

Maharishi University of Management  
CS545 Web Application Architecture

# Meditation Attendance System

Team Members

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# Outline

- Introduction
- Functional Requirements
- Application Architecture
- Project Structure
- Technologies Used
- Individual Contribution
- Demo

# Introduction

- This project tracks the records of meditation, retreat and TM check attendance, which are aggregated in different categories like student, block and entry.
- These records can be accessed by faculty, administrator and student for different purposes with different access level.

# Functional Requirements

- Process attendance data in two formats:
  - Scanned File
  - Manual File

Entry Retreat and TM check attendance

Generate Report

Student: Overall Statistics, Block Report & Download.

Faculty: Block Report

Admin: Entry Report

Login/ Logout

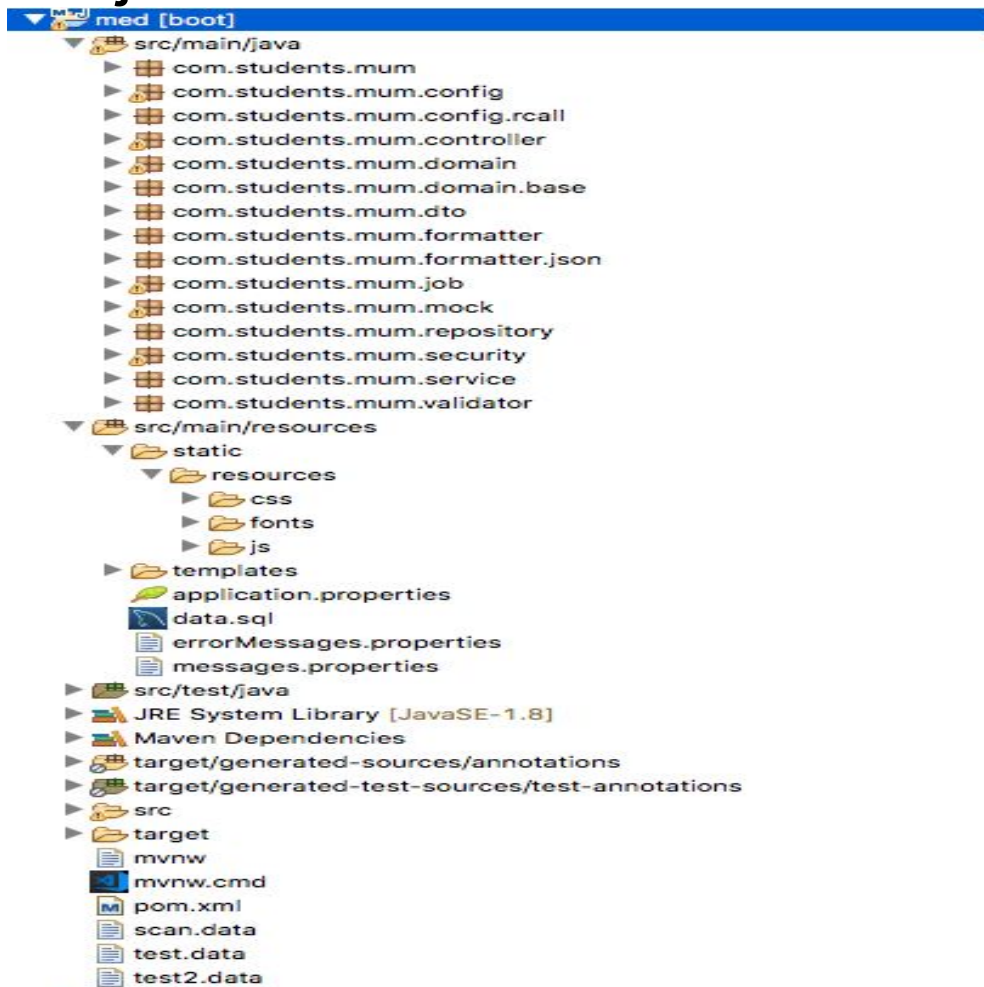
Authorization

# Application Architecture

## Monolith architecture using Spring Boot

- Presentation layer
  - Spring MVC
  - Thymeleaf
- Persistence layer
  - Hibernate
  - Spring Data
- Security
  - Authorization & authentication using JWT

# Project Structure



## Technology, Framework & Style Used

- SpringBoot (Web, Thymeleaf, Data, DevTools, JPA) starter project.
- Hibernate
- JWT
- Spring Scheduling
- Spring Security

# Performance hints

1. Import data,
  - 1.1 two steps
  - 1.2 asynchronous
  - 1.3 Breakpoint resume
2. Aggregating
  - 2.1 Execute Aggregating automatically at night 11PM for every day
  - 2.2 Aggregating as a batch(now 1000 thousand rows)
  - 2.3 Batch data selection from database
  - 2.4 Cache data, one step looking up.



## Contributor:

Dong Wang: Process attendance data,  
Generate reports authorization and  
authentication using JWT.

Balindra Rayamajhi: TM retreat, TM check  
CRUD, Data mockup.

Berhane Mehari: Faculty report.

Robel Gherbrewold: Student report.

# Demo

## 1. TM retreat/check CURD

### Sign in

☐ Remember Me?

Login

[Admin](#) ▾

[Student](#) ▾

[Logout](#)

Welcome: admin

[retreat/checkout List](#)

[Create retreat/checkout](#)

ID	Type	Student	Date	Operations
No upload List				

[Admin](#) ▾

[Student](#) ▾

[Logout](#)

Welcome: admin

[retreat/checkout List](#)

[Create retreat/checkout](#)

Date:

05/08/2019

Type:

☐ check ☒ retreat

Student:

1009

Submit

[Admin](#) ▼[Student](#) ▼[Logout](#) Welcome: admin[retreat/checkout List](#)[Create retreat/checkout](#)

ID	Type	Student	Date	Operations
3	retreat	Balindra Rayamajhi (1001)	2019-05-10	<a href="#">Delete</a>
2	check	Balindra Rayamajhi (1001)	2019-05-01	<a href="#">Delete</a>

[Admin](#) ▼[Student](#) ▼[Logout](#) Welcome: admin[retreat/checkout List](#)[Create retreat/checkout](#)

ID	Type	Student	Date	Operations
3	retreat	Balindra Rayamajhi (1001)	2019-05-10	<a href="#">Delete</a>

## 2. Process attendance report

Admin ▾ Student ▾ Logout Welcome: admin

Data Import

Retreat/Checkout

Entry Report

CalculateAll

Create retreat/checkout

ID		Student	Date	Operations
4		Balindra Rayamajhi (1001)	2019-05-17	<div>Delete</div>
3	retreat	Balindra Rayamajhi (1001)	2019-05-10	<div>Delete</div>

Admin ▾ Student ▾ Logout Welcome: admin

UpLoad List

Import Data

### Meditation File Upload

☐ scan ☐ manually

Upload file input

Choose File

No file chosen

Upload File

[Admin](#) ▼[Student](#) ▼[Logout](#) Welcome: admin[UpLoad List](#)[Import Data](#)

ID	FileName	Upload Date	Processing status	Any Error
1	/Users/balindrarayamajhi/Downloads/med-master/med/data/9d3e88dd-7a8d-47ed-9b04-c7b2016ea72b	2019-05-21T21:20:24.325	Processing...	

[Admin](#) ▼[Student](#) ▼[Logout](#) Welcome: admin[UpLoad List](#)[Import Data](#)

ID	FileName	Upload Date	Processing status	Any Error
1	/Users/balindrarayamajhi/Downloads/med-master/med/data/9d3e88dd-7a8d-47ed-9b04-c7b2016ea72b	2019-05-21T21:20:24.325	Finished	
2	/Users/balindrarayamajhi/Downloads/med-master/med/data/2e31eb8a-c114-4f4d-a448-612e1a82c646	2019-05-21T21:22:54.236	Processing...	

# 3.Student report

Student ▾

Logout Welcome: 1001

Meditation Check System, enjoy your time!

Student ▾

Logout Welcome: 1001

## Entry Statistics:

Overall:	40/83
Rational:	48.2%
Retreat:	1
Check:	1

## Retreat History:

2019-05-08

## Check History:

2019-05-01

# Block Report

201904Block ▾

export

Overall: 23/25

Rational: 92.0% Score: 1.5

2019-04-01	true
2019-04-02	true
2019-04-03	true
2019-04-04	true
2019-04-05	true
2019-04-06	true
2019-04-07	true
2019-04-08	true
2019-04-09	true
2019-04-10	true
2019-04-11	true
2019-04-12	true



# Faculty

Faculty ▼

Student ▼

[Logout](#)

Welcome: tina

## Medidation Check System, enjoy your time!

Faculty ▼

Student ▼

[Logout](#)

Welcome: tina

## Course Report

Web Application Architecture(201902Block) ⌵

export					
Student Number	Student Name	present	possible	percent	score
1001	Balindra Rayamajhi	20	21	95.2	1.5
1002	Dong Wang	15	21	71.4	0.5
1003	Brhane Gerbreweld	15	21	71.4	0.5
1004	Robel Gebreweld	0	21	0.0	0.0
1005	Backhome	0	21	0.0	0.0
1006	Bqrtre	0	21	0.0	0.0

Both(Faculty &Admin)

[Admin](#) ▼

[Faculty](#) ▼

[Student](#) ▼

[Logout](#)

Welcome: both

# Medidation Check System, enjoy your time!

[Admin](#) ▼

[Faculty](#) ▼

[Student](#) ▼

[Logout](#)

Welcome: both

## Entry Report

2019FebEntry ⬆⬇⬇⬆

[Admin](#) ▼[Faculty](#) ▼[Student](#) ▼[Logout](#)   Welcome: both

# Entry Report

2019FebEntry ▼

export

Student Number	Student Name	present	possible	
1001	Balindra Rayamajhi	40	83	48.2
1002	Dong Wang	29	83	34.9
1003	Brhane Gerbreweld	29	83	34.9
1004	Robel Gebreweld	0	83	0.0
1005	Backhome	0	83	0.0
1006	Bqrtre	0	83	0.0

# Configuration

We used java source code to generate datas and using in memory database so there is need any configuration

The start steps are following :

1. `java -jar medServer.jar`
2. `java -jar med.jar`