

Q1: What is Python?

Ans: Python is a versatile, high-level programming language widely used in various domains such as web development, data science, artificial intelligence, and automation. It was created by Guido van Rossum and released in 1991. Python is known for its simple syntax, which makes it easy to read and write, even for beginners. It supports multiple programming paradigms, including object-oriented and functional programming. Python has a large standard library and a vibrant community that contributes to thousands of third-party packages available via PyPI. Developers use Python for tasks like scripting, machine learning, and building web applications with frameworks like Django and Flask.

Q2: What is a loop in programming?

Ans: In programming, a loop is a fundamental control structure that allows a program to repeat a specific block of code multiple times until a certain condition is satisfied. Loops are essential for automating repetitive tasks, such as processing lists or performing calculations. There are different types of loops, such as for loops, which iterate over a sequence, and while loops, which continue as long as a condition remains true. For example, in Python, a for loop might be used to print numbers from 1 to 10, while a while loop could repeat until a user enters a specific input. Loops help make code efficient and are a key concept in most programming languages.