



**भारतीय सूचना प्रौद्योगिकी संस्थान गुवाहाटी**  
**Indian Institute of Information Technology Guwahati**  
**COMPUTER PROGRAMMING LAB (CS110)**  
**ASSIGNMENTS-3**

1. Write a c program to print all even numbers between 1 to 100 using for loop.
2. Write a program in C to print the multiplication table of any number.
3. Write a program in C to count the number of digits in an integer.
4. Write a program in C to reverse an integer.
5. Write separate programs in C to compute the sum of the first  $n$  terms of the following series:

i.  $S_n = 4 \left( \frac{1}{1} - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \dots \right)$

ii.  $S_{\log(1+x)} = x - \frac{x^2}{2} + \frac{x^3}{3} - \dots$

6. Write a program in C to find whether a given positive integer is prime or not.
7. Write a program in C to print the Fibonacci series up to the first  $n$  terms. Series: 0 1 1 2 3 5 8 13....
8. Write separate programs in C to print the following patterns. Each of them is associated with a control variable  $n$ . The examples are associated with  $n = 4$ . A printf should print only 1 character.

i. \*\*\*\*

ii. #  
#  
#  
#

iii. \$\$\$\$  
\$\$\$\$  
\$\$\$\$  
\$\$\$\$

iv. ?  
??  
???  
????

v. 1234  
123  
12  
1

vi. For this, consider  $n = 5$  unlike others.

1  
23  
456  
7890  
12345