

### 1. Triggering the Modal (Generate Subjects Button):

- **Action:** When the "Generate Subjects" button is clicked, the modal will appear.
  - **Dynamic Content:** The modal should dynamically load subjects from the previous year and semester based on the selected student.
    - Fetch data from Firestore based on the student's curriculum and academic history.
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### 2. Grade Input and Validation:

- **Input Fields:** Add dropdowns or text fields for the user to input the grades for each subject from the previous year and semester.
  - **Validation:** Upon clicking the "Save" button:
    - Ensure the grades fall within the range of **1.00 to 5.00**.
    - **Passed:** Grades between 1.00 and 3.00
    - **Failed:** Grades between 3.25 and 5.00
    - Use a regular expression to validate the input and ensure it's a valid number.
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### 3. Populating the Table with Curated Subjects:

- **Action:** After grades are saved, the system should display the subjects for review:
    - The first table will show **all subjects**, including failed ones.
    - Color-code the rows for easy visualization:
      - **Green** for passed subjects.
      - **Red** for failed subjects.
  - **Prerequisite Feedback:**
    - For failed subjects that have prerequisites, the checkbox will either be disabled or a note will be added (e.g., "Prerequisite not met").
    - If the subject is not available for retaking due to prerequisites, it will be visually marked (disabled checkbox, or message in a tooltip).
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### 4. Selecting Subjects to Retake:

- **Action:** The user can select subjects they want to retake using checkboxes.

- Checkboxes will be **enabled** for subjects that the user has failed and are available for retake.
  - **Disabled checkboxes** will indicate that the subject cannot be retaken because the prerequisites were not met.
  - A tooltip or note will appear next to the checkbox, such as "Prerequisite not met" for subjects that have prerequisites but failed grades.
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## 5. Subjects for the Next Semester/Year:

- **Action:** After the user selects the subjects they want to retake or enroll in, these will be displayed in a **second table**.
    - **First table:** All subjects, including those that the user has failed, are shown as reference.
    - **Second table:** Only the subjects the user wants to retake are displayed, based on their selections.
    - This second table can include an "Enroll" button that will trigger the process of enrolling the user into the selected subjects.
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## Roadmap Summary:

### 1. Triggering the Modal:

- User clicks the "Generate Subjects" button, opening a modal.
- The modal dynamically loads subjects from the previous year and semester based on the student's data.

### 2. Grade Input & Validation:

- User inputs grades for each subject.
- Grades are validated to ensure they are within the range of **1.00 - 5.00**.
- The grades are classified as passed or failed based on the criteria:
  - **Passed:** 1.00 - 3.00
  - **Failed:** 3.25 - 5.00

### 3. Populate Curated Subjects:

- A table is populated with all the subjects, color-coded:
  - **Green** for passed.
  - **Red** for failed.

- Subjects that the user has failed and have prerequisites should either be **disabled** or show a note (e.g., "Prerequisite not met").

#### 4. **Selecting Subjects to Retake:**

- The user can select failed subjects they want to retake using checkboxes.
- Subjects that cannot be retaken (due to prerequisites) will have their checkboxes **disabled** or a tooltip message indicating this.

#### 5. **Subjects for the Next Semester/Year:**

- After the user selects the subjects to retake, these subjects will appear in a **second table** for review.
- The second table will only show the selected subjects the user wants to enroll in (based on checkboxes).
- An **"Enroll"** button will be provided to confirm the enrollment process.

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#### **Final Suggestions:**

- **Clear Feedback:** Always ensure clear feedback for failed subjects, particularly when prerequisites prevent retaking.
- **Dynamic Table Updates:** You can dynamically update the tables as users make selections or change their input (such as saving grades).
- **User-Friendly Interface:** To make it easier for users to interact, consider adding tooltips, icons, or additional color codes to visually communicate status (e.g., "Retake" label for selected subjects).