Problem Description:

Ms. Anita Kakar needs an object-oriented program that can calculate student results and create a simple and user-friendly analysis sheet that can be presented to students. It must extract data real-time from several excel sheets provided by the client and use it to carry out the required calculations and present it in the desired format. For the year groups 7-10, it must calculate the student's GPA based on their the EOT results of their four major subjects (Maths, English, Hass and Science), and must differentiate between Mainstream and AP students. It is a bit more complicated for the General and ATAR Year 11-12 modes, for which it must find the student's results, how many Cs they have achieved, whether they have received enough Cs to pass, and their GPA or predicted ATAR, respectively.

Requirements Specification:

1. There must be three modes in the program: **[Functional]**
    a. Mainstream / AP Year 7-10
    b. General Year 11-12
    c. ATAR Year 11-12
2. The program must use data extracted from various excel sheets containing student data **[Functional]** to produce an analysis sheet / table that includes all elements listed below.
    a. The Mainstream / AP Y7-10 mode must include:
        i. Whether the student is in AP or Mainstream **[Non-Functional]**
        ii. The average of the student's EOT results for each of their main four subjects (Maths, English, HASS, Science) **[Functional]**
        iii. Their GPA based on the average marks they received in each of their four major subjects **[Functional]**
    b. The General Y11-12 mode must include:
        i. What subjects the student is doing **[Non-Functional]**
        ii. Their marks **[Functional]**
        iii. How many Cs they've achieved **[Functional]**
        iv. Whether or not they have enough Cs to pass **[Functional]**
        v. Their GPA **[Functional]**
    c. The ATAR Y11-12 mode must include:
        i. What subjects the student is doing **[Non-Functional]**
        ii. Both their raw and scaled marks **[Functional]**
        iii. How many Cs they've achieved **[Functional]**
        iv. Whether or not they have enough Cs to pass **[Functional]**
        v. Their predicted ATAR **[Functional]**
3. The following method must be used to calculate their predicted ATAR **[Functional]**, and the required elements must be built into the system:
    a. 1) Find the sum of the top four subjects after scaling (TEA)
    b. 2) Put it in the TISC calculator
    c. 3) Display the resulting predicted ATAR
4. All this data must be displayed on a user-friendly and simple analysis sheet / table. The system must be automated such that if the excel sheets are changed, the respective analysis sheet automatically changes accordingly. **[Functional]**