System Design

Team Name:

Slack Overflow

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CRC Cards

Note: DAO stands for Data Access Object

Class name: **Event** **Parent class**: N/A **Subclasses**: Course, Due Date **Responsibilities**: ● Act as a parent to CalendarEvent and DueDate ● Store date, time, place, and name of event **Collaborators**: ● DAO ● Timetable ● Calendar	Class name: **User** **Parent class**: N/A **Subclasses**: N/A **Responsibilities**: ● Allows someone to save, edit, and retrieve their data **Collaborators**: ● WebApp ● Calendar ● Timetable ● DAO ● HomePage ● Notes
Class name: **WebApp** **Parent class**: N/A **Subclasses**: Notes **Responsibilities**: ● Handle account creation, login, and account info modifications **Collaborators**: ● DAO ● User	Class name: **HomePage** **Parent class**: N/A **Subclasses**: N/A **Responsibilities**: ● Display user information ● Allow user to navigate to all features **Collaborators**: ● User ● DAO

Class name:

DAO

Parent class: N/A
Subclasses: N/A

Responsibilities:

- Able to access database to retrieve and modify data

Collaborators:

- Web App
- User
- Timetable
- Calendar
- DueDate
- HomePage
- RateMyProf
- Course

Class name:

Calendar

Parent class: N/A
Subclasses: N/A

Responsibilities:

- Display events and due dates
    - Notify users of events/due dates happening soon
- Display courses and timings

Collaborators:

- Timetable
- Event
- User
- DAO

Class name:

Timetable

Parent class: N/A
Subclasses: N/A

Responsibilities:

- Allow sharing
- Add, edit, and remove courses
- Suggest timetables

Collaborators:

- Course
- User
- DAO
- Notes

Class name:

CalendarEvent

Parent class: N/A
Subclasses: Course, Due Date

Responsibilities:

- Takes on responsibilities of parent
- Allows user to specify time frame of event

Collaborators:

- DAO
- Timetable
- Calendar

Class name:

Rate My Prof

Parent class: N/A
Subclasses: N/A

Responsibilities:

- Show the rating of profs from the Rate My Prof website

Collaborators:

- Course
- DAO

Class name:

Course

Parent class: Event
Subclasses: Rate My Prof, Notes

Responsibilities:

- Stores time, place, and name of class/course
- Links to notes

Collaborators:

- Event
- Notes
- DAO
- Rate My Prof
- UserGrades

Class name:

DueDate

Parent class: Event
Subclasses: N/A

Responsibilities:

- Store time, place, and name of due date
- Remind user of due date

Collaborators:

- User
- CalendarEvent
- DAO

Class name:

Notes

Parent class: Course
Subclasses: N/A

Responsibilities:

- Allow sharing of notes
    - Allow collaboration on notes
- Allow notes to be added and edited

Collaborators:

- User
- Course
- Timetable

Class name: **UserGrades** **Parent class**: N/A **Subclasses**: N/A **Responsibilities**: ● Store marks for courses that appear on the timetable ● Calculate averages and marks needed to achieve desired final mark **Collaborators**: ● User ● DAO ● Course	

Software Architecture Diagram

General:

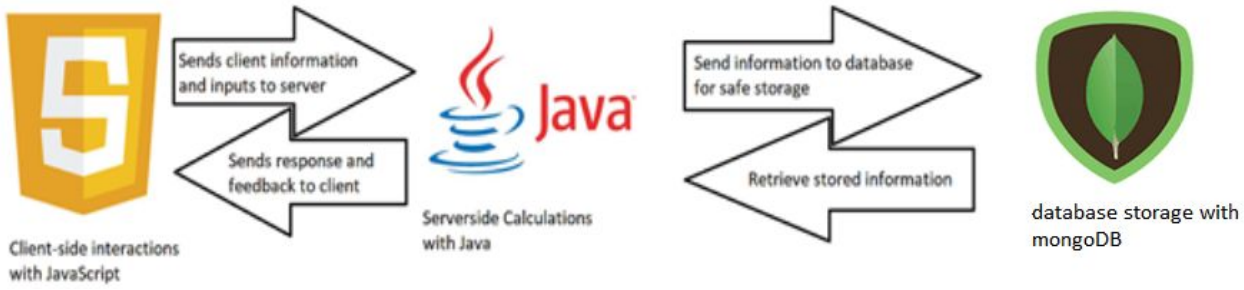
We plan to use HTML, CSS, and Javascript for the user's view. We assume the user will access our app through a website such as google chrome, mozilla firefox, or microsoft edge. The websites will either communicate with the database directly or pass information for processing on to the server for computation and storage.

The user's timetable and calendar data are displayed by parsing the user's relevant JSON formatted entries which are hosted on the server. Large calculations for tasks such as suggesting timetables will be done using Java.

Database:

For the database/model we are using JSONs to save and retrieve data. We have set up a MySQL database hosted on AWS (Amazon Web Services) servers. This allows us to use SQL when necessary, specifically for account specific reasons, e.g. user registration, user login, email verification, password reset.

Single level diagram:



https://www.progress.com/documentation/sitefinity-cms/reference-architecture-diagrams