

PUSS214204

v. 0.1

TimeMate

Software Top Level Design Document

Group 2

Responsible: System Group

Authors: Developer Group

2021-02-11

Contents

1	Document History	3
2	Introduction	3
3	Reference Documents	3
4	Terminology	3
5	Overview	3
5.1	Java Server Pages	3
5.1.1	login.jsp	3
5.1.2	index.jsp	3
5.1.3	viewReport.jsp	4
5.1.4	newReport.jsp	4
5.1.5	editReport.jsp	4
5.1.6	summaryReport.jsp	4
5.1.7	signReport.jsp	4
5.1.8	usermanagement.jsp	4
5.1.9	administration.jsp	4
5.1.10	changepassword.jsp	4
5.2	Servlets	4
5.2.1	LoginServlet	4
5.2.2	PasswordChangerServlet	4
5.2.3	TimeReportServlet	4
5.2.4	UserManagementServlet	5
5.2.5	AdministrationServlet	5
5.3	Java Beans	5
5.3.1	UserBean	5
5.3.2	TimeReportBean	5
5.3.3	UserManagementBean	5
5.3.4	AdministrationBean	5
5.4	Other classes	5
5.4.1	MailHandler	5
5.4.2	PasswordHandler	5
5.4.3	Database	5
6	Database	6
7	Information Stored in Sessions	6
8	Sequence Diagrams	6
8.1	6

1 Document History

Version	Date	Responsible	Description
0.1	2021-02-11	UG	Document created.

2 Introduction

This document describes the design of "TimeMate". The system is a further development of the system "BaseBlockSystem". "TimeMate" hosts various functions related to the creating of time reports, getting a view of reported time and more.

3 Reference Documents

1. Software Requirements Specification: TimeMate, v. 0.5, Doc. number: PUSS214201
2. Software Top Level Design Document: BaseBlockSystem, v 1.0, Doc. number: PUSS12004

4 Terminology

- **Java Server Page (JSP):** Server-side technology that enables the creation of dynamic views.
- **Servlets:** Java programs that runs on the server side.
- **Java Beans:** A Java class that only contains set/get methods with private attributes

5 Overview

Placeholder for the overview of the project - replace with information regarding the project!

5.1 Java Server Pages

Below are the pages used for "TimeMate" and what their function is.

5.1.1 login.jsp

The view that is shown when a user that is not logged tries to access the system. This is the only page in the "TimeMate" system an user can access without having an account. The page consists of two fields, one for username and one for password, as well as an option to request a new password in case that the user has forgotten their password.

5.1.2 index.jsp

This file contains the view that is shown when an user has logged in. From here, the user can access the menu, which is dynamically updated depending on what group the user belong to.

5.1.3 viewReport.jsp

This file contains the view that shows a collection of the users submitted reports.

5.1.4 newReport.jsp

This file contains the view that represents the creation of a new time report.

5.1.5 editReport.jsp

This view is used by users that want to edit their previous reported time reports.

5.1.6 summaryReport.jsp

This view represents a summary of a users previous reported time reports.

5.1.7 signReport.jsp

This view is used by project leaders for signing and unsigning time reports.

5.1.8 usermanagement.jsp

This file contains the view of the usermanagement page. The view is used by the administrator and the project leaders.

5.1.9 administration.jsp

This file contains the view of the administration page. Only the administrator has access to this view.

5.1.10 changepassword.jsp

This view is used by all users to change their password.

5.2 Servlets

The files below are the controllers for the system.

5.2.1 LoginServlet

Communication link between the view login.jsp and the bean LoginBean.

5.2.2 PasswordChangerServlet

Servlet used when a user changes their password.

5.2.3 TimeReportServlet

Communication link between the view report.jsp and the bean ReportBean.

5.2.4 UserManagementServlet

Communication link between the view usermanagement.jsp and the bean UserManagementBean.

5.2.5 AdministrationServlet

Communication link between the view administration.jsp and the bean AdministrationBean.

5.3 Java Beans

The files below are the Java Beans that are used to send information from the server to the client view. When created, beans are stored in the current session and discarded when the session ends.

5.3.1 UserBean

Get/set class which contains user information required to execute queries and updates related to the logged in user.

5.3.2 TimeReportBean

Get/set class which contains a list of users and their time reports which is required to render the report.jsp view.

5.3.3 UserManagementBean

Get/set class which contains a list of users(Excluding project leaders) and their roles which is required to render the usermanagement.jsp view.

5.3.4 AdministrationBean

Get/set class which contains a list of users and their roles (Including project leaders) which is required to render the administration.jsp view.

5.4 Other classes

The classes below are never accessed by the user in any way, but are instead helper classes to the servlets.

5.4.1 MailHandler

Class used to send e-mails to users upon account creation and password changes.

5.4.2 PasswordHandler

Class used to encrypt passwords when needed.

5.4.3 Database

Class to establish connection between Tomcat and our database.

6 Database

Diagram etc. for database here

7 Information Stored in Sessions

Integer CURRENT_ROLE: Used to determine the current users privileges. The following states have been defined:

- 0:** Privileges for users in the "UG" group.
- 1:** Privileges for users in the "TG" group.
- 2:** Privileges for users in the "SG" group.
- 3:** Project leader privileges.
- 4:** Administrator privileges.

8 Sequence Diagrams

8.1