

Python Assignment & Tutorial - II

Assignment Questions

1. Illustrate different types of decision statements used in Python programming.
2. a. Describe various repetition statements in Python with appropriate syntax. Explain how they are executed with the help of flow diagrams.
b. Write a Python program to generate a Fibonacci series between a range, such as 0-n. [Fibonacci series: 0, 1, 1, 2, 3, 5, 8, 13, ...]
3. a. Describe input validation loops and nested loops with appropriate examples.
b. Write a Python program to print a multiplication table of a given number.
4. What is 'else' clause in looping structures in Python? Explain how it works with 'for' loop and 'while' loop with simple examples.
5. a. Is string a mutable data type? Describe string slicing using the built-in slicing method and array slicing in detail with an example.
b. How do you encrypt and decrypt strings in Python? Explain them with suitable examples.

Tutorial Questions:

1. Define and Demonstrate the use of jump statements (break, continue, pass) in Python. Write a program to compute the sum of odd numbers within the given natural number using a continue statement.
2. a. What are string format methods? Explain the string format operator with examples.
b. How + and * operators work with strings?
3. What are string padding functions in Python? Explain with simple examples.
4. What are the different types of number systems? Write a program to convert a decimal number into binary and octal numbers.

List of Programs

1. Write a Python program to display all prime numbers up to 200.
2. Write a Python program to find the average of the top two test scores out of the three test scores received.
3. Write a Python program to check whether a given number is an Armstrong number
4. Write a program to find whether the given string is a palindrome.

5. Write a Python program to sort given input strings.
6. Write a Python program to perform string concatenation and copy operations.
7. Write a Python program to demonstrate traversal through a string using a loop.
8. Write a Python program that interchanges the first and last characters of a given string.
9. Write a Python program using the 'while' loop to print the first N numbers divisible by 5
10. Write a Python program to calculate the number of seconds in a day.