PYTHON FOR DATA SCIENCE

ASSIGNMENT-1

Q1. What will be the output of the following code?

a = 5

b = 2

print(a ** b // b)

a) 12
b) 6
c) 10
d) 25

Answer: a) 12

Explanation: a ** b = 5 ** 2 = 25, then 25 // 2 = 12.

Q2. If s = "Python", what will s[1:5:2] return?

a) 'yth'
b) 'yh'
c) 'to'
d) 'Pto'

Answer: b) 'yh'

Explanation: slicing from index 1 to 5 with step 2 → characters at positions 1 and 3 = 'y' and 'h'.

Q3. What is slicing in Python sequences? Explain with examples using strings and lists.

Answer:

Slicing is a method of extracting a portion of a sequence (string, list, tuple) using indices. The syntax is:

sequence[start : stop : step]

  start → index where slice begins (default = 0)

  stop → index where slice ends (not included)

step → interval between elements (default = 1)