

# Topic 1 - Practice Questions and Assignments

## Section A: Conceptual Questions

1. Why was C++ created after C?
2. Write two differences between C and C++.
3. What is the purpose of `#include <iostream>`?
4. What is function overloading?
5. What is a reference?
6. What is Dynamic Programming?

## Section B: Coding Practice

1. Write a program to take name and age as input and display them.
2. Create a function with default argument.
3. Create overloaded add functions for int and double.
4. Write a function using reference to double a number.
5. Allocate memory using new and free it using delete.
6. Perform bitwise AND, OR, XOR on two numbers.

## Mini Assignments

### Assignment 1:

Create a calculator using function overloading.

### Assignment 2:

Use dynamic memory and reference function to modify a number.

### End-of-Topic Challenge:

Write one program combining input/output, overloading, references, and dynamic memory.