**[ Laboratory No. 1.2:** **Investment]**

**Objectives:**

1. To know the basics about Python Programming and its concepts
2. To create a program that takes input from the user and display necessary information as required

**Materials:**

1. PC or Laptop
2. Python Package Development Kit
3. Pycharm or any IDE

**Background**

In Python, you are not required to declare what kind of data type a variable is as it is interpreted automatically as number. Python will consider any number written without decimals as an integer (as in 143) and any number written with decimals as a float (as in 14344.50).

A **floating-point is** a real number which can be either a rational or an irrational. Thus, floating-point numbers can be numbers that can contain a fractional part, such as 5.0 or -589.50. Simply speaking, for the purposes of thinking of a float in a Python program, it is a number that contains a decimal point.

Like we did with the integer, we can print out a floating-point number in a simple way like this:

**print(69.5)**

**Output**

69.5

These numbers are used in an expression to perform mathematical operations like addition, subtraction, multiplication etc.

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| --- | --- | --- |
| **Arithmetic operators in Python** | | |
| **Operator** | **Meaning** | **Example** |
| + | Add two operands or unary plus | x + y +2 |
| - | Subtract right operand from the left or unary minus | x - y -2 |
| \* | Multiply two operands | x \* y |
| / | Divide left operand by the right one (always results into float) | x / y |
| % | Modulus - remainder of the division of left operand by the right | x % y (remainder of x/y) |
| // | Floor division - division that results into whole number adjusted to the left in the number line | x // y |
| \*\* | Exponent - left operand raised to the power of right | x\*\*y (x to the power y) |

**Instructions:**

1. Create class **Investment*[Surname]***
2. **Problem Scenario**

MEtsab corporation has been known for its excellency and transparency towards its clients in terms of monetarization and capitalization. This year they have more than 10 million investors. And it is growing dramatically. Due to its manual processes in calculation in interest, they are having delay and difficulty in giving payouts on time. Hence, they might lose some investors if this will continue to happen. To help the corporation sustain its missions and values, help them automate the calculation of interest as to how much monthly payout they should give to each investor. The formula is as follows:

**Interest/Month = Capital \* (700%)**

**Processing Fee = 1.5% of the Monthly Payout**

1. **Input**

Input consist name of investors in string and capital in float, the capital of investment in currency.

1. **Constraints**

5,000.00 ≤ Capital ≥ 500,000.00

1. **Output**

Investor

Capital

Month Interest

Processing Fee

Monthly Payout (Gross)

Net Income in a Month

Annual Interest (Calculate with no processing fee)

Net Income in a year

1. **Source Codes**

|  |
| --- |
|  |

1. **Sample Input/Output (Atleast 3 attempts)**

**NOTE: Provide a screenshot and describe your observation for each action you performed based on the item below:**

* **Input any capital value between the constraints**
* **Input any capital value NOT between the constraints**
* **When a capital C is a negative value**
* **When a capital C is a string or contain string**
* **When a capital C contains comma**

1. **Submit your file with filename convention: Investment*[Surname]***

**Rules:**

1. Each laboratory activity has time limit of 1:30 minutes and is due on the day depending on the level of difficulty or constraints.
2. Each activity will only last every after 3 days and has deduction of 10 points every day from the day it was given.