



**भारतीय सूचना प्रौद्योगिकी संस्थान गुवाहाटी**  
**Indian Institute of Information Technology Guwahati**  
**COMPUTER PROGRAMMING LAB (CS110)**  
**ASSIGNMENTS-02**

[Note: Do not use the `scanf()` function, `if()` statements or any loop construct.]

- ✓ 1. Write a program in C to initialize an char variable as 'a' and print its ASCII value.
- ✓ 2. Write a program in C to find the average of five numbers.
- ✓ 3. Write a program in C to find the area of a circle. The radius of the circle is input.
- ✓ 4. Write a program in C to find the area of a rectangle. The length and width of the rectangle are inputs.
- ✓ 5. Write a C program to find the area of a triangle. The lengths of the sides of the triangle are inputs.
- ✓ 6. Write a program in C to calculate simple interest.
- ✓ 7. Write a program in C to calculate compound interest.
- ✓ 8. Write a program in C to solve a quadratic equation. If the equation is  $ax^2 + bx + c = 0$ , then  $a$ ,  $b$ , and  $c$  are inputs.
- ✓ 9. Write a program in C to compute the area of a circle. The circumference of the circle is input. Consider  $\pi = 3.14$ .
- ✓ 10. Given the initial velocity ( $u$ ), acceleration ( $a$ ), and the time ( $t$ ), write a program in C to compute the final velocity of an object.
- ✓ 11. Given the initial velocity ( $u$ ), acceleration ( $a$ ), and the time ( $t$ ), write a program in C to compute the final displacement of an object.
- ✓ 12. Write a program in C to convert temperature in  $^{\circ}\text{C}$  to  $^{\circ}\text{F}$ .
- ✓ 13. Write a program in C to convert temperature in  $^{\circ}\text{F}$  to  $^{\circ}\text{C}$ .

14. Write a program in C to extract the individual digits of a given number (a positive integer) and add them. Assume the number has at most five digits. Do not use any loop construct.
15. Write a program in C to reverse a number (a positive integer). Assume the number has at most five digits. Do not use any loop construct.
16. Write a program in C to calculate the sum of the digits of a five-digit positive integer. Do not use any loop construct.
17. Write a program in C to calculate the product of the digits of a five-digit positive integer. Do not use any loop construct.
18. Write a program in C to reverse a five-digit positive integer. For instance, if the number is 13257, the output needs to be 75231. Do not use any loop construct.
19. Write a program in C to check if a five-digit positive integer is palindrome or. For instance, the number 13531 is a palindrome. Do not use any loop construct. You cannot use any `if ()` statement. If it is a palindrome number, print Y. Otherwise, print N.
20. Write a C program to swap two `int` variables using a third variable.
21. Write a program in C to swap two `int` variables without using a third variable.
22. Write a program in C to find the maximum of two numbers.
23. Write a program in C to find the minimum of three numbers.
24. Write a program in C to find whether a given number is odd or even. If the number is odd, print O. Otherwise, print E. You cannot use any `if ()` statement.
25. Write a program in C to find if a year is a leap year. If it is a leap year, print Y. Otherwise, print N. You cannot use any `if ()` statement.