

ÇANKAYA UNIVERSITY

Software Design Document

MEGA REJİ

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1.INTRODUCTION

1. Purpose

The purpose of this Software Design Document is providing the details of project titled as “Mega Reji: A Gamified Mobile Application Framework for Film Production System”.

The target audience is members of film production team. Mega Reji application provides a coordinated work environment for film production team members with a gamified system.

The purpose of Mega Reji project is creating an environment in order to make easier synchronization and communication between film production team members. In film production process, sometimes conflict can occur in team members in terms of decision making phase. Therefore, Mega Reji assures that all members from each department of film production company will get rid of possible problems while pre- production, production and post production phases. Mega Reji has three main modes: Pre-Production, Production and Post Production. Participants login to the system according to their roles in film production team, and then use the system according to constraints which are determined by admin. Pre-Production mode consists of Producer Group, Director Group and Scenarist Group. In this mode, Scenarist Group writes the script by using Mega Reji application, offers actor for appropriate role, and offer a place to shooting. Producer Group approves the information which comes from Scenarist Group and then Director Group makes a plan according to information which is approved by Producer Group and send notification to all team members about plan. Production mode consists of Stage Group, Producer Group, Director Group, Production Group and Art, Display, Sound, and Light Groups. In Production Mode, Art, Light, Display and Sound Groups create request reports according to their needs, Producer and Production Groups view reports relevant to location and requests, and then Stage Group sends notification about schedule to film production team members according to created plan by Director Group. Lastly, Post Production mode consists of only Post Production Group. In this mode, Post Production Group creates report about how is going on post production phase.

Mega Reji project is designed as an application which is compatible with web, mobile phones and tablets. By this way, all members in film production company can access the application whenever they need.

In order to provide more detailed information about flow of Mega Reji Project, this SDD includes several diagrams such as UML diagram and Activity diagram and explanation about sequences.

2. Scope

This document contains a complete description of the design of Mega Reji for Film production system.

The JSP extension is Java Server Pages. JSP technology allows you to easily create web content, both static and dynamic pieces. It allows HTML and server-based Java programs to work together.

Android is an operating system developed by Google and used by millions of people. Android operating systems are available on mobile phones and tablets. Linux operating system kernel is used. It builds the Android base structure. Apk supports the extension. Android-based phones are useful devices in many ways. Especially being a Java supporter is becoming one of the most noticeable features of phone and tablet users. Every Android-based phone and tablet allows many applications to run and use very easily.

The Android operating system consists of five parts.

- **The kernel:** The kernel is the Linux kernel. It includes security, memory management, process management, network stacks, and driver models.
- **Android Runtime:** Virtual machine.
- **Libraries:** Includes database libraries, web browser libraries, graphics and interface libraries.
- **Application Framework:** It is the part that provides a broad platform for application developers.
- **Applications:** Includes applications developed directly in the Java programming language.

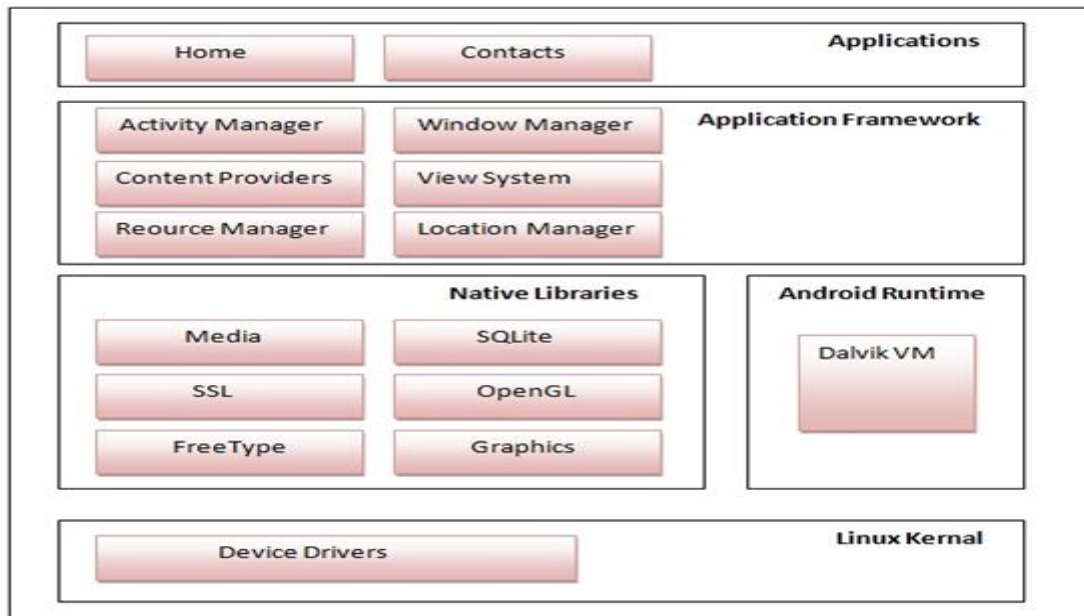


Figure android architecture[1]

Scripting part of the project is occurred using java in mobile application which is developed for Android and web application. Java is open source code, object oriented, platform-independent, high- performance, multi-functional, high-level, an interpreted language. We chose the Java programming language because of rich resources and libraries.

3. Glossary

Term	Definition
BLOCK DIAGRAM	The type of schema which the components in the system are displayed in blocks.
PARTICIPANT	The user who interacts with the simulation environment. Generally Medical Aid Man, Privates Sergeants, Militant Lifesaver, Commissioned Officer in Turkish Armed Forces.
SDD	software Design Document.
UML DIAGRAM	It is a modelling language which is used in Software Engineering.

4. Overview of Document

The remaining part of this document consist of three parts. Section 2 is Architectural Design which describes the project development phases and class diagram of the system and architecture design of Mega Reji application which describes actors, exceptions, basic sequences, priorities, pre-conditions and post conditions. In addition

to project development phases and class diagram in section 2, there is an activity diagram. Section 3 is Use Case Realization which includes block diagram of the system. This block diagram is designed according to use cases in SRS document. Section 4 is related to user interface design. In this section we have shown some sample screenshots from Mega Reji application.

5. Motivation

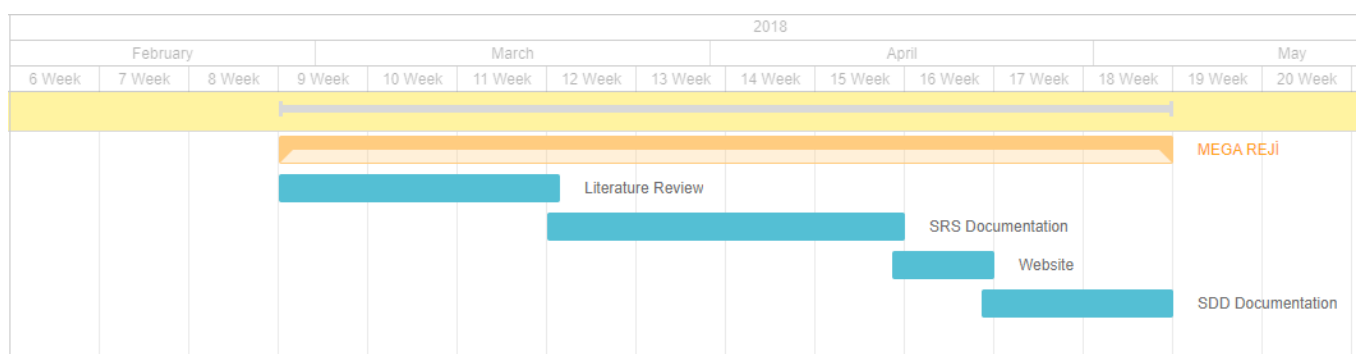
We are a group of senior students in computer engineering department who are interested in gamification and mobile platform. As a group, we have taken the course of java programming for a better understanding object oriented programming. We aimed to combine the fields of education, web programming, mobile programming and gamification in this project. When we are researching about gamification, we find out this technology is so popular but nobody knows it is a gamification. it affect on secretly people's behaviour. Our aim is combining gamification element with web and mobile platform.

2. ARCHITECTURE DESIGN

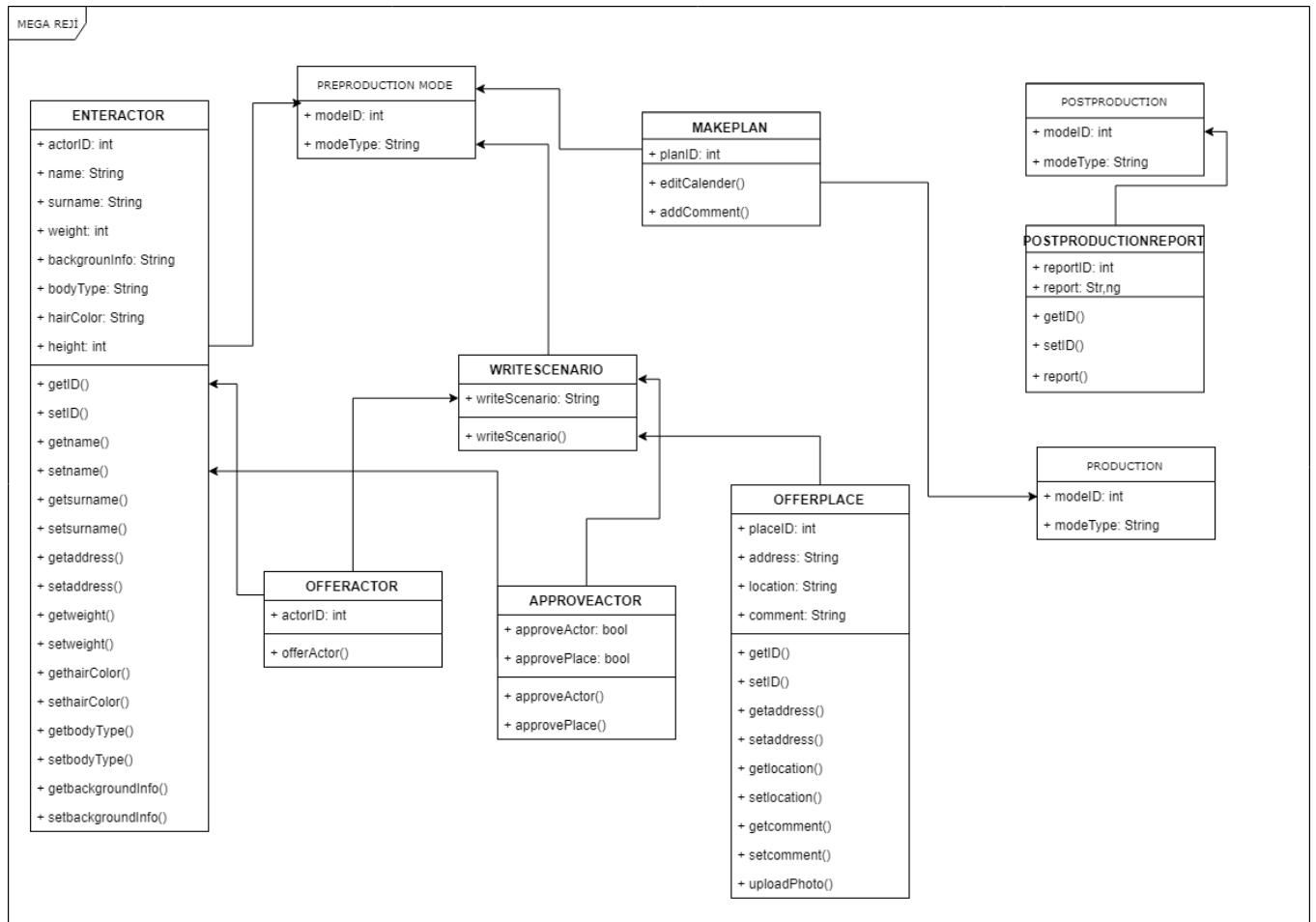
1. Architecture Design Approach

In software engineering, during a project is developing, division of labor and working iteratively is crucial in terms of interfere the problems instantly. Because of this, we have planned to use Scrum in our project. In scrum, project proceeds incrementally and iteratively. The projects divided into small sections that is called sprints by Scrum method. Team members make short daily meetings in order to discuss the general situation and new requirements. There are several advantages of Scrum, for instance, developers can adapt easily to changes in requirements. Other advantage of Scrum is convenience for fast improvement. Sprints provide coding, testing and correcting the errors, and taking feedback from the customer and response his/her requests instantly, due to the fact that working with small chunks prevents disruption.

In Gantt chart shown in Figure (x), represents working phases and durations of our senior project. By using Gantt chart we divided our tasks into small pieces and we visualize flow of our project.



1. Class Diagram



2. Architecture Design of Software

1. Profile Management System

Summary: This system used by participant and admin. Members of film production company, register the system with their name, role, user name and password. Then, login to system with their user name and password. Each type of the participants has different control page because of the constraints.

Actor: Film production company member, admin

Precondition: User must run the program.

Basic Sequence:

1. User shall register if he/she doesn't have an account.
2. User shall login to the system by entering his/her username and password.
3. User can update his/her personal information by selecting update button
4. from user menu.

5. Admin can delete a user account by selecting delete button from admin menu.
6. Admin can approve a user account which is registered recently by selecting approve from admin menu..
7. User can exit from the system by selecting exit button.

Post Conditions: None

Priority: Low

2. Pre-Production Menu

Summary: In this mode, members of each groups can make changes in the direction of constraints and obligations.

Actor: Producer Group, Scenarist Group, Director Group

Precondition: Participants shall login to the system.

Basic Sequence:

1. Scenarist group can write script.
2. Producer and Director Groups shall enter actor/actress information.
3. Producer and Director Groups shall approve place.
4. Producer and Director Groups shall approve actor/actress.
5. Director Group shall make a plan for actor/actress, Sound Group, Light Group, Display Group, Art Group, Production Group and Stage Group.
6. Director Group shall send notification about plan to each members of company.

Post Conditions: None

Priority: Medium

3. Production Mode

Summary: In this mode

Actor: Sound Group,

Precondition: User must be logged in and choose production mode.

Basic Sequence:

- 1.

Exception: Database connection can be failed.

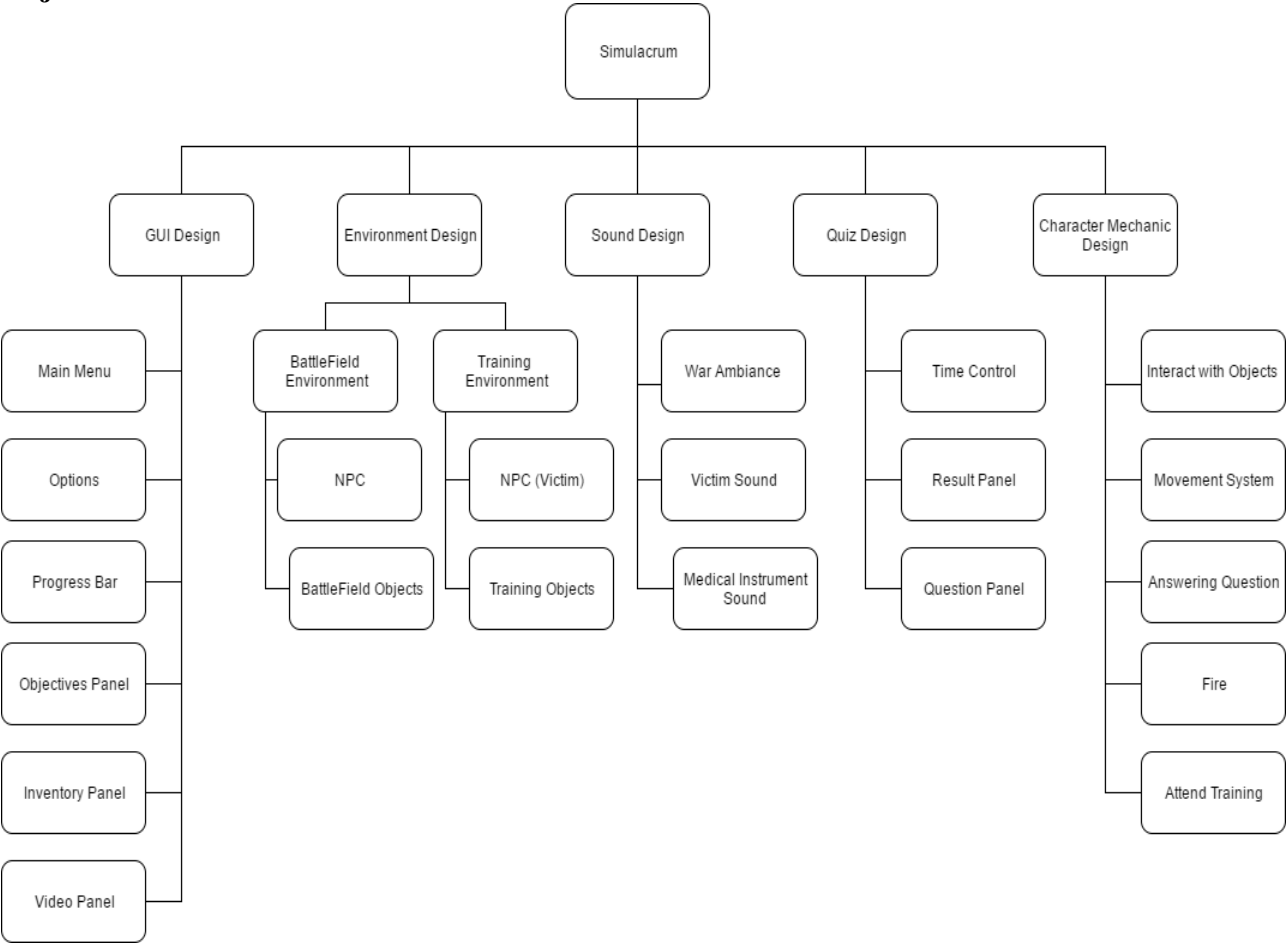
Post Conditions:

Priority: High

2.3 Activity Diagram

3. USE CASE REALIZATIONS

Simulacrum Project



Components of Simulacrum