

# **Infosys Springboard Virtual Internship 6.0: Milestone 1 Report**

**Project Name :** Crypto Volatility and Risk Analyzer

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**Batch :** 11 | **Team:** C

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## **EXECUTIVE SUMMARY**

This document presents the learning progress and technical activities completed during Milestone–1 of the Infosys Springboard Virtual Internship. The milestone focused on building a strong foundation in Python programming through hands-on practice using Google Colab notebooks. The sessions emphasized console-based execution, data handling, string processing, and logical decision-making, which are essential for advanced project development.

## **1. LEARNING ENVIRONMENT OVERVIEW**

The internship sessions were conducted using Google Colab, a cloud-based Python execution platform. The environment allowed the integration of executable Python code cells along with markdown-based explanations. This setup helped in understanding program logic, executing code interactively, and documenting outcomes efficiently.

## **2. KNOWLEDGE AREAS ADDRESSED**

During Milestone–1, the following learning areas were covered:

- Python program structure and syntax
- Console-based user input and output
- Integer and floating-point operations
- String manipulation techniques
- Use of built-in Python modules
- Conditional and logical operations
- Documentation using markdown cells

### **3. PROGRAM EXECUTION AND ANALYSIS**

This section details the Python programs practiced during the sessions along with their purpose, implementation, and outputs.

#### **Program 1: User Interaction Using Console**

##### **Objective:**

To understand how Python programs interact with users through console input and output.

##### **Code Snippet:**

```
print("Hi..!")
name = input('Enter your Name: ')
print('Hi ', name)
```

##### **Output:**

```
Hi..!
Enter your Name: Vyshu
Hi Vyshu
```

#### **Program 2: Numerical Computations Using Data Types**

##### **Objective:**

To perform arithmetic operations using integer and floating-point data types.

##### **Explanation:**

User inputs are taken from the console. Integer values are added, and floating-point values are used to calculate the area of a triangle.

##### **Code Snippet:**

```
# Integer Input
a = int(input('Enter the value for A: '))
b = int(input('Enter the value for B: '))
c = a+b
print(c)

# Area of Triangle
b = float(input("Enter the Base Length of Triangle: "))
h = float(input("Enter the Height Length of Triangle: "))
a = 0.5 * b * h
print("Area = ", a)
```

##### **Output:**

```
106 Area = 31.5
```

### **Program 3: Utilizing Built-in Python Libraries**

#### **Objective:**

To explore Python's built-in modules for practical applications.

#### **Explanation:**

The calendar module is used to generate a formatted monthly calendar based on user input.

#### **Code Snippet:**

```
import calendar
```

```
year = int(input("Please Enter the year Number: "))
month = int(input("Please Enter the month Number: "))

print(calendar.month(year, month))
```

#### **Output:**

```
June 2005
Mo Tu We Th Fr Sa Su
 1  2  3  4  5
 6  7  8  9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30
```

### **Program 4a: Text Processing Using String Operations**

#### **Objective:**

To analyze and manipulate textual data using string methods.

#### **Code Snippet:**

```
# Looping through string
for x in 'MISSISSIPPI':
    print(x)
```

```
# String Methods
s = "life iS beautiful !!! "
print(s.upper())
print(s.replace("l",'w'))
print(s.split("i"))
```

#### **Output:**

```
M  
I  
S  
S  
I  
S  
S  
I  
P  
P  
I  
LIFE IS BEAUTIFUL !!!  
wife iS beautifuw !!!  
['l', 'fe ', 'S beaut', 'ful !!! ']
```

## 4b. String Slicing and Concatenation

I practiced accessing specific parts of strings using slicing techniques on the string "Python Programming". I also demonstrated string concatenation by joining two separate phrases into a single cohesive sentence.

### Code Snippet:

```
str = "Python Programming"  
# Slicing from 1st to 4th index  
print(str[1:5])  
# Slicing from 0th to 2nd index  
print(str[:3])  
  
a = 'life is beautiful !!!'  
b = 'Live happily'  
print("Concatenation: " + a + b)
```

### Output:

```
ytho  
Pyt  
Concatenation: life is beautiful !!!Live happily
```

## 4c. String Formatting

To practice dynamic text generation, I utilized the `.format()` method. By using positional arguments, I injected variables into a sentence structure.

### Code Snippet:

```
# Positional arguments in formatting  
print('{1} and {0} are best friends'.format('Vyshu','Sindhu'))
```

### Output:

```
Sindhu and Vyshu are best friends
```

## **Program 5: Decision Making Using Conditional Statements**

### **Objective:**

To implement decision-making logic using if-else conditions.

### **Code Snippet:**

```
# Even or Odd Check
num = int(input('Enter the number : '))

if num % 2 == 0:
    print('even: ', num)
else:
    print('odd: ', num)

# Greatest of three numbers
a = int(input('Enter A: '))
b = int(input('Enter B: '))
c = int(input('Enter C: '))

if (c>a and c>b):
    print('C is bigger')
```

### **Output:**

```
odd: 29
C is bigger
```

## **Program 6: Logical Validation Using Operators**

### **Objective:**

To validate conditions using logical operators.

### **Code Snippet:**

```
# Range check
num = int(input("Guess a Number: "))
if num>2 and num<79:
    print("Correct Guess!")
else:
    print("Incorrect Guess!")

# List membership
regno = int(input("Enter Register no : "))
if regno in [98,101,105,109,110]:
    print("pass")
else:
    print("Fail")
```

**Output:**

Incorrect Guess!

Fail

**4. PARTICIPATION AND SKILL DEVELOPMENT**

The intern actively participated in daily sessions by writing and executing Python programs. Logical explanations were documented using markdown cells, which improved problem-solving ability, debugging skills, and overall programming confidence.

**5. OVERALL OUTCOME**

- Strengthened understanding of Python fundamentals
- Improved ability to write and analyze console-based programs
- Gained experience in documenting technical workflows
- Built a solid foundation for future milestones

**6. FINAL REMARKS**

Milestone–1 successfully established a strong base in Python programming concepts. The hands-on learning approach and continuous practice during the sessions will be highly beneficial for implementing advanced features in upcoming milestones of the project.