

# **Experiment 5.1.2**

## **Roots of an experiment**

Algorithm:

Step 1: Start

Step 2: Input four integers a, b, c, d

Step 3: Calculate total = a + b + c + d

Step 4: Print total

Step 5: Calculate per = (total / 400) \* 100

Step 6: Print per rounded to two decimal places

Step 7: If per > 75

    Print "Distinction"

Step 8: Else if per >= 60 and per <= 75

    Print "First Division"

Step 9: Else if per >= 50 and per < 60

    Print "Second Division"

Step 10: Else if per >= 40 and per < 50

    Print "Third Division"

Step 11: Else

    Print "Fail"

Step 12: Stop

## Code:

```
a, b, c, d = map(int,input().split())

print(a+b+c+d)

per = ((a+b+c+d)/400)*100

print(f"{per:.2f}")

if per>75:

    print("Distinction")

elif per>=60 and per<=75:

    print("First Division")

elif per>=50 and per<=60:

    print("Second Division")

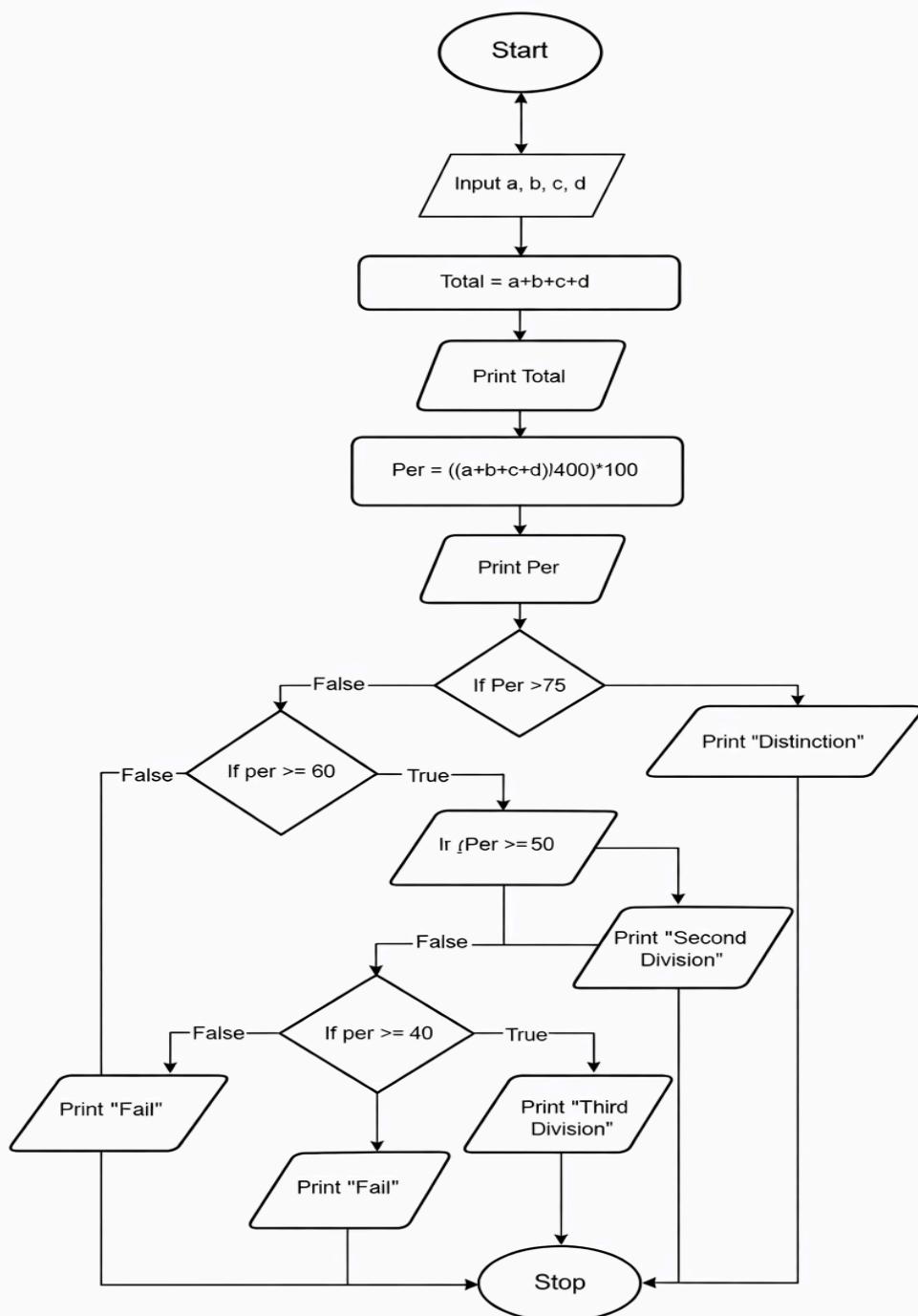
elif per>=40 and per<=50:

    print("Third Division")

else:

    print("Fail")
```

## FlowChart:



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**5.1.2. Student Grade Based on Aggregate**

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  $\geq 60\%$  and  $< 75\%$ : First Division
- Aggregate  $\geq 50\%$  and  $< 60\%$ : Second Division
- Aggregate  $\geq 40\%$  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  marks = list(map(int, input().split()))
2  total_marks = sum(marks)
3  aggregate = total_marks / 4.0
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"
12 else:
13     grade = "Fail"
14 print(total_marks)
15 print(f"(aggregate:.2f)")
16 print(grade)

```

Average time: **0.004 s** Maximum time: **0.006 s**  
3.60 ms 6.00 ms

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

Test case 1	6 ms
Expected output	85 90 78 88
	341
	85.25
	Distinction
Actual output	85 90 78 88
	341
	85.25
	Distinction

Test case 2 **4 ms**

Terminal **Test cases**

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