

**School of Computing and Data Science
Sai University**

Practice Set 1: C++ Basics

- Q1.** Write a program to read your name and age, and print them in the format:
`Hello <name>, you are <age> years old.`
- Q2.** Read an integer and check whether it is even or odd.
- Q3.** Take two integers as input and print the larger one using `if-else`.
- Q4.** Read three integers and print the largest number.
- Q5.** Take an integer and check whether it is positive, negative, or zero.
- Q6.** Write a program to print the multiplication table of a given number using a `for` loop.
- Q7.** Print all numbers from 1 to 100 using a `for` loop.
- Q8.** Find the sum of the first n natural numbers.
- Q9.** Find the factorial of a given number n .
- Q10.** Check whether a given year is a leap year or not.
- Q11.** Given marks of a student (0–100), print the grade: A (≥ 90), B (80–89), C (70–79), D (60–69), F (below 60).
- Q12.** Find the roots of a quadratic equation $ax^2 + bx + c = 0$. (Handle real and imaginary roots using `if-else`.)
- Q13.** Check whether a number is prime or not.
- Q14.** Print all prime numbers between 1 and 100.
- Q15.** Reverse the digits of a given number. (Example: input 1234 → output 4321)
- Q16.** Find the sum of digits of a given number. (Example: input 1234 → output 10)
- Q17.** Generate the Fibonacci series up to n terms.
- Q18.** Check whether a given number is a palindrome or not. (Example: 121 is palindrome, 123 is not.)
- Q19.** Write a program to calculate the simple interest. Formula: $SI = \frac{P \times R \times T}{100}$
- Q20.** Write a program to find the greatest common divisor (GCD) of two numbers using a loop.