Experiment No: 3 - Online Examination Result Processing System

Aim
To design and implement a Python program that processes **online examination results** by calculating total marks and percentage, determining pass or fail status, assigning grades, identifying distinction, and displaying a detailed result summary using **conditional control structures**.

Problem Statement
Write a Python program to perform the following operations:
- Accept student details such as **name** and **roll number**
- Read marks obtained in **five subjects**
- Validate the entered marks (marks should be between 0 and 100)
- Calculate **total marks** and **percentage**
- Determine **pass or fail** status:
  - Subject-wise (minimum 35 marks in each subject)
  - Overall result
- Assign **grade** based on the percentage obtained (if all subjects passed otherwise NotAvailable)
- Identify whether the student has secured **distinction**
- Display a **detailed result summary**

The program must use **conditional control structures** (`if`, `elif`, `else`).

Constraints
- Maximum marks per subject: 100
- Minimum pass marks per subject: 35
- Distinction: Percentage ≥ 75 and all subjects passed

Percentage Range Grade

Percentage Range	Grade
90 – 100	A+
75 – 89	A
60 – 74	B
50 – 59	C
35 – 49	D
Below 35	Fail

Input
- Student name
- Roll number
- Marks in five subjects

Output
- Student details
- Total marks and percentage
- Pass or fail status
- Grade
- Distinction status

Concepts Used
- Conditional statements (`if`, `elif`, `else`)
- Relational and logical operators
- Input validation

Result
Thus, the enhanced Python program for an **Online Exam Result Processor** with validation, grading, and distinction features was successfully executed.

Test Case – 1

Sample Input
Enter Student Name: Kushala
Enter Roll Number: CS102
Enter marks in Subject 1: 85
Enter marks in Subject 2: 78
Enter marks in Subject 3: 88
Enter marks in Subject 4: 74
Enter marks in Subject 5: 90

Sample Output
Name: Kushala
Roll Number: CS102
Total Marks: 415
Percentage: 83.0
Result: PASS
Grade: A
Distinction

Test Case – 2

Sample Input
Enter Student Name: Jathin
Enter Roll Number: CS103
Enter marks in Subject 1: 34
Enter marks in Subject 2: 78
Enter marks in Subject 3: 88
Enter marks in Subject 4: 74
Enter marks in Subject 5: 90

Sample Output
Name: Jathin
Roll Number: CS103
Total Marks: 364
Percentage: 72.8
Result: FAIL
Grade: NotAvailable