Module 1: Questions to Practice

Premanand S

Assistant Professor
School of Electronics Engineering
Vellore Institute of Technology
Chennai Campus

premanand.s@vit.ac.in

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Module 1: Practice Questions

1. Rahul books a resort stay. Room charges per day: Economy – 800, Premium – 1200, Luxury – 1600. Optional services: Meals – 250/day, Transport – 150/day. If the stay exceeds 7 days, apply a 12% discount on the total bill. Write a program to calculate the final cost.
2. Find the sum of all two-digit numbers between L and R whose sum of digits is a composite number.

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3. Count how many three-digit numbers in a given range are formed using only the digits $\{3, 6, 9\}$.
4. Find all two-digit numbers in a range where (square of the first digit square of the second digit) is a perfect cube.

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5. Print all numbers between two limits where every non-zero digit divides the number exactly. Also print their average.
6. From a range of two-digit numbers, print all pairs (i, j) such that $|i - j|$ is a perfect cube.

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7. Find all pairs (x, y) in a range such that $(x - y)$ is divisible by $(x + y)$.
8. Print all three-digit numbers in a range where the sum of the first and last digits is 10.

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9. Count how many numbers between 1 and N have digits in strictly descending order.
10. Find all two-digit numbers in a range that are divisible by both digits plus one. Print their sum.

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11. Replace every number in an array with the closest even number. If there is a tie, choose the smaller one.
12. Reverse the elements of an array in groups of size k and print the product of elements in each group.

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13. From an array, print the element that appears more than $n/3$ times. If no such element exists, print an appropriate message.
14. Given an array and a window size k, print the maximum element in every sliding window.

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15. Create a new array where each element is the sum of all elements except the one at that index.
16. Given a matrix, count how many even numbers are present in each row.

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17. Print the elements of a matrix in spiral order starting from the top-right corner in clockwise direction.
18. Replace every element in each column of a matrix with the sum of that column.

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19. Reverse each column of a matrix and find the absolute difference between the sum of the first row and the last row.
20. Given a matrix, swap any two specified columns and print the updated matrix.

Thank You!

Stay Connected

Premanand S

Email: premanand.s@vit.ac.in
Phone: +91-7358679961

LinkedIn: linkedin.com/in/premsanand
Instagram: instagram.com/premsanand
WhatsApp Channel: anandsDataX

Google Scholar: Google Scholar Profile
GitHub: github.com/anandprems