

# Group 29 (AKT)

## Module Guide

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Table 1: **Revision History**

<b>Date</b>	<b>Version</b>		<b>Notes</b>
November 2017	6,	1.0	Created
November 2017	8,	1.1	Updated content
November 2017	10,	1.2	Updated and finalized content for Rev.0
December 2017	3,	2.0	Updated content for Rev.1

# 1 Introduction

Reddit Clone is a project that mimics the basic functionality of the website Reddit, a community based social news aggregator. This document(referred to as the Module Guide) aims to specify the module structure of the system for designers and maintainers. In order to support the principle of information hiding, the system is decomposed into easily maintainable, reusable modules with low coupling and high cohesion.

The following is an outline of the document structure:

- Section 2 contains possible changes to the system
- Section 3 provides an overview of module design within the system
- Section 4 explains how the requirements and module design are related
- Section 5 provides details on each module, specifically it's secret(s) and service(s)
- Section 6 contains the traceability matrices between modules/requirements and modules/anticipated changes
- Section 7 provides the use hierarchy between each module

MIS documentation was generated for each module and markdown document. The MIS was generated using CompoDoc, a document generator for AngularJS projects. MIS documentation can be found in the [Gitlab repo](#).

## 2 Anticipated and Unlikely Changes

### 2.1 Anticipated Changes

**AC1:** Navigation methods

**AC2:** Data modelling

**AC3:** Content interaction

**AC4:** Data management

### 2.2 Unlikely Changes

**UC1:** Input/Output devices of the system

**UC2:** Real time database/hosting using Firebase

**UC3:** Assumption of a working internet connection

**UC4:** User interface

**UC5:** Authentication methods

**UC6:** Ability to edit posts/subreddits/user profiles

### 3 Module Hierarchy

This section provides an overview of module design within the system, including naming and classifications. Modules are summarized in a hierarchy decomposed by secrets in Table 3. The modules listed below, which are leaves in the hierarchy tree are the modules that will actually be implemented.

Module Name	Module Number	Date Implemented By
Hardware Hiding Module	M1	28/09/2017
Authentication Module	M2	29/09/2017
Subreddit Module	M3	13/10/2017
Searching Module	M4	07/11/2017
Post Module	M5	13/10/2017
Comment Module	M6	18/11/2017
Storage Module	M7	25/11/2017
Sorting Module	M8	07/11/2017
Database Module	M9	05/10/2017
Homepage Module	M10	13/10/2017

Table 2: Module Number Format

Level 1	Level 2
Hardware-Hiding Module	
Behaviour-Hiding Module	Authentication Module (M2) Searching Module (M4) Storage Module (M7) Sorting Module (M8) Database Module (M9)
Software Decision Module	Subreddit Module (M3) Post Module (M5) Comment Module (M6) Homepage Module (M10)

Table 3: Module Hierarchy

## 4 Connection Between Requirements and Design

The system is designed to satisfy the requirements stated in the Software Requirements Specification (SRS) as well as allow for further features to be added. The user interface mimics the appearance of the original Reddit's mobile site and is designed to be intuitive and easy to use for most users. A graphical representation of the connection between the requirements listed in the SRS and the modules specified within this document can be viewed in Table 5.

## 5 Module Decomposition

### 5.1 Hardware Hiding Modules

**Secrets:** The implementation of the virtual machine within device being used

**Services:** Interface between user and the system

**Implemented By:** Internet browser

### 5.2 Behaviour-Hiding Module

#### 5.2.1 Authentication Module

**Secrets:** Authentication

**Services:** This module contains all the logic that handles authenticating user and setting user environment variables.

**Implemented By:** –

#### 5.2.2 Searching Module

**Secrets:** Searching algorithm

**Services:** Handles searching for subreddits within the application

**Implemented By:** –

#### 5.2.3 Storage Module

**Secrets:** User settings

**Services:** Contains user settings on local machine

**Implemented By:** –

#### 5.2.4 Sorting Module

**Secrets:** Sorting algorithms

**Services:** Sorts posts based off of different attributes

**Implemented By:** –

#### 5.2.5 Database Module

**Secrets:** Database communication

**Services:** Handles users adding, deleting or updating content

**Implemented By:** –

#### 5.2.6 Homepage Module

**Secrets:** Main hub to all features

**Services:** Central navigation and access to all features or content

**Implemented By:** –

#### 5.2.7 User Authentication Module

**Secrets:** User authentication communication

**Services:** Handling new users, creation of users, password and username authentication, password reset

**Implemented By:** –

### 5.3 Software Decision Module

#### 5.3.1 Subreddit Module

**Secrets:** The design decision of how to navigate to and from subreddits as well as how content is created or loaded and displayed

**Services:** Displaying a page specific to a certain topic

**Implemented By:** –

#### 5.3.2 Post Module

**Secrets:** The design decision of how to navigate to and from posts as well as loading post content

**Services:** Displaying post content

**Implemented By:** –

### 5.3.3 Comment Module

**Secrets:** The design decision of how to navigate to and from the comments page as well as how to load and display comments

**Services:** Displaying comments specific to posts selected

**Implemented By:** –

## 6 Traceability Matrix

Table 4: Trace Between Requirements and Modules

Requirement	Modules
Functional Requirements	
FR1	M2, M9, M10
FR2	M2, M3
FR3	M3, M5, M6, M9, M10
FR4	M2, M5, M6, M9
FR5	M2, M6, M9
FR6	M2, M5, M6, M9, M10
FR7	M3, M7, M8, M9, M10
FR8	M9, M10
Non-functional Requirements	
NF1	M3, M5, M6, M8, M10
NF2	M1
NF3	M1, M9
NF4	M1, M9
NF5	M1
NF6	M1
NF7	M1, M9
NF8	M2, M9

Table 5: Trace Between Anticipated Changes and Modules

Anticipated Changes	Modules
AC1	M3, M5, M6
AC2	M3, M5, M6, M9
AC3	M2, M3, M5, M6, M9
AC4	M9



## 7 Use Hierarchy Between Modules

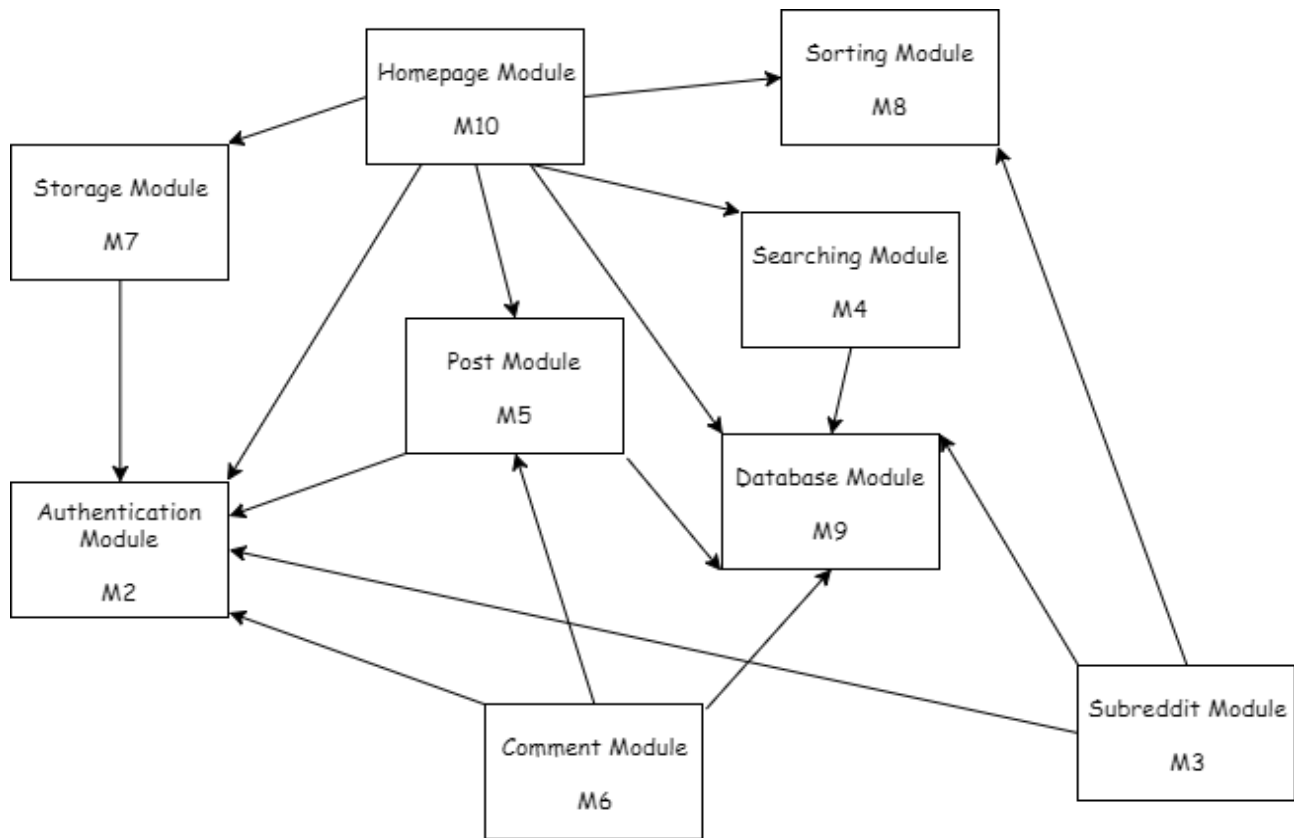


Figure 1: Use hierarchy among modules