

Intro📖:

Calculate final grades of students.

To calculate the GPA:

Multiply the grade value for a course by the number of credit hours for that course. Do this for each course, then add these results together. Divide the resulting sum by the total number of credit hours

Learning Objectives✅:

- Work with variables to store and retrieve data
- Perform basic math operations
- Format strings to present results.

Project overview💻:

You are developing a Student GPA Calculator. The key aspects are:

- Student Information:
Receive the student's name and class information.
- Class Information:
Each class has a name, grade, and credit hours.
- GPA Calculation:
Multiply the grade by the credit hours for each class.
Sum up these results.
Divide the sum by the total number of credit hours.
- Output:
Display the student's name, class information, and calculated GPA.

By following these steps, your application will efficiently calculate and display the GPA for a given student based on their class grades and credit hours.

Data Given (Input)✎:

Student: Sophia Johnson

Course	Grade	Credit Hours
English 101	4	3
Algebra 101	3	3
Biology 101	3	4
Computer Science I	3	4
Psychology 101	4	3

Final GPA: 3.35

Improvements 🛠️:

1. Use Arrays or Lists:
 - Replace individual variables with arrays or lists for courses and grades.
2. Use a Class or Struct:
 - Define a class or struct to represent a course, improving organization.
3. Avoid Magic Numbers:
 - Define constants for numerical values (e.g., grades A and B).
4. Improve GPA Calculation:
 - Simplify GPA calculation using `Math.Round` for two decimal places.
5. Enhance Output Formatting:
 - Improve formatting for better readability, aligning columns in the output.
6. Error Checking:
 - Implement error checking to handle potential issues, such as division by zero.
7. Use Functions:
 - Break down the code into functions for modularity, readability, and testability.

These improvements aim to enhance code scalability, maintainability, and readability, while also addressing potential error scenarios. Implementing these suggestions would contribute to a more robust and flexible GPA calculator.

Running the project ⌚:

Use “dotnet run” command to run the command (visual studio command)

Output 📄:

```
Student: Sophia Johnson
Course      Grade  Credit Hours
English 101    4         3
Algebra 101    3         3
Biology 101    3         4
Computer Science I  3         4
Psychology 101  4         3
Final GPA:    3.35
```