts

Artifacts	How to Use				Review Details	Tools Used	Templates/ Examples
	Incep	Elab	Const	Trans			

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Development Case	Must	Must	Must	Must	Formal-External	MS word	RUP template
Tools	Won't	Could	Must	Must	Informal		
Tool Guidelines	Must	Must	Must	Must	Informal		

### 3.9.3 Notes on the Artifacts

Development case must be maintained through the development process.

Tools and Guidelines are used in informal way.

Artifacts	How to Use	Reason

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#### 4. Roles

Not applicable