

EXPERIEMNT - 5

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5.1.2] Student Grade based on Aggregate

ALGORITHM

Step 1: Start the program.

Step 2: Input marks of four subjects: m1, m2, m3, m4.

Step 3: Calculate the total marks using:

$$\text{total} = m1 + m2 + m3 + m4$$

Step 4: Calculate the aggregate percentage using:

$$\text{aggregate} = (\text{total} / 400) \times 100$$

Step 5: Check the aggregate percentage:

If aggregate > 75, assign grade = Distinction

Step 6: Else if aggregate \geq 60 and < 75, assign grade = First Division

Step 7: Else if aggregate \geq 50 and < 60, assign grade = Second Division

Step 8: Else if aggregate \geq 40 and < 50, assign grade = Third Division

Step 9: Else, assign grade = Fail

Step 10: Display the total marks.

Step 11: Display the aggregate percentage up to two decimal places.

Step 12: Display the grade of the student.

Step 13: End the program.

PYTHON CODE

```
m1, m2, m3, m4 = map(int, input().split())
```

```
total = m1 + m2 + m3 + m4
```

```
aggregate = (total / 400) * 100
```

```
if aggregate > 75:
```

```
    grade = "Distinction"
```

```
elif aggregate >= 60:
```

```
    grade = "First Division"
```

```
elif aggregate >= 50:
```

```
    grade = "Second Division"
```

```
elif aggregate >= 40:
```

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```
grade = "Third Division"
```

else:

```
    grade = "Fail"
```

```
print(total)
```

```
print(f"aggregate:.2f}")
```

```
print(grade)
```

FLOWCHART



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EXCECUTION

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5.1.2. Student Grade Based on Aggregate 07:07

Write a program to calculate the total marks, aggregate percentage, and grade of a student based on marks in four subjects. The grade is determined as follows:

- Aggregate > 75%: Distinction
- Aggregate >= 60% and < 75%: First Division
- Aggregate >= 50% and < 60%: Second Division
- Aggregate >= 40% and < 50%: Third Division
- Aggregate < 40%: Fail

Input Format:
• Four space-separated integers representing the marks in four subjects.

Output Format:
• The first line should print the total marks.
• The second line should print the aggregate percentage with two decimal places.
• The third line should print the grade.

Constraints:
• $0 \leq \text{marks in each subject} \leq 100$

Sample Test Cases +

```
studentG...
1 m1, m2, m3, m4 = map(int, input().split())
2 total = m1 + m2 + m3 + m4
3 aggregate = (total / 400) * 100
4 if aggregate > 75:
5     grade = "Distinction"
6 elif aggregate >= 60:
7     grade = "First Division"
8 elif aggregate >= 50:
9     grade = "Second Division"
10 elif aggregate >= 40:
11     grade = "Third Division"
```

Average time Maximum time
0.004 s **0.008 s**
4.10 ms 8.00 ms

5 out of 5 shown test case(s) passed
5 out of 5 hidden test case(s) passed

Test case 1 8 ms	
Expected output	Actual output
85 90 78 88	85 90 78 88
341	341
85.25	85.25
Distinction	Distinction

Test case 2 6 ms

Terminal Test cases

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