The code is a C# console application to determine if a student qualifies for an exam based on their weighted average marks. The weights are 30% for Test 1, 50% for Test 2, 10% for an Assignment, and 10% for a Project. The application has a menu to add marks, check marks, or exit.

**Key Components**

1. **Namespace and Class Declaration**
   * **Namespace**: ConsoleApp1
   * **Class**: Program
   * **Fields**: test1, test2, assignment, project, result for storing marks and the calculated result.
2. **Main Method**
   * **Loop**: Keeps the application running until the user chooses to exit.
   * **Menu Options**: Users can add marks, check marks, or exit.
   * **Input Handling**: Uses Enum.TryParse and a switch statement to handle user choices.
3. **MenuOption Enum**
   * Defines options for the menu: AddMarks, CheckMarks, Exit.
4. **DisplayHeader Method**
   * Clears the console and prints the application header.
5. **AddMarks Method**
   * Prompts the user to enter marks for each test, assignment, and project using the GetMark method.
6. **GetMark Method**
   * Prompts for and returns a mark for a specified test or assignment.
7. **CalculateResult Method**
   * Calculates the weighted average of the marks.
8. **CheckMarks Method**
   * Displays the entered marks and the overall weighted average.
   * Determines if the student qualifies for the exam based on the result.

**Flow**

1. **Start Application**: Displays the menu.
2. **Add Marks**: Prompts for marks, calculates the result.
3. **Check Marks**: Displays marks and the qualification status.
4. **Exit**: Stops the application.

This application can be dockerized, pushed to Docker Hub, and run using Docker CLI as per the project guidelines.

**Steps to Run the Application**

1. **Pull the Docker Image:** Open a terminal and run the following command to pull the Docker image from Docker Hub:

docker pull f0urie/csapp:csapp

1. **Run the Docker Container:** Execute the following command to run the Docker container:

docker run -it f0urie/csapp:csapp

1. **Enter the Marks:** When prompted, enter the marks for Test 1, Test 2, Assignment 1, and Project. The application will then calculate the weighted average and determine if the student qualifies to write the exam.

The application will display whether the student qualifies to write the exam based on the calculated weighted average.