Badji Mokhtar Annaba University , Faculty of Technology,Computer Science Departement

Computing and Automation 01, Semester 01, Algorithms and Data Structure 01

Third Serie of Exercice for directed coursework

All the exercices must be written in C durig practical tutorial

1. Write an algorithm to display the first 10 natural numbers.
2. Wite an algorithm to diplay the 10 natural number in reverse.
3. Write an algorithmto compute the sum of the first 10 natural numbers.
4. Write an algorithm to read 10 numbers from the keyboard and find their sum and average.
5. Write an algorithm which asks the user to introduice an number and display its multiplication table.
6. Sum of Digits: Write a program to calculate and print the sum of the digits of a number ex if the number is 12345 the sum is 1+2+3+4+5 wich is equal to 15.
7. Create a program to print all prime numbers between 1 and 100 using nested loops, 0 and 1 are not a prime numbers, also if a number is divisible by any number between 2 and number/2 then it is not a prime number.
8. Write an algorithm to calculate the factorial of a given number.
9. Fibonacci Sequence: Write a program that generates and prints the first 20 numbers in the Fibonacci sequence.
10. Write an algorithm to find sum of series: $1 + x + x^2 + x^3 + ... x^{n.}$
11. Write an algorithm to find sum of series.

$$1 + \frac{x}{1!} + \frac{x^2}{2!} + \frac{x^3}{3!} + \cdots + \frac{x^n}{n!}$$