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| **PROJECT REQUIREMENTS** | |
| **Project Name** | Visual Schedule Builder Plus (VSB\_Plus) |
| **Functional Requirements** | |
| 1. Home Page:  ●  Students can choice to sign in to their account with   * student name * student ID   ●  According to their name and SID to determine what faculty they are register in  2. Academic Page (3 views):  ●  Default linear term registration views   * Plan out the courses list that the students require to take in different semester/term * Recommend the courses according to the faculty requirements * Visualize the different limitations of each course (the prerequisites, when it offers, or the credit hours requires) * Display the course that were completed   ●  Kanban-style   * Separating three parts to show the courses (Already Done, Registered Now, Future will Take)   ●  Calendar view   * Terms as the column, 1st row as course supposed to take, 2nd row as courses chosen to register. * Using the arrowed line to show relationship of courses * Able to drag and put the course in Taking selection * For the elective course, fetch the available elective courses from a file, and put the courses in the   corresponding term.  3. Semester Schedule Page:  ●  Courses list that are available for the students to take in different semester/term  ●  Course details(will be link to Course Details Page)  ●  Building up of time schedule as the students have select a course  ●  Search bar to search for other course  4. Courses List Page:  ●  List out all the courses that are offers in U of R along with the filter functionality.   * Selecting different faculty buttons to show the relative faculty courses on the list. * Able to filter the different year courses and show the relative selected year courses on the list. * If there is no courses that meeting the filter condition, showing up the word “No course are found!” to remind the user. * One button that allow user to change the course arrangement.   + One course arrangement is one class per row with course details (short name, credit and full name and description)   + One course arrangement is two class per row with less course details (short name and full name)   ●  User can search the specific course with short name of course.   * Allow user to input short name of course, according to the first few characters to prompt course short name. * Allow user to select the input course and show up the course details. * elective classes   ●  Show up details for the selected course.   * Show short name, full course name, prerequisites and description of course. * Show up the chart that about course section information. | |
| **Technical/Performance Requirements** | |
| Technical requirements:   1. Run the back-end server 2. Using JSON to get the course information database 3. Create machine learning model to recommend the course   Performance requirements:   1. Show the course schedule for several semesters. 2. Show up the course details in multiple way 3. Visualize the limitation of course | |