

Write a program that accepts the mass of an object (in kilograms) and its velocity (in meters per second), then calculates and displays the momentum of the object. The momentum p is calculated using the formula:

 $p = m \times v$

where.

m is the mass of the object (in kilograms). v is the velocity of the object (in meters per second).

Input Format:

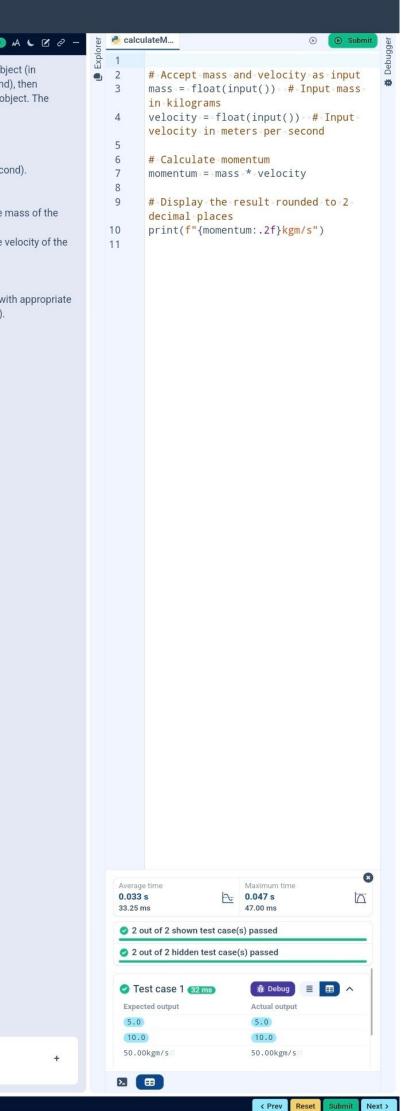
A single floating-point number representing the mass of the object in kilograms.

A single floating-point number representing the velocity of the object in meters per second.

Output Format:

Sample Test Cases

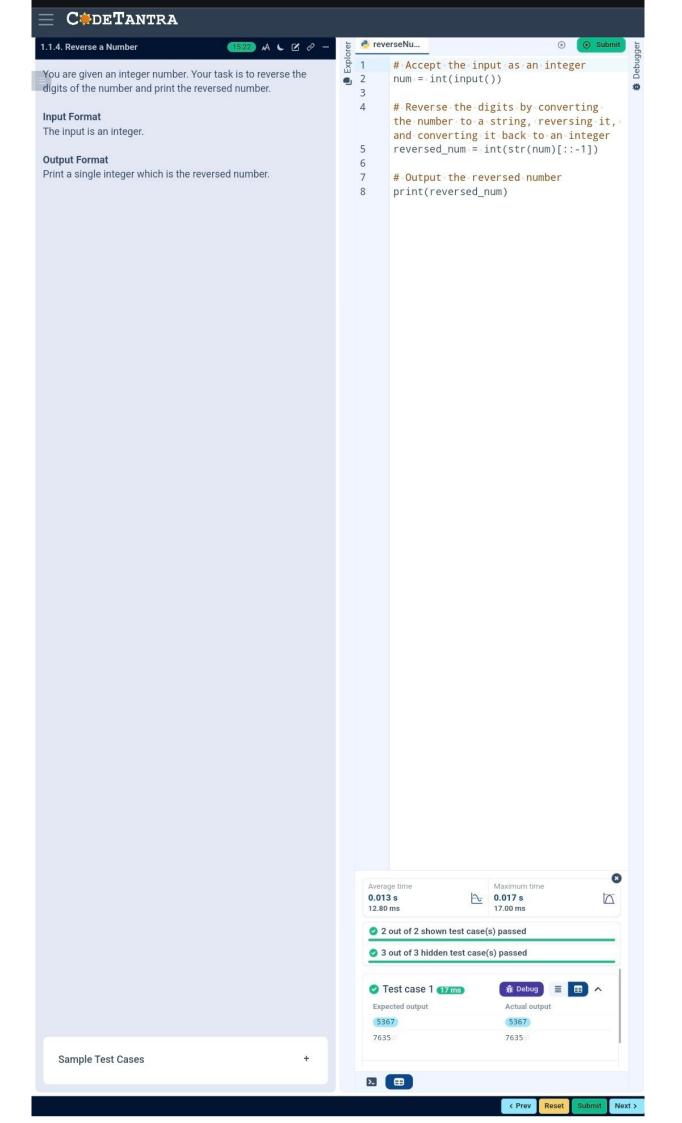
The output will display calculated momentum with appropriate units (kgm/s) (rounded up to 2 decimal places).

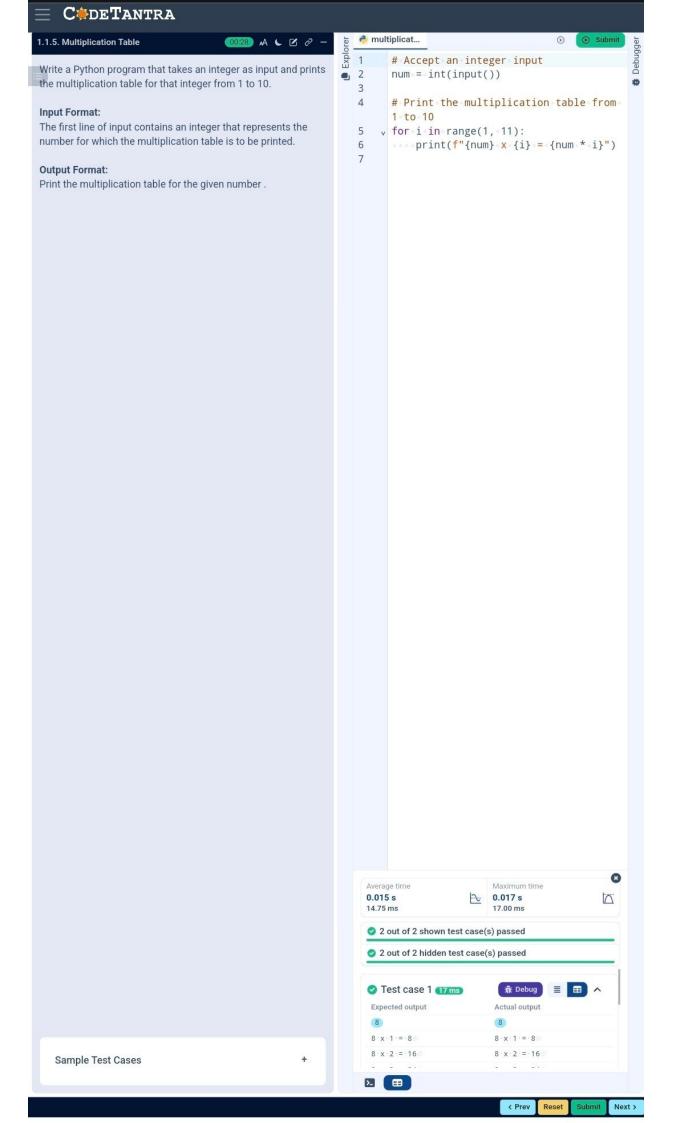












Write a Python program that accepts the number of courses and the marks of a student in those courses.

The grade is determined based on the aggregate percentage:

• If the aggregate percentage is greater than 75, the grade is Distinction.

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- If the aggregate percentage is greater than or equal to 60 but less than 75, the grade is First Division.
- If the aggregate percentage is greater than or equal to 50 but less than 60, the grade is Second Division.
- If the aggregate percentage is greater than or equal to 40 but less than 50, the grade is Third Division.

Input Format:

The first input will be an integer n, the number of courses. The second input will be n integers representing the marks of the student in each of the n courses, separated by a space.

Output Format:

If the student passes all courses:

- · Print the aggregate percentage (rounded to two decimal places).
- · Print the grade based on the aggregate percentage.

If the student fails any course (marks < 40 in any course), print:

Sample Test Cases

```
Explorer
       v def calculate_grade():
        # Accept number of courses
   2
.
   3
        num_courses = int(input())
   5
        # Accept marks for the courses
   6
         marks = list(map(int,
        input().split()))
   7
   8
          # Check if the student has
        failed any course (marks < 40)
   9
       v if any (mark < 40 for mark in
        marks):
  10
        print("Fail")
       v eelse:
  11
        # Calculate the total marks
  12
        and aggregate percentage
  13
        total_marks = sum(marks)
  14
         aggregate_percentage =
        (total_marks / (num_courses * 100))
        * 100
  15
  16
         # Print the aggregate
        percentage
  17
          print(f"Aggregate
        Percentage:
        {aggregate_percentage:.2f}")
  18
        # Determine the grade based
  19
        on the aggregate percentage
  20
       v if aggregate_percentage > 75:
         print("Grade:
  21
        Distinction")
  22
      v elif 60 <=
        aggregate_percentage < 75:
  23
                    print("Grade: First
        Division")
  24
      v elif 50 <=
        aggregate_percentage < 60:
  25
                   print("Grade: Second
        Division")
      v elif 40 <=
  26
        aggregate_percentage < 50:
  27
            print("Grade: Third
        Division")
  28
        # Call the function to execute
  29
  30
        calculate_grade()
                                           0
                        Maximum time
    Average time
                    0.027 s
    0.023 s
                                          22.75 ms
                        27.00 ms
    2 out of 2 shown test case(s) passed
    2 out of 2 hidden test case(s) passed
                                 ■ ■ ^
    Test case 1 27 ms
                         🏗 Debug
    Expected output
                        Actual output
                        56 78 97 86 93
    56 78 97 86 93
    Aggregate Percentage: 82.
                        Aggregate Percentage: 8
   Σ ==
```

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Reset

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passorFail....

Submi

