

## SMART TIMETABLE

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### DESCRIPTION

A website that allows users to generate their virtual timetable according to their own preferences. It will let users input course code, preferred class time, and class location, etc. and provide users with best schedule that fit all their preferences. The website contains data about all courses offering in the current and upcoming terms. Users will be able to search for all the necessary details, such as prerequisite, location, instructor, regarding a specific course.

### FEATURE AND REQUIREMENT

#### Account Management (20)

- Three account levels: user, registered user, and administrator (3)
- **Users** can search for courses and generate timetables
- **Registered user** can search for courses, generate timetables, save timetables when logged in.
- **Administrator** can add a course, update a course, or delete a course.
- Users can become registered users by clicking “sign up” button.
- Users then need input their email, username, and password.
- There is HTML5 form validation methods to check if required fields are completed and password match.
- Passwords are hashed and salted.
- It is not possible to become an administrator through User Interface
- Registered users can change and reset their passwords
- Registered users can update their email addresses
- Registered users can deactivate their accounts
- When registered users deactivate their accounts, their stored info is deleted on the back-end
- Optional features:
  - o CAPTCHA confirmation
  - o Confirmation email when creating an account
  - o Sessions are managed using JSON web tokens
  - o User can upload their profile picture
  - o User can update their profile picture

#### Dashboard (15)

- Search for courses using course code
- Search for courses by selecting a specific breadth requirement
- Login/Signup/logout button (3)
- (Registered User) Profile button, and will lead to Account Management page
- View the course list along the left panel
- Able to delete already selected courses
- Able to access a list of solutions generated depending on which courses and preferences they chose.
- When click on each solution, the timetable would change to that particular solution

- Right side of the solutions list will display number of conflict courses that timetable would contain
- Optional features:
  - o Display most searched/popular courses (2)
  - o Users can choose a specific major and then they will see all the courses arranged from first year to last.
  - o Users can add a course to “choices for later”, and they can view the information for those courses without putting it on timetable

#### Timetable (16)

- Display timetable with different colors for different courses
- Timetable will display course code, instructor name, location, and time slot (4)
- When cursor is over a particular course, it will display a short course description
- When a user is logged in, his/her previously saved timetable will be displayed
- User can filter certain preferences during search process.
- Can filter by time of the day (morning, afternoon, or evening sessions)
- Can filter by days of the week (Monday, Tuesday, Wednesday, etc)
- Can filter by course types, e.g. whether this course is a theory course or hands-on coding course
- Can filter by instructors
- Can drag & drop a course to other available slot
- Optional:
  - o Can download the timetable as a png or jpg file to local
  - o Each course will have a course rating
  - o Registered users can rate courses in their timetable

#### Admin (6)

- Only admin users can add a course
- Form with course code, breadth requirement, time slot, and a short course description
- Form validation (check if all fields are valid)
- Only admin users can update a course
- Course time, and instructor can be updated
- Only admin can delete a course if it is no longer

See Basic UI next page.

