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**ROLL NO:65**

**BRANCH:COMPS-3**

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| Experiment No.1 |
| Program to perform arithmetic operations by accepting values from users |
| Date of Performance: 9/1/2024 |
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Experiment No. 1

Title: Program to perform arithmetic operations by accepting values from users

Aim: To write a program to perform arithmetic operations by accepting values from users

Objective: To introduce basic concepts in Python

Theory:

What is Python?

Python is a popular programming language. It was created by Guido van Rossum, and

released in 1991.

It is used for:

 web development (server-side),

 software development,

 mathematics,

 system scripting.

What can Python do?

 Python can be used on a server to create web applications.

 Python can be used alongside software to create workflows.

 Python can connect to database systems. It can also read and modify files.

 Python can be used to handle big data and perform complex mathematics.

 Python can be used for rapid prototyping, or for production-ready software

development.

Why Python?

 Python works on different platforms (Windows, Mac, Linux, Raspberry Pi, etc).

 Python has a simple syntax similar to the English language.

 Python has syntax that allows developers to write programs with fewer lines than

some other programming languages.

 Python runs on an interpreter system, meaning that code can be executed as soon as it

is written. This means that prototyping can be very quick.

 Python can be treated in a procedural way, an object-oriented way or a functional

way.

Good to know

 The most recent major version of Python is Python 3, which we shall be using in this

tutorial. However, Python 2, although not being updated with anything other than

security updates, is still quite popular.

 In this tutorial Python will be written in a text editor. It is possible to write Python in

an Integrated Development Environment, such as Thonny, Pycharm, Netbeans or

Eclipse which are particularly useful when managing larger collections of Python

files.

Python Syntax compared to other programming languages

 Python was designed for readability, and has some similarities to the English

language with influence from mathematics.

 Python uses new lines to complete a command, as opposed to other programming

languages which often use semicolons or parentheses.

 Python relies on indentation, using whitespace, to define scope; such as the scope of

loops, functions and classes. Other programming languages often use curly-brackets

for this purpose.

Arithmetic operators are used to perform mathematical operations like addition,

subtraction, multiplication and division.

There are 7 arithmetic operators in Python :

1. Addition

2. Subtraction

3. Multiplication

4. Division

5. Modulus

6. Exponentiation

7. Floor division

CODE:

import math;

a=input("enter 1st value");

b=input("enter 2nd value");

add=float(a)+float(b);

print("THE SUM IS",add);

product=float(a)\*float(b);

print("THE PRODUCT IS",product);

div=float(a)/float(b);

print("THE quotient IS",div);

modulo=float(a)%float(b);

print("THE REMAINDER IS",modulo);

minus=float(a)-float(b);

print("THE SUBTRACTION IS",minus);

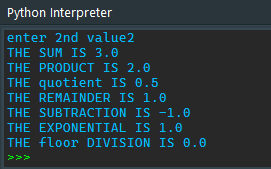
EXPONENTIAL=float(a)\*\*float(b);

print("THE EXPONENTIAL IS",EXPONENTIAL);

floor=float(a)//float(b);

print("THE floor DIVISION IS",floor);

OUTPUT:



Conclusion:In conclusion, our lab experiment centered on introducing Python's fundamental concepts, with a hands-on exercise implementing arithmetic operations. The provided code allowed participants to input values for two variables, performing addition, subtraction, multiplication, division, modulus, exponentiation, and floor division operations. This practical application illustrated Python's readability and versatility in handling basic mathematical computations, providing a solid foundation for future programming endeavors in the lab.