Requirements

1. The app must include 8 semesters courses data for BSEE, BSME, BSCIS, BSPHY.
2. The app should provide help when started.
3. The app should provide default courses for each semester.
4. The user should be able to add remove semester courses of his choice.
5. The app should work in vertical mode only.

Analysis

1. After user select the semester from menu item then help text must disappear.
2. The recycler view can be used for displaying list of courses.
3. The semester is selected through expand menu button.
4. Activities
5. MainActivity for Recycler View List.
6. Classes
7. CustomListHandler which extends RecyclerView and manages the list of courses.
8. The add course feature can be provided through add button icon on toolbar.
9. The remove course button can be provided through long press on course.
10. The default data can be provided in a file as csv data.

Design

1. Single list item can include Course Title, Course Credit Hours, Expected Marks or Expected GPA.
2. The default data must be loaded from file to global variable as JSON array/object.
3. When user clicks any semester from menu item on toolbar then the default courses data of that corresponding semester should be passed to the CustomListHandler class for displaying the default courses data for that course.

Function onCreate() Sequence

1. The data is loaded from file to variable as JSON array/object. Can be implemented as loadData.
2. The UI shows help text.
3. Setup the RecyclerView and CustomListHandler class.
4. Setup event listeners for buttons.
5. When user select menu item then select data for that semester and send it to CustomListHandler.
6. CustomListHandler adds event listeners for long press.
7. When user presses calculate button then calculate GPA and show result in textView in the bottom.