

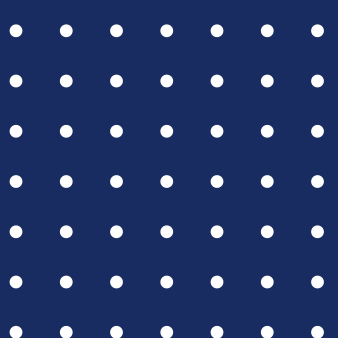
DAY 1: PYTHON BASICS

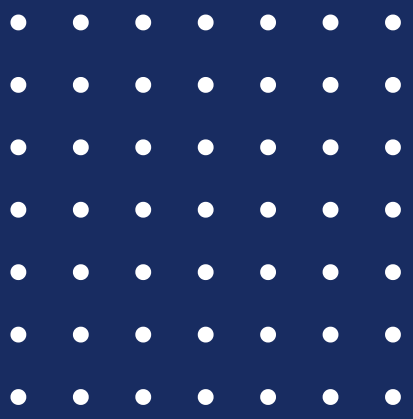
TOPICS: INTRODUCTION TO PYTHON, DATA TYPES, VARIABLES, OPERATORS

1. PRINT STATEMENTS AND BASIC SYNTAX:

- WRITE A PYTHON PROGRAM THAT PRINTS "HELLO, WORLD!" TO THE CONSOLE.
- WRITE AND MODIFY THE PROGRAM TO PRINT "LEARNING PYTHON IS FUN!" TO THE CONSOLE.

```
print("Hello, World!")
```



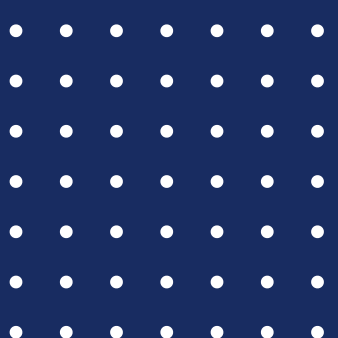


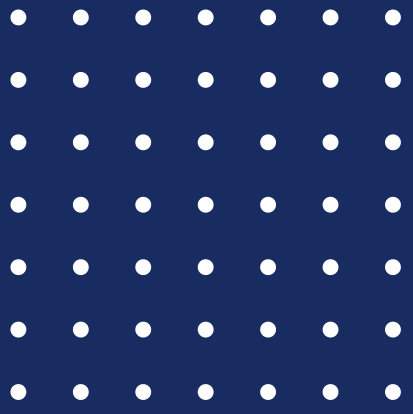
2. VARIABLES AND DATA TYPES:

- CREATE VARIABLES FOR A STUDENT'S NAME (STRING), GRADE (INTEGER), GPA (FLOAT), AND ENROLLMENT STATUS (BOOLEAN). PRINT THEIR VALUES.

```
# Variables of different data types
age = 30
salary = 75000.50
employee_name = "John Doe"
is_manager = False

# Print initial values
print("Age:", age)
print("Salary:", salary)
print("Employee Name:", employee_name)
print("Is Manager:", is_manager)
```





3. BASIC ARITHMETIC OPERATIONS:

- WRITE A PROGRAM THAT PERFORMS ADDITION, SUBTRACTION, MULTIPLICATION, AND DIVISION WITH THE NUMBERS 12 AND 3, AND PRINTS THE RESULTS.

```
x = 15
```

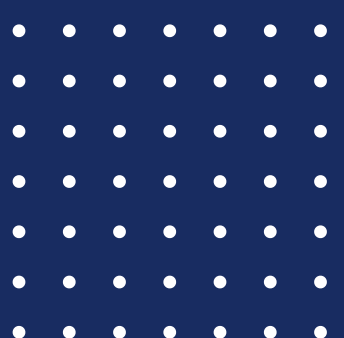
```
y = 4
```

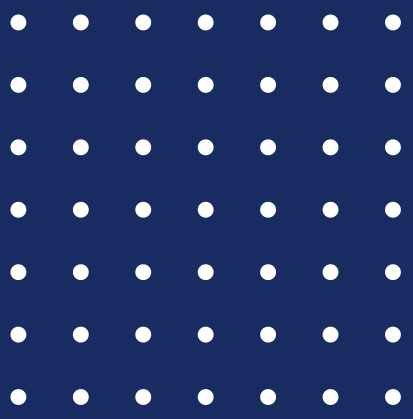
```
print("Addition:", x + y)
```

```
print("Subtraction:", x - y)
```

```
print("Multiplication:", x * y)
```

```
print("Division:", x / y)
```

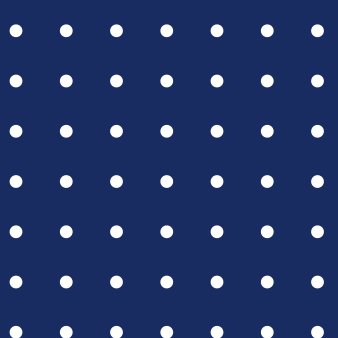


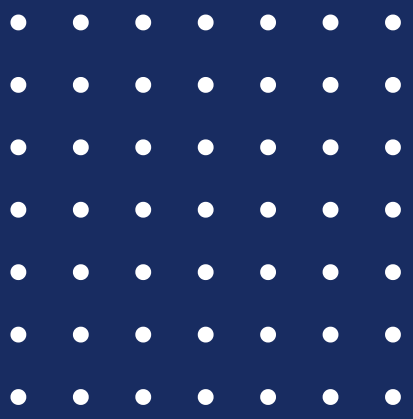


4. STRING OPERATIONS:

- CONCATENATE THE STRINGS "HELLO" AND "WORLD" WITH A SPACE IN BETWEEN, AND PRINT THE RESULT.

```
first_name = "John"
last_name = "Doe"
full_name = first_name + " " + last_name
print("Full Name:", full_name)
```

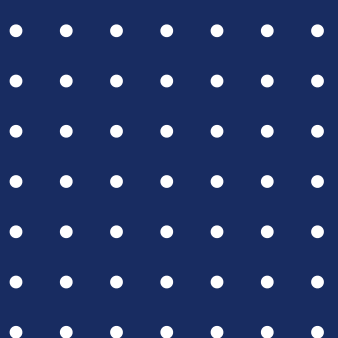


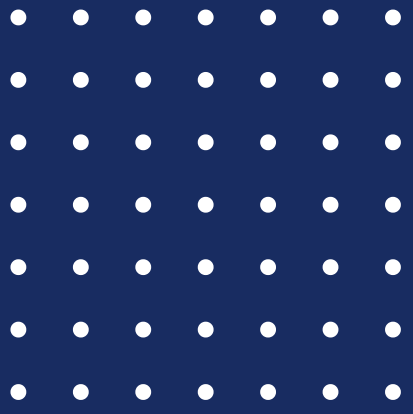


5. STRING METHODS:

- CONVERT THE STRING "LEARNING PYTHON" TO UPPERCASE AND LOWERCASE, AND REPLACE "PYTHON" WITH "PROGRAMMING" IN THE STRING "I LOVE PYTHON".

```
sentence = "Python is awesome"
print("Uppercase:", sentence.upper())
print("Lowercase:", sentence.lower())
print("Replaced String:", sentence.replace("awesome", "great"))
```

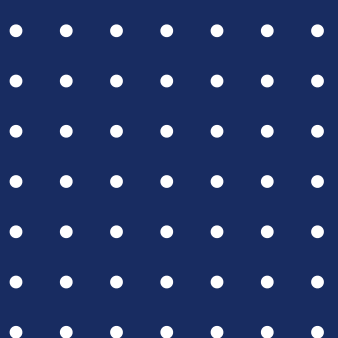


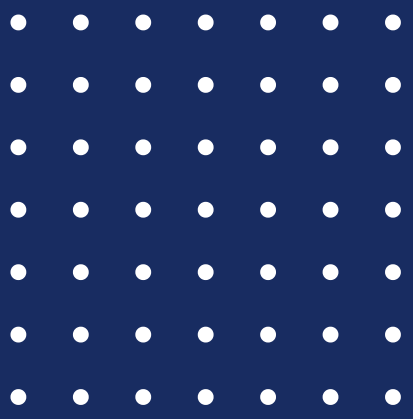


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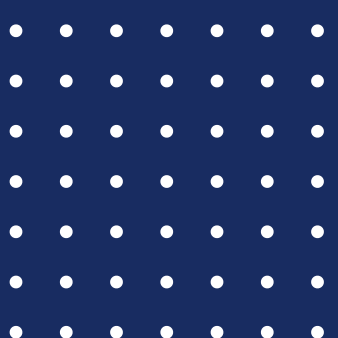


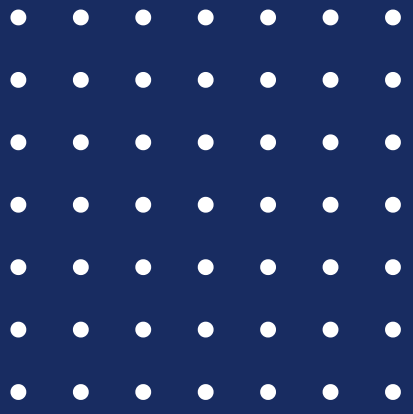
7. TYPE CASTING IN PYTHON:

- WRITE A PROGRAM THAT CONVERTS THE STRING "789" TO AN INTEGER AND "123.45" TO A FLOAT, AND PRINTS THE RESULTS.

```
# Converting string to integer
str_number = "123"
int_number = int(str_number)
print("String to Integer:", int_number)

# Converting string to float
str_float = "456.78"
float_number = float(str_float)
print("String to Float:", float_number)
```





7. TYPE CASTING IN PYTHON WITH USER INPUT:

- WRITE A PROGRAM THAT TAKES A USER'S INPUT AS A STRING, CONVERTS IT TO A FLOAT, AND PRINTS THE RESULT.

```
# Taking user input as string and converting to integer
user_input = input("Enter a number: ")
int_input = int(user_input)
print("User input as Integer:", int_input)
```

