Software Requirements Specification

for

Gym Management System

Version 1.0

Prepared by Zhenghao Wu & Qizhou Xie

GMS Studio (Team 5)

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1. Introduction

## Purpose

The purpose of this document is to show the detail description of the Gym Management System. It will talk about the feature of the system (what the system can do for customers), the interface of the system, the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the stakeholders and the developers of the system and will be proposed to the Supervisor of Software Development Workshop II’s Group Project for approval.

## Document Conventions

This document will be written using only one different font, Arial for main content and titles. Main content’s font size should be in 12pt.

1. System Features

## Login

3.1.1 Description and Priority

Because the system does not allow registration, and all functions need to be logged in before allowing use.

The three roles in the system (Member, Worker, Coach) have login privileges.

3.1.2 Stimulus/Response Sequences

* When a not login user accesses the system, a login window is displayed on the page
* The user enters the account password and clicks the login button
* Server verified the account and the password
* If correct: open login session, return to the menu page

3.1.3 Functional Requirements

* Require database Inquiry
* If the username & the password don’t match or don’t exist: return error message, stay on the current page.

## Recharge Quota

3.2.1 Description and Priority

Members can recharge quota through the online payment platform (WeChat Pay and Alipay), The staff can also manually modify the quota for the member.

3.2.2 Stimulus/Response Sequences

* When a not login user accesses the system, a login window is displayed on the page
* The user enters the account password and clicks the login button
* Server verified the account and the password
* If correct: open login session, return to the menu page

3.2.3 Functional Requirements

* Require database Inquiry
* WeChat Pay and Alipay API
* If the payment didn’t finish within 300 seconds. It will automatically halt.

1. External Interface Requirements

## User Interfaces

All the User interfaces are done with CSS framework Bootstrap v4.0.0, and Dashboard UI kit Tabler (Bootstrap based).

If you need to access any function in the system, you must log in, and the login page does not provide a registration window.

After login, the user will automatically jump to the main page. The page will display related content and functions according to the user's identity.

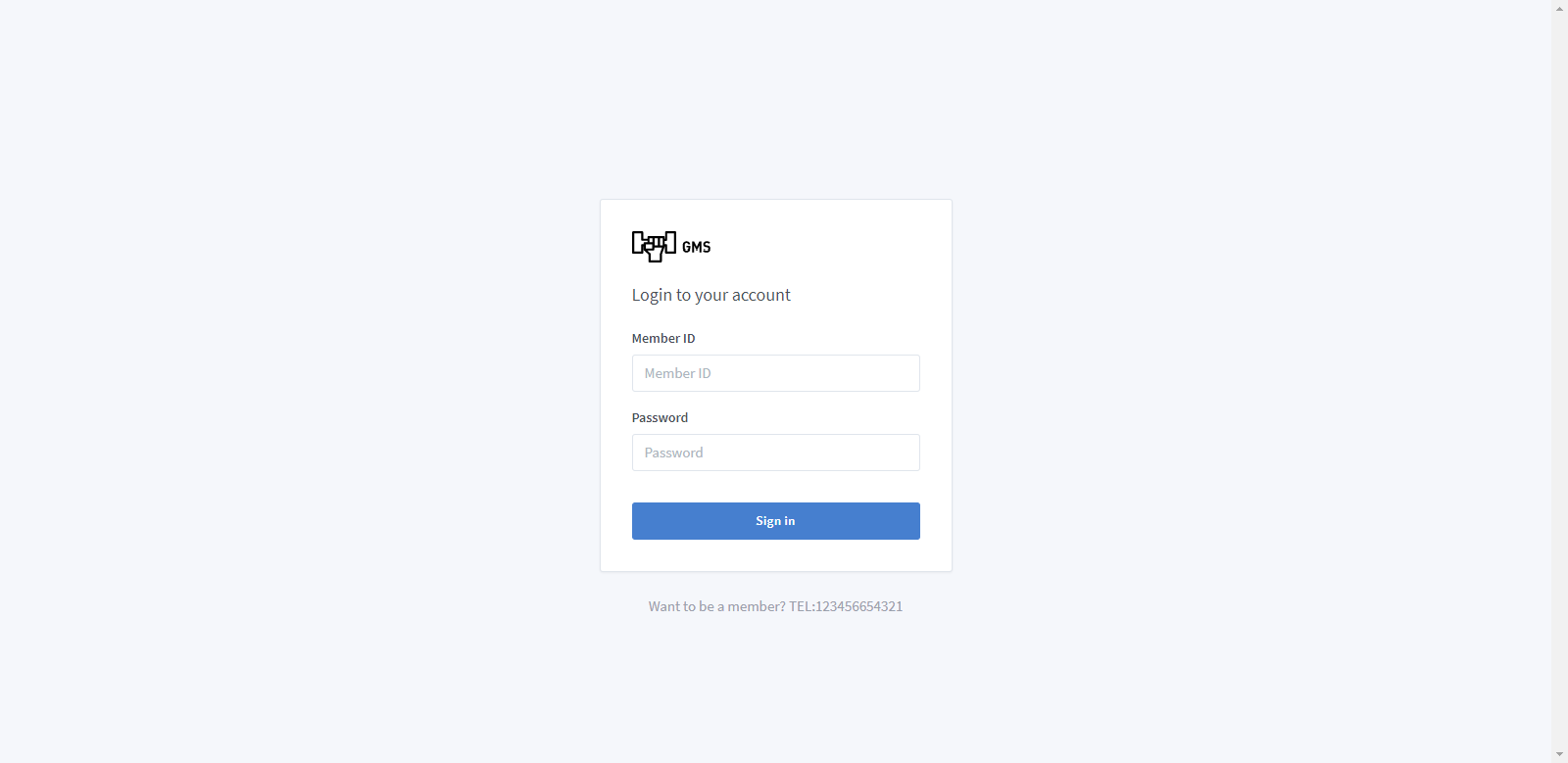


Figure 1GMS Login Page

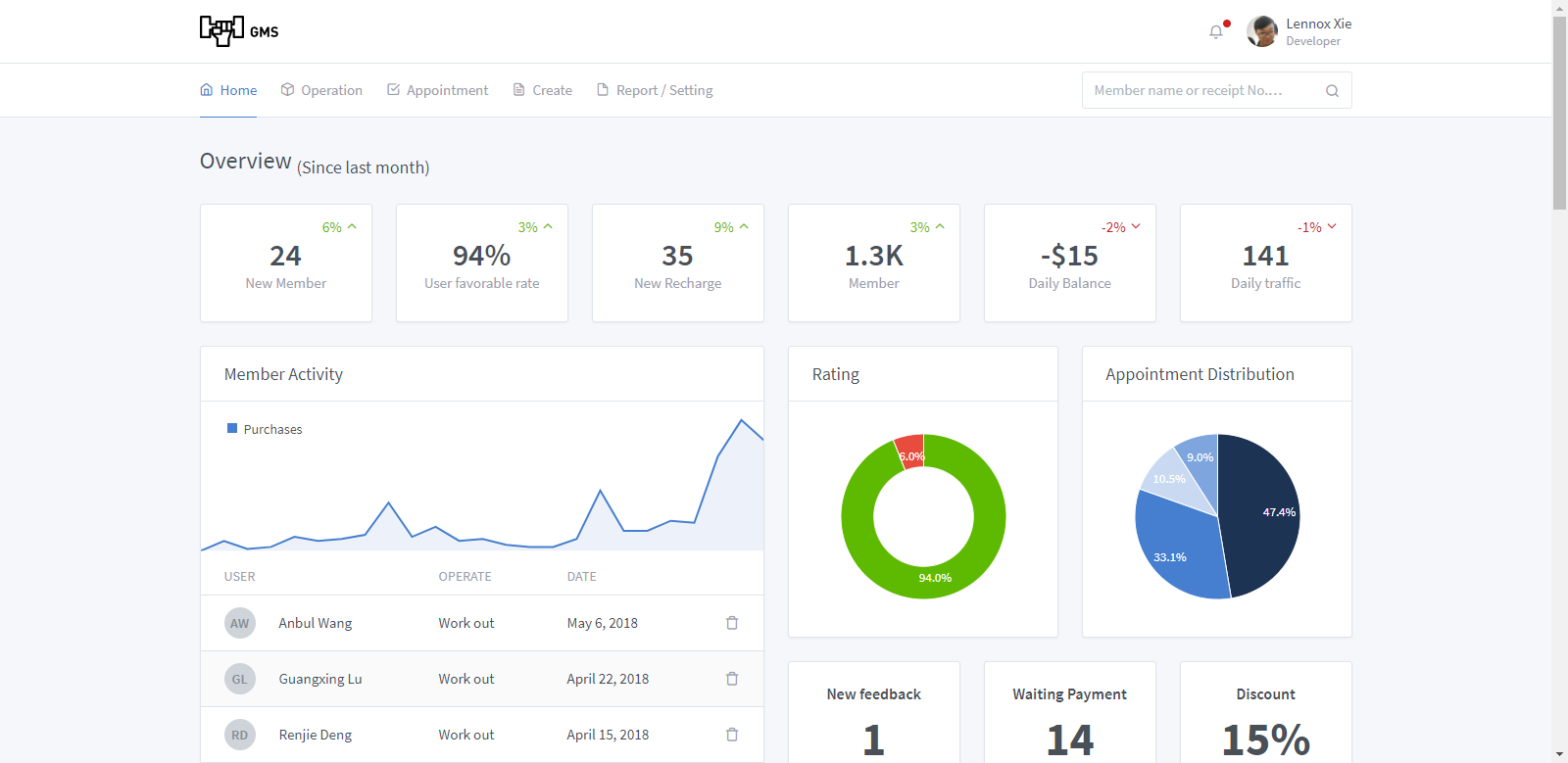


Figure 2 GMS Dashboard Page (Homepage)

## Hardware Interfaces

Because the development of the backend relies on the framework Django (2.0+), all of the following conditions must be met to run this program:

Local Environmental dependence:

* Python 3.6.4 running under 32-bit or 64-bit

If you want to deploy it to VPS, extra dependences are required:

* uWSGI 2.0 (PyPy need extra plugins)
* XAMPP for Database (MariaDB or MySQL) environment
* Nginx or Apache for Forward traffic

## Communications Interfaces

During the testing phase, all features will be tested in Google Chrome (65.0.3325.181(64-bit) or later) and Firefox (58.0.2 (64-bit) or later).

After the program is deployed, all traffic should be encrypted by HTTPS. When running locally, do not enable port mapping to ensure data security.

1. Other Nonfunctional Requirements

## Performance Requirements

Within the scope of server processing capabilities, all requests should react accurately and the order of execution should be scheduled in the order in which the requests are delivered.

## Security Requirements

* All user passwords need SHA256 encryption
* Save User Information Change Log

## Software Quality Attributes

Front-end:

* All content and information are correctly displayed and encoded properly. All links need to be properly connected to the specified location.

Back-end:

* All front-end requests need to be properly received, responded, and processed. The data changes should be accurate.