

# System Requirement

1. The system need to be website based with any tech stack.
2. The scheduling system should :
  - a. accommodate any number of subjects, classes, locations, and students, while considering the constraints of available classrooms.
  - b. The end user will provide the following details before the automatic generation of the timetable:
    - i. Semester/term information, including the name and duration.
      1. The name and number of courses offered for that semester/term.
      2. The duration of the teaching period.
    3. Details of study breaks:
      - a. Name and Number of units for each course offered in the semester/term
        - i. Prerequisite of each unit
        - ii. Lab requirement of each unit
        - iii. Number of students enrolled in the unit in each location
    - ii. Location/campus information:
      1. Classrooms /labs details for each campus, to be used for scheduling of each unit
        - a. Classroom/lab capacity
    - iii. Weekdays information for each course, on those days classes has to be scheduled:
      1. Weekly duration and timing information for each unit in a semester.

The end user should input all necessary information before auto-generating the timetable. Once the information is stored, a drag-and-drop GUI can be used for timetabling.