

module5

December 8, 2025

Assignment “Part 1: Write a program that uses nested loops to collect data and calculate the average rainfall over a period of years. The program should first ask for the number of years. The outer loop will iterate once for each year. The inner loop will iterate twelve times, once for each month. Each iteration of the inner loop will ask the user for the inches of rainfall for that month. After all iterations, the program should display the number of months, the total inches of rainfall, and the average rainfall per month for the entire period.

Part 2: The CSU Global Bookstore has a book club that awards points to its students based on the number of books purchased each month. The points are awarded as follows:

If a customer purchases 0 books, they earn 0 points. If a customer purchases 2 books, they earn 5 points. If a customer purchases 4 books, they earn 15 points. If a customer purchases 6 books, they earn 30 points. If a customer purchases 8 or more books, they earn 60 points. Write a program that asks the user to enter the number of books that they have purchased this month and then display the number of points awarded.

“

Git Repository <https://github.com/izzy64/CSC500/blob/main/Module5>

CODE

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[7]: # Part 1

# test data:
# 0, 0, 3, 6, 9, 6, 4, 3, 4, 2, 2, 0
# 0, 1, 1, 7, 8, 7, 3, 2, 3, 2, 1, 0

print("How many years worth of data to analyze?")
years_count = int(input())
print(years_count)

month_count = years_count * 12
rain_total = 0

for year in range(1, years_count + 1):
    for month in range(1, 13):
        print(f"How many inches of rainfall were observed in month {month} of {year} {year}?")
        rainfall = int(input())
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    print(rainfall)
    rain_total += rainfall

print(f"Over a period of {years_count} years ({month_count} months), a total of "
    f"{rain_total} inches of rain were observed for an average of {((rain_total/
    month_count):.3f} inches of rain per month")

```

How many years worth of data to analyze?

2

How many inches of rainfall were observed in month 1 of year 1?

0

How many inches of rainfall were observed in month 2 of year 1?

0

How many inches of rainfall were observed in month 3 of year 1?

3

How many inches of rainfall were observed in month 4 of year 1?

6

How many inches of rainfall were observed in month 5 of year 1?

9

How many inches of rainfall were observed in month 6 of year 1?

6

How many inches of rainfall were observed in month 7 of year 1?

4

How many inches of rainfall were observed in month 8 of year 1?

3

How many inches of rainfall were observed in month 9 of year 1?

4

How many inches of rainfall were observed in month 10 of year 1?

2

How many inches of rainfall were observed in month 11 of year 1?

2

How many inches of rainfall were observed in month 12 of year 1?

0

How many inches of rainfall were observed in month 1 of year 2?

0

How many inches of rainfall were observed in month 2 of year 2?

1

How many inches of rainfall were observed in month 3 of year 2?

1

How many inches of rainfall were observed in month 4 of year 2?

7

How many inches of rainfall were observed in month 5 of year 2?

8

How many inches of rainfall were observed in month 6 of year 2?

7

How many inches of rainfall were observed in month 7 of year 2?

3

How many inches of rainfall were observed in month 8 of year 2?

```
2
How many inches of rainfall were observed in month 9 of year 2?
3
How many inches of rainfall were observed in month 10 of year 2?
2
How many inches of rainfall were observed in month 11 of year 2?
1
How many inches of rainfall were observed in month 12 of year 2?
0
Over a period of 2 years (24 months), a total of 74 inches of rain were observed
for an average of 3.083 inches of rain per month
```

```
[9]: print("How many books did you purchase this month?")
book_count = int(input())
print(book_count)
if book_count < 2:
    monthly_points = 0
elif book_count < 4:
    monthly_points = 5
elif book_count < 6:
    monthly_points = 15
elif book_count < 8:
    monthly_points = 30
else:
    monthly_points = 60
print(f"You earned {monthly_points} points this month")
```

```
How many books did you purchase this month?
7
You earned 30 points this month
```