

## Gradius Development Guide

Here is a guide how to get started in developing on the gradius project.

If the developer isn't familiar to object oriented programming then it is recommended that the user reads some literature about the subject, then return to the project and start developing. Some relevant topics to read would be Java and Android programming. Within these topics the user should read about MVC, databases, XML and how game loops work.

To be able to program an Android project the developer will need a java programming application e.g. Eclipse. Which can be fetched from:

<http://www.eclipse.org/downloads/>

After installing Eclipse the developer will need the Android SDK extension and related tools to be able to program in the Android language.

Start out by installing the Android SDK and related tools which can be fetched from:

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

The link has a small description on how it should be done so that the development environment is set up correctly. The Android version which is used to develop the project is Android 2.1 (API level 7).

For revision control the project uses the Git revision control system that can be accessed from:

<https://github.com/>

This site provides social networking functionality such as feeds, followers and a network graph to display how developers work in their versions of a repository.

When a change has been made in the project this should be committed and pushed to the repository so that everyone in the project can get access to the most recent modification and changes to the project. This is done in a terminal and if the developer has not done this before there is a short how-to in this link:

<http://sirupsen.com/starting-with-git/>

To get access to the github Gradius project the link is:

[git@github.com:jasinski/gradiuss.git](mailto:git@github.com:jasinski/gradiuss.git).

If you don't use eclipse the project also can be build through the command line and changing the directory position to the folder from where you want to place the directory by running the file Gradius.sh which is found in <https://github.com/jasinski/gradiuss/tree/master/dokument> and then running the command:

`./Gradius.sh`

This script builds the project and the test project and later runs the test. Before doing this make sure you have added the android executable to the Path variable on your computer.

The testing in the project is done by Junit which is an built in tool for eclipse. Junit is a unit testing framework for the Java programming language. The developer that has created a class will be the one that tests the class as well. The the same developer will also write the requirements and test cases for the class in order to simplify the testing, which are stored in a wiki document on the github website. The testing will be switched when the developer is satisfied with his testing so that another developer can check if something has been overseen.

The Gradius project can be fetched from the Git repository when access has been granted to

the project. After downloading the project the developer will be invited to a google document where we assign task which should be done. When a task has been assigned the developer types their name beside the task that needs to be done and when the task is completed the user marks it as done and informs the rest of the team.

The communication within the project is done mostly by an application called WhatsApp which is a chat application for smartphones which can include several users in a group discussion to simplify the communication, coordination and cooperation in the project. If a developer needs help in understanding a code snippet then the question can be asked on WhatsApp.