

TDA367: Object-oriented programming project  
Chalmers University of Technology



# Grey Matter RAD-documentation

and I OOPP:

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# 1 Introduction

## 1.1 Purpose

The project aims to construct an Android application for mental training. The application is to be competitive and rank users in relation to others as well as own past performances. Introduction

In today's society where the global population spends more and more time on our phones, but not necessarily on productive activities, rather social media. Spending too much time and focus on others' lives, scrolling endlessly in the app's feed. Therefore our group decided to create an app to switch the focus from social media to the more productive way to spend time, "GrayMatter". An app to test and train your cognitive abilities, like memory and reaction. On the commute or on the coffee break, take your phone and compete against your friends and colleagues.

## 1.2 Application specifications

The application is to be an android application compatible with android 8.0 and upwards. It will be adaptable for various screen sizes.

The application will work as a hub for multiple mental training mini games. These games can be reached from a common menu. Common for the games are also a leaderboard which ranks players internationally and amongst their friends as well as a personal progress analyzation tool. Both the leaderboards and the analyzer tool will be scoring via the Neurån scoring system. This competitive point system will have a scientific aspect as it is based on the normal distribution of the player base.

The user will be able to add other users as their friends. They can show their friends in a list and is able to remove or block existing as well as search for new ones.

## 1.3 Scope of application

The application will include at least four mental training mini games. It will host an international leader board and a friend leaderboard for each of the games. *Grey Matter* will store the users player history in a personal profile which can add other profiles as their friends.

Requirements 2.1 User interface The first iterations of the GUI:

first design.png:

The scrollable list of the games, where the user can press on one of the cards and the game starts.

main page.png

we decided to add a profile and statistics page, to give the user some more features.

main page2.png

This is the third iteration of the design, where we added some color and also decided to go with bigger card and only one column

friends logged in

this is the profile page where we wanted the user to change some settings and possibly check the friends stats

## 2.2 functional requirements

This lists the different USER STORIES AND THEIR PRIORITIES

## 2.3 non functional requirements

Lists the (typ prestanda mål eller annat som ger användaren lycka)

## 3. User stories

## 4. Domain model