



Write a pretitle

Case Study in Python Programming

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Agenda

1. First Case Study : Miles Per Gallon
2. Second Case Study : A Game of Chance - Crap
3. Third Case Study : COVID 19 Infection Statistic



1

First Case Study : Miles Per Gallon

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- Drivers are concerned with the mileage obtained by their automobiles. One driver has kept track of several tankfuls of gasoline by recording miles driven and gallons used for each tankful. Develop a sentinel-controlled-repetition script that prompts the user to input the miles driven and gallons used for each tankful.
- The script should calculate and display the miles per gallon obtained for each tankful. After processing all input information, the script should calculate and display the combined miles per gallon obtained for all tankfuls (that is, total miles driven divided by total gallons used).
- Requirement Output of The Program :

```
Enter the gallons used (-1 to end): 12.8
Enter the miles driven: 287
The miles/gallon for this tank was 22.421875
Enter the gallons used (-1 to end): 10.3
Enter the miles driven: 200
The miles/gallon for this tank was 19.417475
Enter the gallons used (-1 to end): 5
Enter the miles driven: 120
The miles/gallon for this tank was 24.000000
Enter the gallons used (-1 to end): -1
The overall average miles/gallon was 21.601423
```

2

Second Case Study : A Game of Chance - Crap

Second Case Study : A Game of Chance - Crap

- You roll two six-sided dice, each with faces containing one, two, three, four, five and six spots, respectively.
When the dice come to rest, the sum of the spots on the two upward faces is calculated.
- If the sum is 7 or 11 on the first roll, you win. If the sum is 2, 3 or 12 on the first roll (called “craps”), you lose (i.e., the “house” wins).
- If the sum is 4, 5, 6, 8, 9 or 10 on the first roll, that sum becomes your “point.” To win, you must continue rolling the dice until you “make your point” (i.e., roll that same point value). You lose by rolling a 7 before making your point.

A large, white, three-dimensional-style digit '3' is centered on a green gradient background. The background transitions from a light lime green at the top to a dark forest green at the bottom, with subtle horizontal stripes. A thin vertical yellow line runs along the right edge of the slide.

3

Third Case Study : COVID 19

Infection Statistic

Third Case Study : COVID 19 Infection Statistic

- (COVID-19 Infection Statistics) During the first 20 days of the COVID-19 pandemic, the number of newly infected patients per day in a country were recorded.
- Place the following numbers in a list: 174, 335, 278, 214, 422, 513, 737, 672, 489, 412, 1301, 1105, 1123, 1376, 1502, 894, 665, 1704, 1656, 1342 Use the built-in functions in the statistics module to display the following statistics concerning the infection rate: minimum, maximum, range, mean, median, variance, and standard deviation.



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Thank You

Any Question?