भारतीय सूचना प्रौद्योगिकी संस्थान गुवाहाटी
Indian Institute of Information Technology Guwahati

COMPUTER PROGRAMMING LAB (CS110)
ASSIGNMENTS–06

1. Write a function in C to compute the area of a circle. You need to pass the diameter of the circle as a parameter to the function. Write the main function and call it from the main function. You need to define the function before the main function.

2. Write a function in C to check whether a number is prime or not. If it is a prime number, the function should return 1. Otherwise, it should return 0. Write the main function and call the function from the main function. You need to define the function after the main function and declare the function outside (before) the main function.

3. Write a function in C to check whether a number is Armstrong or not. If it is an Armstrong number, the function should return 1. Otherwise, it should return 0. Write the main function and call the function from the main function.

4. Write a function in C to print all prime numbers inside a given range $[a, b]$. You need to pass a and b as parameters to the function.

5. Write a function in C to print all Armstrong numbers inside a given range $[a, b]$. You need to pass a and b as parameters to the function.

6. Write a function in C to print all Perfect numbers inside a given range $[a, b]$. You need to pass a and b as parameters to the function.
Note: A perfect number is a positive integer that is equal to the sum of its positive divisors, excluding the number itself.

7. Write a function in C that takes three integers as arguments and returns the largest one's value. The largest value should be displayed in the main function.

8. Write a function in C that takes a positive integer n as an argument and returns the smallest power of two that is greater than or equal to n.

9. Write a function in C that takes a positive integer as input and returns the leading digit in its decimal representation. For example, the leading digit of 234567 is 2.