

Java Final Project

Appointment scheduling/reservation system

Introduction to Java

CS9053

Section I

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Introduction:

This program enables a user(student in our case) to make an appointment with Professors and reserve a particular available time slot on any working day from future. 'Appointment List' view of program also displays all applicable reserves as rows on the table.

Constraints:

1. Student ID should be a 5 digit unique number.
2. Since Student ID is unique, it can only have one name associated with it.
3. Student can only make appointments for a future date.
4. Student can not make an appointment for Saturdays and Sundays.
5. A professor can take only 4 appointments on a given day.
6. There are in total 5 available slots in a day, each of 1 hour.
7. If the time slot is already reserved by someone else for the professor student chose to make an appointment with, it will be unavailable.

Tools:

- Java programming language
- Eclipse IDE
- MySQL Database Server
- phpMyAdmin

Project Setup:

- I have used phpMyAdmin, a free open source tool to handle administration of MySQL database over web. Following credentials can be used to login to phpMyAdmin page:

URL: <https://phpmyadmin.co/>

Server: sql3.freemysqlhosting.net

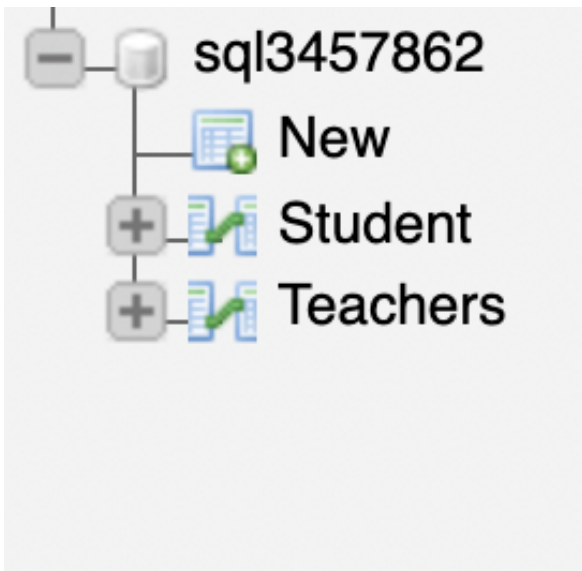
Username: sql3457862

Password: cHlnupmAFQ

Port number: 3306

- I have used two tables and following columns for my program.

- **Tables:**



- **Columns in Student Table:**

Table structure

Relation view

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1	ID	int(5)			No	None			Change Drop Primary
<input type="checkbox"/>	2	Name	char(40)	latin1_swedish_ci		No	None			Change Drop Primary

- **Columns in Teachers Table:**

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/> 1	Name	char(40)	latin1_swedish_ci		No	None			Change Drop Primary
<input type="checkbox"/> 2	Date	date			No	None			Change Drop Primary
<input type="checkbox"/> 3	Time	varchar(5)	latin1_swedish_ci		No	None			Change Drop Primary
<input type="checkbox"/> 4	Student_ID	int(5)			No	None			Change Drop Primary

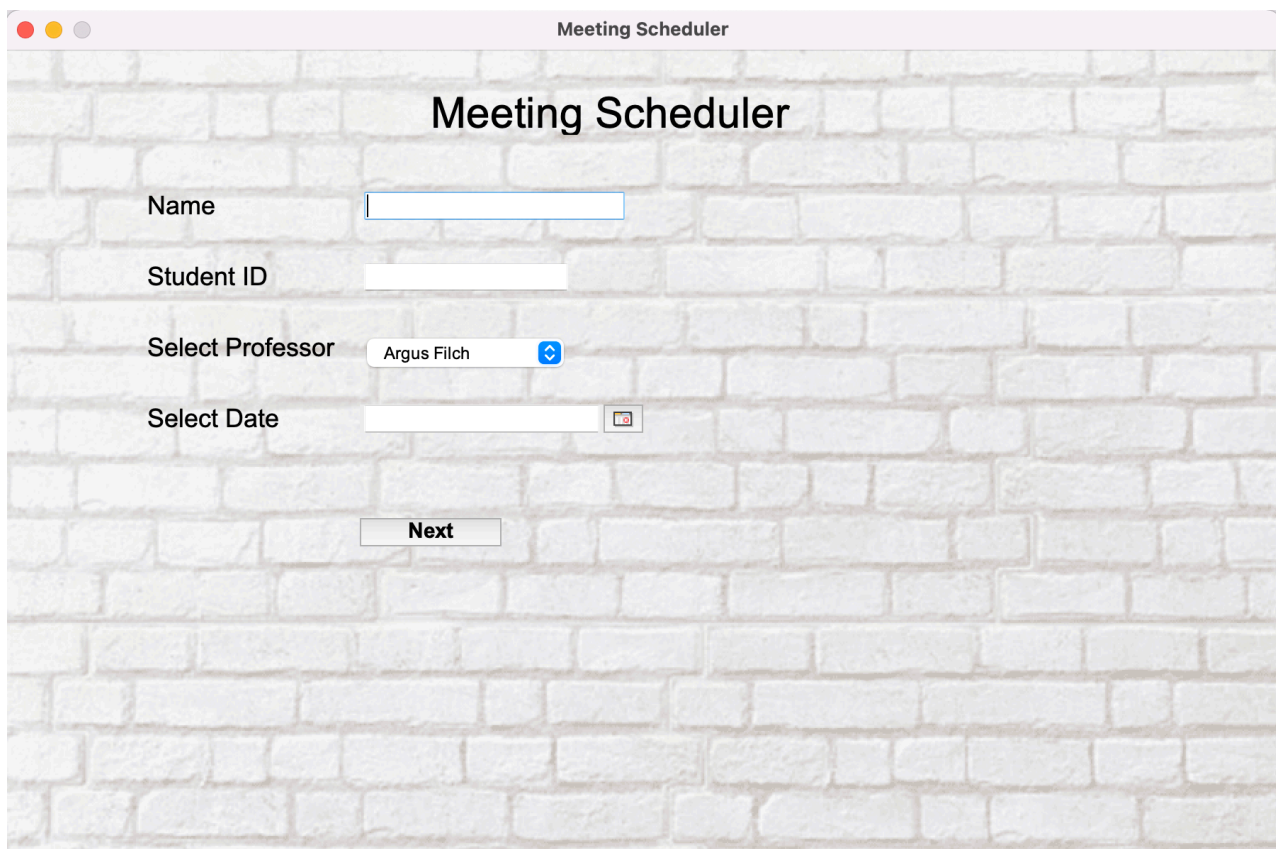
- Eclipse IDE is recommended but should work on other IDE as well as long as it supports Connector/J 8.0.27 JDBC driver for MySQL to provide connectivity to the program, JCalendar and JDateChooser libraries.

How to run the project:

- Please extract the zip file and you shall see project folder.
- In Eclipse please go to File > Open projects from File Systems > Directory > Selcet the project you just extracted and click on finish.
- You shall now see the project in Eclipse, please expand the Meeting Scheduler folder in project explorer.
- Please go to src folder and you shall find 'finalProject' package.
- In this package I have created two classes 'Main' and 'MyConnection'.
- 'Main' class has main method in it, hence please run this java file.

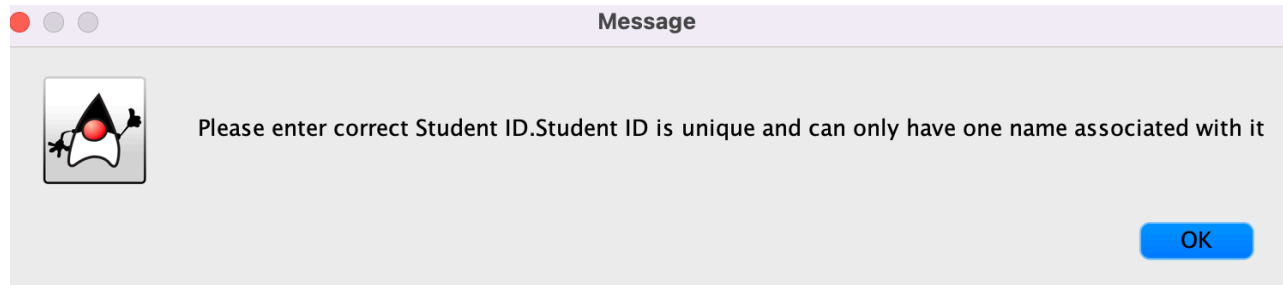
Home Form:

When you run Main.java file you shall be presented with following page that allows user(student) to enter their name, Student ID and date, and selcet a professor from drop down list they wish to make an apointment with. There is no constraints on number of appointment a student can make.

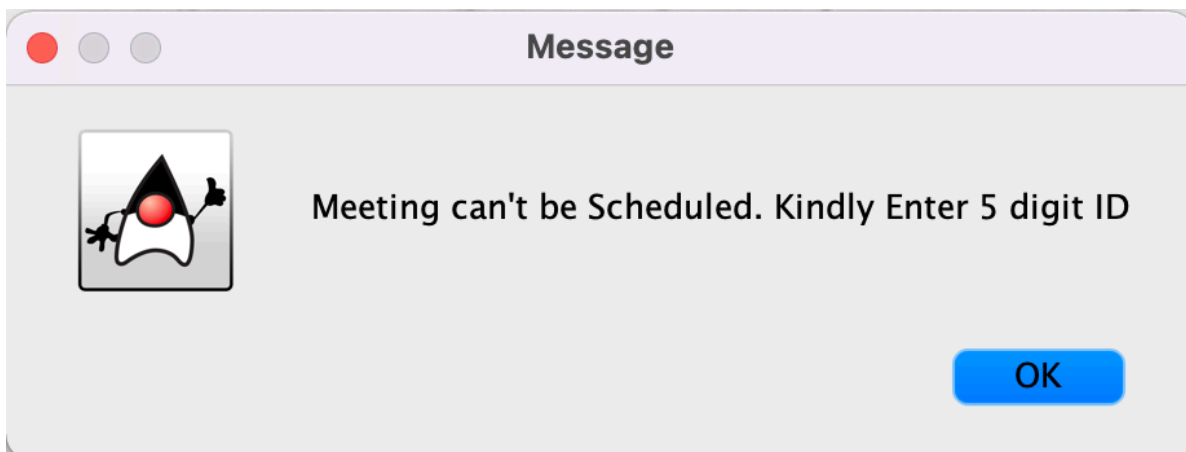


The screenshot shows a Java Swing window titled "Meeting Scheduler". The window has a light gray title bar with standard macOS window controls (red, yellow, and green buttons). The main content area has a light gray brick wall background. At the top center, the text "Meeting Scheduler" is displayed in a large, bold, black font. Below this, there are four input fields arranged vertically, each with a label to its left: "Name" with a text input field, "Student ID" with a text input field, "Select Professor" with a dropdown menu showing "Argus Filch" and a blue arrow icon, and "Select Date" with a date picker widget showing a calendar icon. At the bottom center, there is a "Next" button with a gray background and black text.

- Student ID should be unique, i.e. a Student ID can only be associated with one name but not vice versa since multiple people can have same name. If user tries to enter multiple name to same student ID it shall give following error message:



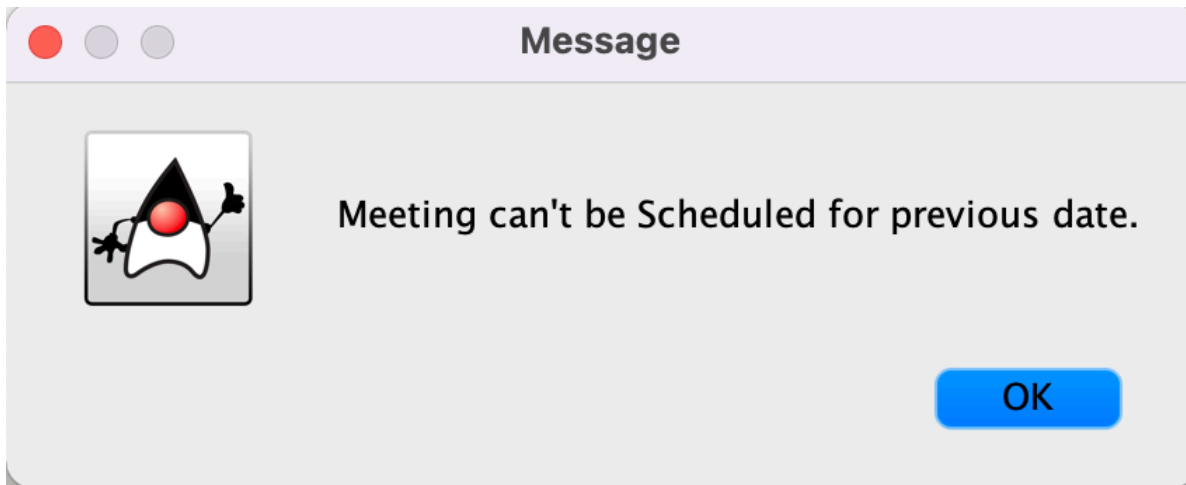
- Student ID should be a 5 digit number, if user enters an incorrect Id number he shall get following error:



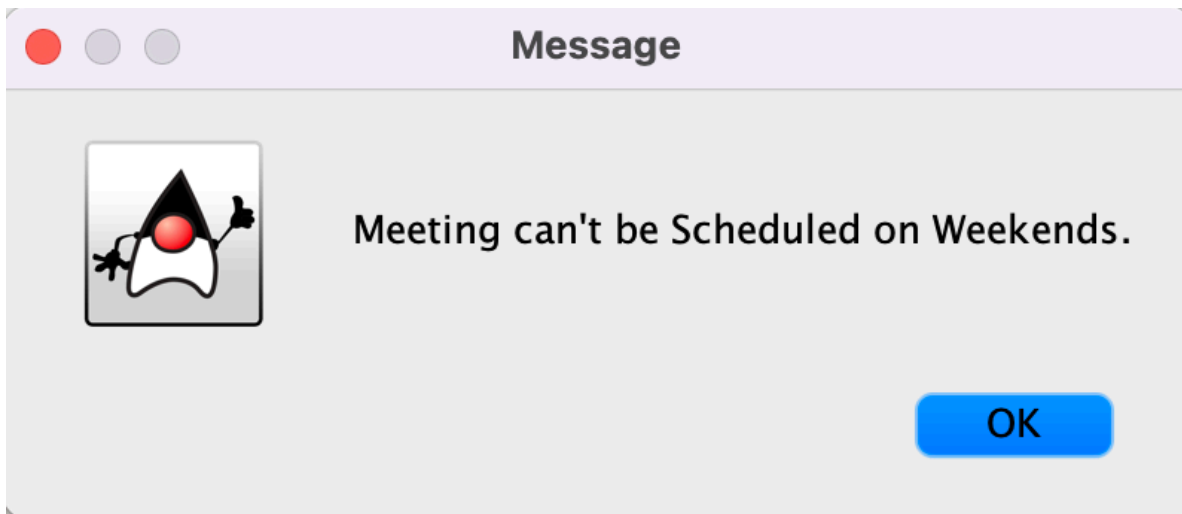
- Same name can be used for different student ID and program will run fine without an error:

Appointment List				
Name	Date	Time	Student ID	Student Name
Argus Filch	2021-12-27	9am	12345	Prateek Dagariya
Argus Filch	2021-12-29	10am	12354	john
Argus Filch	2021-12-27	10am	46456	josh
Argus Filch	2021-12-27	11am	34534	jerry
Argus Filch	2021-12-27	12pm	23453	george
Argus Filch	2021-12-28	10am	32421	Dean
Poppy Pomfrey	2021-12-21	9am	54321	Dean

- User should select a date of future and it should not be a weekend. If user selects a date from past he shall get following error:



- If user selects a date of a weekend, he shall get following error:



Appointment Section:

- When user enters correct information and hits "Next", he will be redirected to another page where he can view all reserved appointments.
- User can select a slot from the drop down section 'Selcet Time' where all the available slots are visible.
- Once user selcets a time slot he can reserve it by clicking on 'Submit' button.
- There are in total 5 slots avaialble for a user to choose from, each slot has duration of one hour.

- And each Professor will take only 4 appointments on a given day.

Appointment List

Name	Date	Time	Student ID	Student Name
Argus Filch	2021-12-27	9am	12345	Prateek Dagariya

Select Time

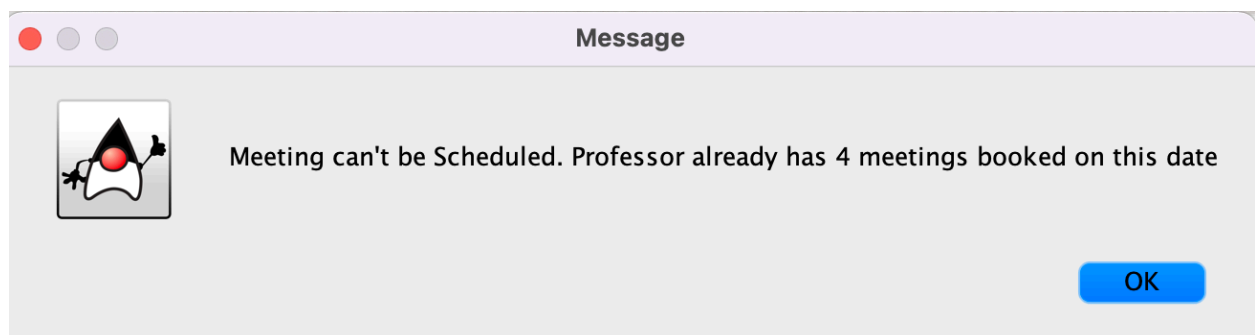
10am

⌵

Submit

Back

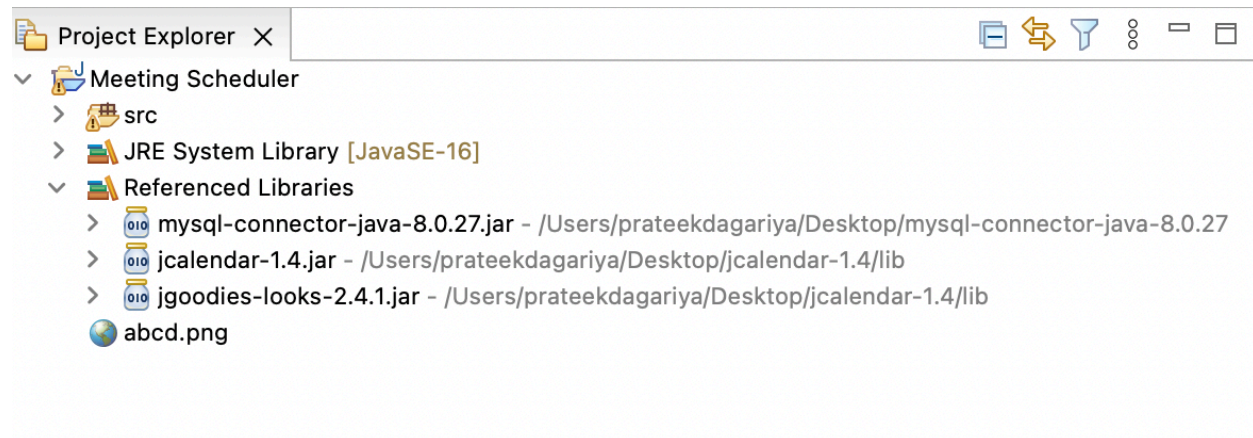
- If user tries to reserve slot for a Professor who already has 4 appointments on a given day he shall see following error:



Thank you!!

Disclaimer:

- I have used following external reference libraries:



- Connector/J 8.0.27 (mysql-connector-java-8.0.27.jar) JDBC driver for MySQL to provide connectivity to the program. It can be downloaded from following link:

<https://dev.mysql.com/downloads/connector/j/>

Note: If your Operating system is not listed in the drop down you can download the platform independent jar files.

- jcalendar-1.4.jar to display calendar in a box.
- jgoodies-looks-2.4.2.jar for a rich look of calendar.

You can download above two libraries if you scroll down at the bottom on below link and click on the zip folder highlighted below.

<https://toedter.com/jcalendar/>

Download and Latest Version

You can download a zip file, containing all the sources, libs and documentation.

- Latest release version 1.4: jcalendar-1.4.zip

Note: If these libraries do not appear with the project folder that you imported in Eclipse, you may need to add them to the project path through following steps:
Please right click on meeting scheduler folder in Eclipse > Build Path > Configure Build Path.. > Libraries tab > Add External Jars.. > Select the library you need to add > Once added click on Apply & close button on bottom.