Department of Computer Science

Krantiguru Shyamji Krishna Verma Kachchh University

University Campus, Mundra Road, Bhuj, Gujarat - 370 001

http://cs.kskvku.ac.in 02832 235 036 cs@kskvku.ac.in

10/02/2026

Official Notice: Submission of Practical Journal (Second Assignment)

All students of **B.S. in Computer Science, Semester–II** and **M.Sc. CA & IT, Semester–II** are hereby informed to perform all prescribed practical programs, write them neatly in the Practical Journal, and submit the completed journal as part of the **Assignment** for the subject **CAIT201: Programming with Python**, as per the schedule given below.:

📌 Submission Schedule

B.S. in Computer Science – Semester II
M.Sc. CA & IT – Semester II

🗓️ Submission Date: 27/02/2026
🕒 Submission Time: 10:00 PM to 2:30 PM

Important Instructions

I. **Late submission will not be accepted under any circumstances.**
II. Students must submit the Practical Journal **on their allotted date only**.
III. **Early submission is permitted only with prior permission of the course teacher.**
IV. All practical programs must be **properly performed and neatly written** in the journal.
V. The journal must be **complete, indexed, neat, and well-organized**; otherwise, it will **not be evaluated**.

Your **cooperation and adherence to the schedule** are expected.

Department of Computer Science

Programming with Python: Practical Practice List

1. Aim

   To write a Python program to take two numbers and print their sum. Definition

   This program demonstrates basic input and arithmetic operation. It accepts two numbers from the user and calculates their sum using the addition operator.

2. Aim

   To write a Python program to check whether a number is even or odd. Definition

   This program uses the modulus operator to check divisibility by two. If the remainder is zero, the number is even; otherwise, it is odd.

3. Aim

   To write a Python program to find the largest of two numbers. Definition

   This program uses conditional statements to compare two numbers and determine the greater value.

4. Aim

   To write a Python program to swap two numbers with and without using a third variable.

   Definition

   Swapping means interchanging the values of two variables. It can be done using a temporary variable or using Python multiple assignment feature.

5. Aim

   To write a Python program to check whether a year is a leap year. Definition

   A leap year is divisible by four but not by one hundred unless it is also divisible by four hundred. This program checks these conditions using logical operators.

6. Aim

   To write a Python program to calculate simple interest. Definition

   Simple interest is calculated using the formula principal multiplied by rate multiplied by time divided by one hundred. The program implements this mathematical formula.

7. Aim

   To write a Python program to convert Celsius to Fahrenheit. Definition

   Temperature conversion is performed using the formula Fahrenheit equals Celsius multiplied by nine by five plus thirty two.

8. Aim

   To write a Python program to find the largest of three numbers. Definition

   This program compares three numbers using conditional statements and displays the greatest value.

9. Aim

   To write a Python program to assign grade based on marks.

Definition

This program uses multiple conditional statements to classify marks into different grade categories.

10. Aim

    To write a Python program to check whether a character is vowel or consonant.
    Definition

    This program checks whether the entered alphabet belongs to the vowel set. If not, it is considered a consonant.

11. Aim

    To write a Python program to check whether a number lies between one and one hundred.

    Definition

    This program uses relational and logical operators to verify whether a number falls within a specified range.

12. Aim

    To write a Python program to calculate electricity bill based on slab system.
    Definition

    This program calculates the total electricity bill based on different rate slabs using conditional statements.

13. Aim

    To write a Python program to check login using username and password.
    Definition

    This program verifies user credentials by comparing entered values with predefined username and password.

14. Aim

    To write a Python program to check whether a number is Armstrong.
    Definition

    An Armstrong number is equal to the sum of its digits raised to the power of the number of digits. This program verifies that condition.

15. Aim

    To write a Python program to check whether a number is palindrome.
    Definition

    A palindrome number reads the same forward and backward. The program reverses the number and compares it with the original.

16. Aim

    To print numbers from one to n.
    Definition

    This program uses a loop to print numbers sequentially from one up to a given limit.

17. Aim

    To print even numbers between one and one hundred.
    Definition

    This program uses a loop and a condition to display numbers that are divisible by two.

18. Aim

    To find factorial of a number.

Definition

Factorial of a number is the product of all positive integers less than or equal to that number.

19. Aim

    To find sum of digits of a number.

    Definition

    This program extracts each digit using division and modulus operations and calculates the total sum.

20. Aim

    To reverse a number.

    Definition

    This program reverses a number by extracting digits one by one and rebuilding the number in reverse order.

21. Aim

    To count number of digits in a number.

    Definition

    This program counts how many digits are present by repeatedly dividing the number by ten until it becomes zero.

22. Aim

    To check whether a number is prime.

    Definition

    A prime number is divisible only by one and itself. This program checks divisibility using a loop.

23. Aim

    To write a function to find factorial of a number.

    Definition

    A function is a reusable block of code. This function calculates and returns the factorial when called.

24. Aim

    To write a function to check prime number.

    Definition

    This function checks whether a number satisfies the condition of being prime and returns the result.

25. Aim

    To write a function to check palindrome number.

    Definition

    This function reverses the number and compares it with the original value to determine whether it is palindrome.

26. Aim

    To write a function to find largest of three numbers.

    Definition

    This function compares three numbers and returns the greatest value.

27. Aim

    To write a function to calculate sum and product of digits.

Definition

This function extracts digits of a number and calculates both their sum and multiplication.

28. Aim

    To create a class Student with attributes name, roll number and marks.
    Definition

    A class is a blueprint for creating objects. The Student class stores student details and includes methods to display information.

29. Aim

    To create a class Rectangle to calculate area and perimeter.
    Definition

    This class uses attributes length and width and provides methods to calculate area and perimeter.

30. Aim

    To create a class Circle to calculate area and circumference.
    Definition

    This class stores radius as attribute and includes methods that apply mathematical formulas for area and circumference.

31. Aim

    To create a class BankAccount with deposit and withdraw methods.
    Definition

    This class demonstrates object oriented programming by performing financial operations through class methods.

32. Aim

    To create a class Employee to calculate annual salary.
    Definition

    This class stores employee details and includes a method to compute yearly salary based on monthly salary.

33. Aim

    To demonstrate constructor method.
    Definition

    A constructor is a special method that automatically initializes object attributes when an object is created.

34. Aim

    To create a class with static variable to count number of objects created.
    Definition

    A static or class variable is shared among all objects of a class. It is used to keep track of total objects created.

35. Aim

    To demonstrate method calling from another method.
    Definition

    This program shows how one method inside a class can call another method using the self reference.

36. Aim

    To create a class that validates data inside constructor.
    Definition

    This class checks the correctness of input values before assigning them to object attributes.

37. Aim

    To create a menu driven calculator using class.
    Definition

    This program uses class methods along with user choice to perform different arithmetic operations.

38. Aim

    To create multiple objects of the same class.
    Definition

    This program demonstrates that multiple objects of a class can hold different data and work independently.