Skill Mentors' Python Quick Study Guide I

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Skill Mentors'
Data Analytics BootCamp

Basic Concepts:

Variables

```
```python
 # Declaration
 variable_name = Value
```

Input/Output

```
 # Input
 user_input = input("Enter something: ")

 # Output
 print("User input:", user_input)
```
```

Data Types

```
# Integer
num_int = 45

# Float
num_float = 3.14

# String
text = "Hello, World!"
```

Arithmetic Operations:

Addition

```
result = 10 + 5
```

Subtraction

```
result = 15 - 7
```

Multiplication

```
result = 3 * 4
```

Division

```
result = 20 / 4
```

Floor Division (Quotient)

```
quotient = 19 // 5
```

Modulus (Remainder)

```
quotient = 19 % 5
```

Exponentiation

```
result = 2 ** 3
```

Conversion and Constants:

Type Conversion

```
# Float to Integer
num_int = int(3.14)

# Integer to Float
num_float = float(42)
```

Constants

In Python, constants are often represented using uppercase letters, but there's no strict enforcement of constant values. By convention, variables with uppercase names are considered constants.

```
PI = 3.14
```

Examples on basic python programming concepts

1.Simple Multiplication:

- Request two numbers from the user, perform multiplication, and display the result.

```
# Simple Multiplication
num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))
result = num1 * num2
print("Result of multiplication:", result)
```

2.Area of a Circle:

- Ask the user for the radius of a circle. Calculate the area using the formula (area = π * radius^2) and display the result. (Assume π as 3.14)

```
# Area of a Circle
import math
radius = float(input("Enter the radius of the circle: "))
area = math.pi * radius2
print("Area of the circle:", area)
```

3.Time Converter:

- Ask the user for a time duration in hours. Convert it to minutes and display the result.

```
# Time Converter
hours = float(input("Enter the time duration in hours: "))
minutes = hours * 60
print("Time in minutes:", minutes)
```