

Python Programming (B.Tech CSE - Sem 2)

Experiment 02 – Exercise Sheet

Conditional Statements

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Repository: <https://github.com/tali7c/Python-Programming>

Note: This document contains only problem statements (no solutions).

Instructions

- Write a separate program for each exercise.
- Use `if/elif/else` clearly and validate input.
- Print outputs in a clean, user-friendly format.

Exercises

Exercise 01: Divisible by 3 and 5

Check whether the given number is divisible by 3 and 5 both.

Exercise 02: Multiple of 5

Check whether a given number is multiple of five or not.

Exercise 03: Greatest Among Two Numbers

Find the greatest among the two numbers. If numbers are equal then print "Numbers are equal".

Exercise 04: Greatest Among Three Numbers

Find the greatest among three numbers assuming no two values are the same.

Exercise 05: Quadratic Equation Roots

Check whether the quadratic equation has real roots or imaginary roots. Display the roots.

Exercise 06: Leap Year

Find whether a given year is a leap year or not.

Exercise 07: Next Date

Write a program which takes any date as input and displays the next date of the calendar.

Example:

Input: day=20, month=9, year=2005

Output: day=21, month=9, year=2005

Exercise 08: Grade Sheet

Print the grade sheet of a student for the given range of CGPA. Scan marks of five subjects and calculate the percentage.

Formula:

$$\text{CGPA} = \text{percentage} / 10$$

CGPA ranges:

- 0.0 to 3.4 → F
- 3.5 to 5.0 → C+
- 5.1 to 6.0 → B
- 6.1 to 7.0 → B+
- 7.1 to 8.0 → A
- 8.1 to 9.0 → A+
- 9.1 to 10.0 → O (Outstanding)

Sample (format idea):

- Name, Roll Number, SAP ID, Semester, Course
- Subject-wise marks (5 subjects)
- Percentage, CGPA, Grade