

Experiment 1: Performing Arithmetic Operations using Python & Solving multi-step problems using variables

Aim: Run and execute the following word problem using Arithmetic Operators in Python.

Objective: The objective is to learn the use of Python as a calculator and solve the word problem using various arithmetic functions like addition (+), subtraction (-), multiplication (\times) and division (\div).

Problem Statement:

- 1] The population of a town is 198568. Out of them 45312 are men and 35678 are women. Find the number of children in the town.
- 2] A shopkeeper has 2425 boxes of 24 pencils each. How many pencils do all the boxes have in all?
- 3] There are 86 rooms in a school. 4356 students study there. Equal number of students sits in each room. Find the number of students sitting in one room?
- 4] Maria bought 96 toys priced equally for \$12960. The amount of \$1015 is still left with her. Find the cost of each toy and the amount she had.
- 5] A travel company wants to fly a plane to the Mauritius. Flying the plane costs 5000 dollars. So far, 29 people have signed up for the trip. If the company charges 200 dollars per ticket, what is the profit made by the company? Create variables for each numeric quantity and use appropriate arithmetic operations.

Output :

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Date of Performance :- 17-01-22

1)

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[1]: #1] The population of a town is 198568. Out of them 45312 are men and 35678 are women. Find the number of children in the town

#Storing given input in the variables
population_of_town = 198568
population_of_men = 45312
population_of_women = 35678

#Calculating the number of children in the town
no_of_children = population_of_town - ( population_of_men + population_of_women )

#displaying the output
print("no of children in town:", no_of_children)

no of children in town: 117578
```

2)

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[2]: #A shopkeeper has 2425 boxes of 24 pencils each. How many pencils do all the boxes have in all?

Number_of_boxes = 2425

Number_of_pencils_in_each_box = 24

#calculations
total_number_of_pencils = ( Number_of_boxes * Number_of_pencils_in_each_box )

#result
print("The_total_number_of_pencils", total_number_of_pencils)

The_total_number_of_pencils 58200
```

3)

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[4]: #3] There are 86 rooms in a school. 4356 students study there. Equal number of students sits in each room. Find the number of students sitting in one room

#Storing given input in the variables
total_rooms_in_school = 86
total_students_studying = 4356

#Calculating the number of students sitting in one room
no_of_students_per_room = (total_students_studying / total_rooms_in_school )

#displaying the output
print("number of students sitting in one room is", no_of_students_per_room )

number of students sitting in one room is 50.651162790697676
```

4)

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#4] Maria bought 96 toys priced equally for $12960. The amount of $1015 is still left with her. Find the cost of each toy

#Storing given input in the variables
number_of_toys = 96
cost_of_96_toys = 12960
the_amount_still_with_her = 1015

#Calculating the one toy cost
cost_of_one_toy = ( cost_of_96_toys / number_of_toys )

#Calculating the amount she had initially
amount_she_had_initially = ( cost_of_96_toys + the_amount_still_with_her )

#displaying the output
print("cost of one toy", cost_of_one_toy )
print("amount she had initially:", amount_she_had_initially )

cost of one toy 135.0
amount she had initially: 13975
```

5)

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#A travel company wants to fly a plane to the Mauritius. Flying the plane costs 5000 dollars.
#So far, 29 people have signed up for the trip. If the company charges 200 dollars per ticket,
#what is the profit made by the company? Create variables for each numeric quantity and use appropriate arithmetic operators

#Storing given input in the variables
flying_the_plane_cost = 5000
people_who_signed_up_for_trip = 29
per_ticket_price = 200

#Calculating the profit made by the company
profit_made_by_the_company = ( people_who_signed_up_for_trip * per_ticket_price - flying_the_plane_cost )

#displaying the output
print("total profit made by the company:", profit_made_by_the_company )
```

total profit made by the company: 800

Conclusion:

In this experiment, we will learn all about Python's math module. Mathematical calculations are an essential part of Python development. For mathematical calculations in Python, used the mathematical Arithmetic operators, such as addition (+), subtraction (-), division (/), multiplication (*) , Floor division modules/reminder and Exponent. And solve the multi-step problems using variables.