

Python Basics Assignment

Objective:

This assignment will help you practice fundamental Python concepts, including print statements, variables,

Part 1: Print Statement & Variables

Task 1: Printing Basic Information

Write a Python program that prints the following information using the print() function:

- Your name
- Your age
- Your favorite programming language

Example Output:

Name: John Doe

Age: 20

Favorite Programming Language: Python

Task 2: Storing and Displaying Information

Declare variables to store the following information and display them using a print statement:

- Student Name
- Course Name
- Institution Name
- Year of Study

Example Code:

```
student_name = "Alice Smith"
```

```
course_name = "Python Programming"
```

```
institution_name = "Saylani Mass IT Training"
```

```
year_of_study = 2025
```

```
print("Student Name:", student_name)
```

```
print("Course Name:", course_name)
print("Institution:", institution_name)
print("Year of Study:", year_of_study)
```

Part 2: Mathematical Operations

Task 3: Basic Arithmetic

Write a Python program that performs the following mathematical operations:

- Addition of two numbers
- Subtraction of two numbers
- Multiplication of two numbers
- Division of two numbers
- Modulus (remainder after division)

Example Code:

```
num1 = 15
```

```
num2 = 4
```

```
sum_result = num1 + num2
```

```
sub_result = num1 - num2
```

```
mul_result = num1 * num2
```

```
div_result = num1 / num2
```

```
mod_result = num1 % num2
```

```
print("Sum:", sum_result)
```

```
print("Subtraction:", sub_result)
```

```
print("Multiplication:", mul_result)
```

```
print("Division:", div_result)
```

```
print("Modulus:", mod_result)
```

Task 4: Calculating the Area of a Rectangle

Ask the user to enter the length and width of a rectangle, then calculate and print the area.

Formula:

Area = Length × Width

Example Output:

Enter length: 10

Enter width: 5

Area of Rectangle: 50

Part 3: String Slicing & Methods

Task 5: String Slicing

Write a Python program that:

- Stores a full name in a variable
- Extracts and prints the first name and last name using slicing
- Prints the initials (First letter of first and last name)

Example Code:

```
full_name = "Michael Jordan"
```

```
first_name = full_name[:7] # Extract first name
```

```
last_name = full_name[8:] # Extract last name
```

```
initials = full_name[0] + full_name[8] # Get initials
```

```
print("First Name:", first_name)
```

```
print("Last Name:", last_name)
```

```
print("Initials:", initials)
```

Task 6: String Methods

Write a program that asks the user for their full name and applies the following string methods:

- Convert to uppercase
- Convert to lowercase
- Count the number of characters

- Replace spaces with underscores (_)

Example Output:

Enter your full name: Alice Johnson

Uppercase: ALICE JOHNSON

Lowercase: alice johnson

Total Characters: 13

Modified Name: Alice_Johnson

Submission Guidelines:

- Complete all tasks and ensure your code is working.
- Save your Python script as `python_basics_assignment.py`.
- Submit your assignment before the due date.