EXERCISE N° 01 :

1- Write a program that displays numbers between 0 and 10 using the While, Repeat and For.

2- Modify this program so that it displays the numbers between two values A and B entered by the user using the While loop. Repeat and For.

EXERCISE N°02:

1- Write a program that calculates the sum of the numbers between two values A and B entered by the user.

2- Modify this program to calculate the square sum of the numbers between two values A and B entered by the user.

EXERCISE N° 03 : (use a loop of your choice)

1- Write a pascal program which displays the even and odd numbers between two variables A and B entered by the user.

2- Modify this program so that it displays the number of even and odd numbers between two variables A and B entered by the user (Ex: A = 1, B = 9 the number of even = 4, odd number = 5).

EXERCISE N° 04:

Write a program that calculates the factorial of a user-entered integer, then check the program for the numbers 0,4,7,8,9. What do you notice? Propose a solution to overcome the problem encountered.

EXERCISE N° 05 :

Considering the Exponential Series defined by:

$$e^x = 1 + x + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} \ldots$$

Write a program that calculates this series.

EXERCISE N° 06:

Considering the sum S_n defined for any integer n by:

$$Sn = 4 \sum_{K=0}^{N} \frac{k}{2k+1}$$

Write a program that calculates Sn. N is a user-entered integer.

EXERCISE N° 7:

Calculate the Nth term U_N of the FIBONACCI sequence which is given by the recurrence relation:

U1=1, U2=1, UN = UN -1 + UN -2 (for N>2). N is given by the user.

EXERCISE N° 8: (use the Repeat loop)

Write a program that calculate the greatest common divisor (GCD) of two numbers using the following trick: Subtract the smaller of the two integers from the larger until they are equal.

EXERCISE N° 9 :

Write a Pascal program that converts a sentence written in lower case to the same sentence in upper case (use the upCase and length functions)

EXERCISE N° 10:

We want to write a Pascal program allowing a message to be encoded using the following process: permute each even index character with the character that precedes it.

Example: The coding of the character string: ˝Baccalauréat˝ gives ˝aBcclauaérta˝

EXERCISE N° 11:

Write a program that:

- Reads a vector (array) of integers then displays this vector.

- Calculate the sum of the vector's elements

EXERCISE N° 12 :

Write a program that:

- Find the greatest number in a vector.

EXERCISE N° 13 :

Write a program which permutes between two cells of a vector of n elements (the choice of the two cells is defined randomly by the user)

EXERCISE N° 14 :

Write a program that permutes two arrays (element by element) automatically filled with values between 5 and 50 (use the Randomize function)

EXERCISE N° 15 : ˸

Write a program that sorts a vector in ascending then descending order.

EXERCISE N° 16 :

Write a program that calculates the sum of two vectors.

EXERCISE N° 17 : Write a program that calculates the product of two vectors.